



September 2021

Synthesis of Independent Dialogues

REPORT 3
Part 2, Section 4



UNITED NATIONS
FOOD SYSTEMS
SUMMIT 2021

This supplemental report provides in-depth documentation in support of the third Independent Dialogues Synthesis Report. This report focuses on Themes 16 to 22.

Acknowledgements

We gratefully acknowledge support for the Synthesis of the Independent Dialogues from the McKnight Foundation, Kellogg Foundation, IKEA Foundation, the Global Alliance for the Future of Food, and the Blue Marble Evaluation Network.

We wish to express our gratitude, respect, and appreciation for the hundreds of volunteers who convened Independent Dialogues and reported the results as well as the thousands who participated in the Dialogues and shared their reflections, hopes, insights, and concerns on which this synthesis report is based.

The 4SD team that designed the standardized method and supported Convenors, Curators and Facilitators of Independent Dialogues deserves special recognition for the Herculean labour involved that has led to more than 1350 Member State, Independent, and Global Dialogues. Our synthesis work has flowed from and been dependent on the process they initiated and supported. Our thanks to Florence Lasbennes, David Nabarro, John Atkinson, Noemi Blazquez Benito, Charlotte Dufour, Will Fihn-Ramsay, Magali Madi, Saber Mouimen, William Nabarro, Thuy Nguyen, Arne O'Donoghue, Samia Ouraïed, Laura Ovies, Marlen Schuepbach, Paola Victoria.

The [Blue Marble Evaluation](#) team wishes to express special thanks to United Nations Summit Secretariat staff Zachary Bleicher and Sarah Hutton for their support, advice, and collaboration throughout this synthesis process.

We also wish to acknowledge and express appreciation for the contributions of the Dialogues coding team, Ms. Nozipho Ngwabi, Dr. Marlene Roefs, Ms. Tikwiza Silubonde, and Dr. Lauren Wildschut and Blue Marble Evaluation Network members who contributed to the synthesis process and four Deep Dive reports: Gabriela Reneria Flores and Taruna Gupta (Youth), Charmagne Campbell-Patton and Donna Podems (Gender), Mutizw Mukute and Claire Nicklin (Smallholder Farmers) and Andrealisa Belzer and Serge Eric Yakeu Djiam (Indigenous Peoples). Our Claremont Graduate University special issues coding team expanded our capacity to code and synthesize the large influx of Dialogue reports in July: Ann Marie Castleman, Minji Cho, Sarah Gaal, Deborah Kaddu-Serwadda, and Theodore Theoharis. Marlene Roefs and Bob Williams provided independent peer reviews of the report which helped identify both the strengths and limitations of the synthesis.

Finally, we wish to recognize and celebrate the leadership of the United Nations Secretary-General and the entire UN Summit Secretariat for their vision and commitment in conceiving of the Summit and making it a reality.

We would be remiss in not recognizing and thanking our families for the disruptions in family life sometimes brought on by our engagement with this endeavor – and our deepest appreciation for their support and understanding.

This report was prepared by the Blue Marble Evaluation Network

Blue Marble Evaluation (BME) is an approach to evaluating global initiatives aimed at transforming systems towards a more sustainable world. Blue Marble Evaluators constitute a global network of evaluators who work in the space of global systems transformation. For this assignment, our BME team brings together evaluators from around the globe who offer an interdisciplinary approach to research and evaluation. As a team, we bring various standpoints yet at the same time we have a shared view seeing the world as a global system of ecological and human interdependence.

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Table of Contents

Acknowledgements.....	3
Blue Marble Evaluation Lead Team.....	4
The Purpose of the Food Systems Summit: Support for the Agenda 2030 Decade of Action.....	7
Supporting Documentation for the Synthesis of Independent Dialogues.....	7
Quotes for Guiding Themes 16-22	9
What success factors are key to transformative results?	9
Guidance Theme 16. Generate Financial Resources Sufficient to Accelerate Transformation	9
Access to jobs and job creation	16
Environment and climate smart investment	21
Finance derisking.....	24
Funding farmers.....	31
Government subsidies	37
Incentives.....	45
Innovation	64
Investment	72
Living wage.....	95
Partnerships	96
Private sector	99
Producers income	102
Risk management	108
Sustainable financing.....	113
Women and finance.....	116
Guiding Theme 17. Align and Integrate Coalitions and Solutions	123
Complement work of others	123
Partnerships, networks, and alliances	134
Coordination	183
Guiding Theme 18. Ensure Openness and Transparency	195
Open	205
Trust.....	219
Guiding Theme 19. Act With Urgency	224
Guiding Theme 20. Facilitate Conflict Resolution and Negotiate Trade-Offs	253
Agricultural practices	263
Consumer trends.....	269
Data.....	279
Finance	280
Food access.....	283
Food costs.....	284
Food gardens, safety, staples and funding.....	288
Governance.....	289

Inclusion	292
Innovation	296
Innovations versus traditions	297
Labelling practices.....	298
Land use.....	299
Open	301
Policy	303
Priorities	306
Roles and responsibilities	311
Sustainability	312
Systems.....	315
Technology	317
Terminology	320
Trade.....	321
Traditions.....	321
Trust.....	322
Urban and rural divide.....	327
Various scale of farms including local	328
Waste	329
Guiding Theme 21. Build Global Transformation Momentum Across Systems: Generate mutually reinforcing acceleration of solutions across food, climate, and health systems toward transformational critical mass and tipping points.	330
Interconnected	356
Guiding Theme 22. Learn And Adapt Through Ongoing Evaluation	377
Knowledge sharing	401
Monitoring and evaluation	418
Research	434

The Purpose of the Food Systems Summit: Support for the Agenda 2030 Decade of Action

UN Secretary-General António Guterres will convene a Food Systems Summit in September 2021, as part of the Decade of Action to achieve the Sustainable Development Goals (SDGs) by 2030. The Summit aspires to launch bold new actions to deliver progress on all 17 SDGs, each of which relies to some degree on healthier, more sustainable and equitable food systems.

To prepare for the 2021 Food Systems Summit (hereafter referred to simply as “the Summit”), Independent Dialogues have taken place around the world. Independent Dialogues are one of three main components of the Food Systems Summit Dialogues (FSSD), the other two being Member State Dialogues and Global Dialogues. Independent Dialogues could be convened by any interested group. A guidebook for conducting Dialogues and training of conveners offered a standardized process for facilitating dialogues and a standardized feedback reporting form. Dialogues typically lasted an hour to two hours at most. They typically included a presentation on the topic of the Dialogue followed by panel discussions or breakout groups. Independent Dialogues aimed to offer a seat at the table to food system stakeholders who have an opportunity to “debate, collaborate, and take action towards a better future” (Food Systems Dialogue).

The Independent Dialogues invited participants to discuss how food systems can be transformed. This synthesis organizes and presents Dialogue results in answer to four questions:

- ❖ What food systems transformations are needed and envisioned?
- ❖ Who should engage in transforming food systems?
- ❖ How should the transformation of food systems be undertaken?
- ❖ What success factors are key to transformative results?

The Blue Marble Evaluation Team (BME) did not organize or convene the Independent Dialogues, collect the data, or design the data collection forms. Rather, we were tasked with synthesizing and analysing data that were submitted for dialogues held between 5 November 2020 and 21 July 2021. The analysis of that data resulted in several reports, including the [Synthesis of Independent Dialogues](#) (September 2021) which identified 22 themes to address the four questions.

Supporting Documentation for the Synthesis of Independent Dialogues

There are four supplemental reports that provide illustrative quotes to support that September 2021 Synthesis report. Each supplemental report provides extensive documentation (i.e., quotes) to illuminate and support each of the identified 22 guiding themes. These four reports are:

- **Report 1** provides illustrative data that supports the themes identified to answer the question, “What food systems transformations area needed an envisioned?” The data are organized into the

three thematic areas: (Theme 1) Transformed Systems, (Theme 2) Sustainability and (Theme 3) Equity.

- **Report 2** provides illustrative data to support the themes identified to answer the question, “Who should engage in transforming food systems?” Data are organized into five key thematic areas: (Theme 4) Multistakeholder Partnerships, (Theme 5) Value Diversity and Engage, (Theme 6) Primacy of Government: Responsibility and accountability, (Theme 7) Engage Collaboratively and Amplify and (Theme 8) Empower Historically Excluded Voices.
- **Report 3** provides illustrative data to support the themes identified to answer the question, “How should the transformation of food systems be undertaken?”. Data are organized into the 6 themes: (Theme 9) Apply Systems Thinking, (Theme 10) Recognize Complexity, (Theme 11) Guarantee the Right to Food, (Theme 12) Support Nature-Positive Solutions, (Theme 13) Contextualise and Localise, (Theme 14) Education about Food Systems: Shift Perspectives, Revise Narratives and Change Mindsets, and (Theme 15) Innovate and Integrate What is Already Working.
- **Report 4** provides illustrative data to support the themes identified to answer the question, “What success factors are key to transformative results?” Data are organized into the remaining seven themes: (Theme 16) Generate Financial Resources Sufficient to Accelerate Transformation, (Theme 17) Align and Integrate Coalitions and Solutions, (Theme 18) Ensure Openness and Transparency, (Theme 19) Act with Urgency, (Theme 20) Facilitate Conflict Resolution and Negotiate Trade-offs, (Theme 21) Build Global Transformation Momentum Across Systems: Generate mutually reinforcing acceleration of solutions across food, climate and health systems toward transformational critical mass and tipping points, and (Theme 22) Learn and Adapt Through Ongoing Evaluation. (*This report*).

These four supplemental reports do not include all the quotes identified, read, and considered for the September report. Rather, these four reports provide an illustrative set of quotes that support the 22 identified themes. The BME team encourages reading of the Dialogue Reports for a more in-depth understanding of these themes.

Quotes for Guiding Themes 16-22

What success factors are key to transformative results?

Guidance Theme 16. Generate Financial Resources Sufficient to Accelerate Transformation

Finance concerns were wide-ranging, from job creation to a focus on strengthening rural economies. Some general quotes are provided, followed by more specific themes.

*...ease of access to funds, training, and basic services...*¹

*To ensure state and other (international) assistance (legal, financial, technical, etc.) in the development and promotion of traditional food systems of indigenous peoples and local communities.*²

*There should also be viable financing for small producers and a technology transfer aimed at increasing productivity.*³

*Agricultural policies - Advocacy by farmer organizations in each country towards political decision-makers for an increase in budgetary reservations dedicated to the agricultural sector; that each Central African state devote at least 10% of its budget to the agricultural sector, in accordance with the commitments made in the Maputo Declaration in 2003 and Malabo Declaration in 2014, in order to better promote innovative and sustainable food production systems that are respectful of nature, and greater involvement of farmers in the development, implementation, and monitoring of agricultural policies...*⁴

*A study of the millet, peanut, and soybean sector carried out by researchers from Abdou Moumouni University in Niamey made it possible to formulate recommendations to develop and secure the sectors through access to improved and certified seeds, support for the technical capabilities of producers and the establishment of agricultural equipment loans. But it will also be wise to restructure input supply channels and study the potential markets to redefine the marketing channel.*⁵

¹ 166:10 p 7 in 355_June_14_21_FAO

² 354:31 p 9 in 407_June_10_21_CSIPN_Aborigen Forum

³ 506:8 p 3 in 065a_Mar_31_21_Hidalgo Multi_Eng

⁴ 510:6 p 7 in 079a_May_27_21_NGA_Soung_Eng

⁵ 517:3 p 6 in 100a_June_10_21_Hainikoye IM_Eng

Scientific, financial, and expert support for the functioning of food value chains.⁶

Improve the living environment of subsistence/family farmers. Support subsistence/family farming through financing from large companies operating in the agricultural areas concerned.⁷

Resources and infrastructure; equipment access and availability; capital; entrepreneurship opportunities that add value to their products.⁸

Business credit and knowledge about Business credit; Understanding alternative cooperative models, development and management for small farms.⁹

Improve access to credits.¹⁰

Farmers need access to infrastructure, finance, digitalization, transport etc. Low public sector investment makes private sector key, but it needs a more business-conducive environment.¹¹

The main challenges discussed to strengthen these models were: 1. The expansion of access to technical assistance for small/medium producers, using innovative mechanisms; 2. The expansion of access to credit for sustainable systems; 3. The expansion of the associative capacity of small and medium producers;¹²

Developing metrics for the sustainability of systems and agricultural properties, which is essential for the certification scheme of integrated systems, when Life Cycle analysis and ESG criteria are growing in importance and can strengthen sustainable practices; 8. Measuring the impacts of the transition to regenerative practices, and practicing with new forms of financing, such as blended finance; 9. The need for mechanization adapted for diversification and regeneration;¹³

Regarding the valuation of Brazilian socio-biodiversity products obtained in sustainable production models, it was highlighted that: Purchase guarantee options, such as offtake agreements and long-term contracts, are necessary as an economic basis for the transition to regenerative agriculture, in addition to connection with markets that give value to products generated from sustainable practices;¹⁴

⁶ 519:19 p 7 in 106a_June_18_21_Nurgaziev R_Eng

⁷ 524:25 p 7 in 119a_July_08_21_Moussavou B_Eng

⁸ 356:53 p 7 in 409_June_13_21_Mone S

⁹ 356:55 p 7 in 409_June_13_21_Mone S

¹⁰ 357:18 p 6 in 401_June_10_21_Ekwamu_A

¹¹ 359:40 p 8 in 403_June_10_21_ESCAP_Multi

¹² 389:31 p 9 in 431_June_22_21_CEBOS_EMBRAPA

¹³ 389:33 p 9 in 431_June_22_21_CEBOS_EMBRAPA

¹⁴ 389:39 p 9 in 431_June_22_21_CEBOS_EMBRAPA

Payment mechanisms for environmental services and amplifying the access to credit for smallholders were also highlighted, as well as long-term financing models.¹⁵

To improve income generation for extractivist communities.¹⁶

Measuring the impacts of the transition to regenerative practices, and practicing with new forms of financing, such as blended finance...¹⁷

...technology, finance, logistics, training, regulation and monitorization.¹⁸

Participants discussed that access to healthy and sustainable diets is dependent on the accessibility of sustainable production technologies, especially for small and medium producers that still lack the basics such as access to credit.¹⁹

Across all sectors adaptation, response and preparedness mechanisms needs to be nutrition sensitive and gender responsive. The GoB should play the leadership role while designing and implementing actions in line with national programming and planning while ensuring complementarity to government budgeting.²⁰

1.Support from a wide range of institutions and sectors is important a .from the top down: policy support and the development of regulations in the relevant markets are important b. from the bottom up: the promotion of food-related education and advocacy at a societal level is also important c. In addition, financial support is also needed in some cases.²¹

Help SMEs get financial support from the government. Compared with large businesses and government-owned enterprises, SMEs have limited access to finance because many banks prefer to allocate their resources to large enterprises rather than to SMEs.²²

Finance construction of transport and logistical infrastructure facilities to create upper links of value chains, technical equipment and provision of life for Indigenous People to maintain traditional forms of economy and preserve their way of life.²³

Some suggested that funding support was needed in order to ensure meaningful participation of civil society groups in the Summit.²⁴

Provide the resources, financial support, and information needed for communities to create their own thriving food systems.²⁵

¹⁵ 389:81 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹⁶ 389:93 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹⁷ 389:114 p 9 in 431_June_22_21_CEBOS_EMBRAPA

¹⁸ 389:126 p 10 in 431_June_22_21_CEBOS_EMBRAPA

¹⁹ 389:138 p 10 in 431_June_22_21_CEBOS_EMBRAPA

²⁰ 392:7 p 7 in 434_June_02_21_Hanan_KA

²¹ 393:23 p 8 in 435_June_08_21_FAO_ICC_UNFSS

²² 393:37 p 10 in 435_June_08_21_FAO_ICC_UNFSS

²³ 394:50 p 11 in 436_June_16_21_GIYC_Multi

²⁴ 395:15 p 9 in 437_June_16_21_Collin J

²⁵ 404:36 p 8 in 445_May_26_21_CLEI USA

Put grants in place to make properties available and accessible.²⁶

...collaboration between researchers and other stakeholders and increased funding to allow the research results to be implemented on the ground...²⁷

Budgets also contribute to the sustainability of food systems, when it comes to fighting hunger, and developing stronger health systems, it is important to first understand it as a very comprehensive approach. Allocating budget to specific areas of the system is not sustainable in the long run because the system will no longer be symmetrical.²⁸

Panelists also spoke at length about the need for policy to consider equity and social justice concerns. Key points from this discussion included: When looking at the sustainability of our food systems it is important to look at problems through a gender lens. We can not continue thinking that women can be left behind because women and girls are an indispensable part of our economies, politics, and agriculture. In fact, there is data that shows if women are included in food systems we can have 30% growth in the sector. There need to be more policies that support women financially, such as taxes and subsidies to get women involved. Economic inequality leads to different issues in food systems around the world, including problems such as obesity, even in the Global North. Different countries around the world have different capacities to implement sustainable food systems.²⁹

It is important to ensure that intergenerational equity, youth, justice and fairness, equity, gender, resilience, and diversity are values at the center of conversations as they are important for funding flows to support deeper values.³⁰

Making finances available and accessible to reorienting the financing arrangements for the young people.³¹

Promote auto-financing mechanisms in African countries.³²

Establish financing mechanisms that support research for local development.³³

Further, access to financing; for infrastructure, inputs are critical to enable enterprises to become sustainable.³⁴

Beyond government, private sector needs to take action to bring financial and allied services closer in an affordable manner.³⁵

²⁶ 404:41 p 9 in 445_May_26_21_ICLEI USA

²⁷ 407:15 p 6 in 448_Feb_25_21_IFAD_Multi

²⁸ 410:16 p 7 in 451_Apr_06_21_IFAD_Multi

²⁹ 410:17 p 7 in 451_Apr_06_21_IFAD_Multi

³⁰ 411:30 p 7 in 452_Apr_27_21_IFAD_Multi

³¹ 414:16 p 6 in 455_May_14_21_Ekwamu_A

³² 414:20 p 6 in 455_May_14_21_Ekwamu_A

³³ 414:21 p 6 in 455_May_14_21_Ekwamu_A

³⁴ 415:14 p 6 in 456_May_17_21_Ekwamu_A

³⁵ 415:15 p 6 in 456_May_17_21_Ekwamu_A

1. Government: Making available food waste focused funding streams (once it is clearly defined—see Immediate Actions, No. 1 below). 2. Business: Promote maintenance of profitability and innovation.³⁶

Engaging women, youth, and vulnerable or marginalized communities and enhancing their access to finance, risk management, entrepreneurship, and other opportunities.³⁷

Providing financial resources allocated to ensure engagement of impacted communities.³⁸

Address challenges facing women farmers, such as lack of access to land, financing, markets, agricultural training and education, suitable working conditions, and equal treatment.³⁹

Implementation on initial foodscape in North West India, through the support of the Bezos Earth Fund.⁴⁰

9. Increase economic opportunity to allow advancement for each farming generation. Greater opportunity will reduce the stigma of harsh labor that keeps people from staying with farming or starting to farm, which could improve lives.⁴¹

Granting systems could be a catalyst to bring this together.⁴²

Mama programme - supports women to distribute their product through building an inclusive supply chain and access to market and training and finances.⁴³

Capacity building in terms of market access. Establish data driven programs to enable women to grow profitable products Finance- structure right finances to look at the cycles between payment of loans and farmers' harvest time Digitalization- establish easy platforms such as USSD platforms that share information such as market information on pricing, consumer products demand and extension support.⁴⁴

Development partners are key in mobilising resources and financing the strategic activities for the food systems.⁴⁵

Farmers cannot access to low interested loan (2-6% interest, special loan) which are offered by the different Bank due to Bank needs different mortgage if any farmer want to take loan. Farmers cannot manage the mortgage so that they cannot get the loan for

³⁶ 427:13 p 8 in 468_June_18_21_Mayne A

³⁷ 428:9 p 6 in 469_June_17_21_de Silva R

³⁸ 428:47 p 7 in 469_June_17_21_de Silva R

³⁹ 429:120 p 7 in 470_June_17_21_Burian_Multi

⁴⁰ 429:169 p 11 in 470_June_17_21_Burian_Multi

⁴¹ 429:222 p 15 in 470_June_17_21_Burian_Multi

⁴² 429:275 p 19 in 470_June_17_21_Burian_Multi

⁴³ 430:36 p 10 in 471_June_08_21_van Liere M

⁴⁴ 433:13 p 7 in 474_June_18_21_Matu_Opiyo

⁴⁵ 448:15 p 6 in 388_May_03_21_Kambewa_D

quality produce production for marketing. The government can advise to Bank to flexible the issue.⁴⁶

4. Improved access to finance and Market access has emerged as a cross-cutting solution across all five ACTION TRACKS.⁴⁷

*Recommendation 5: facilitate procurement and access to finance for school meals suppliers Who: Farmers' organisations supplying food, buyers, donor organisations, bank and non-bank financial institutions. How: identify and provide information on bank and non-bank financial entities that have as services "bank guarantee credit lines for food suppliers" that allow the financing of suppliers that have signed contracts with buyers at the school level.*⁴⁸

*Recommendation 6. Reduce tax, allow lower tariffs and less charges on products for producers and consumers to ensure fairer prices (customs unions and governments) Who: national governments and customs unions How: it is necessary to reduce taxes and remove unnecessary trade procedures and cost from products. To achieve this, actors like customs unions and governments should find actionable solutions and measures. Trade should be used to promote sustainable development, and improvement of production systems with producers at its core.*⁴⁹

*Recommendation 4: promote development of green finance to contribute to the development of agroecology. Who: UN, development banks, national governments How: The UN has created a line of financing contributing to sustainable development by mitigating the effects of climate change. Development banks at the national level also manage this financial model, which needs to be made more widely accessible to national level agroecological producers.*⁵⁰

*Proposed systemic interventions included: 1) establishment of contract-growing arrangements to clearly set the capital requirements for production; and 2) cooperative set-ups serving as loan-conduits, including consolidators, whole facility managers, boards and other entities focused on warehousing, distribution, marketing, and sales.*⁵¹

*A previous study conducted by IISLA, which mapped out the flow of capital globally and domestically, suggests that there is an abundance of capital circulating in the market. The challenge, however, is bridging that capital so it can reach and be utilised by investment-ready agripreneurs at affordable rates. Efficient channels for capital to reach smallholder farmers and MSMEs whilst ensuring that these small-scale businesses effectively manage their finances must therefore be in place.*⁵²

⁴⁶ 450:42 p 10 in 391_May_31_21_FAO_Multi

⁴⁷ 455:38 p 10 in 063_Mar_04_21_Nanavaty_Multi

⁴⁸ 457:104 p 18 in 120_Apr_27_21_Mauderli_U

⁴⁹ 458:86 p 22 in 123_May_04_21_Mauderli_U

⁵⁰ 458:99 p 27 in 123_May_04_21_Mauderli_U

⁵¹ 460:81 p 7 in 131_May_25_21_IISLA_Ventures

⁵² 460:115 p 17 in 131_May_25_21_IISLA_Ventures

Fourth, there is a strong call for new forms of finance, new partnerships, and new business models. Some of these have already been initiated: for example, new forms of finance have been developed to support food systems in rapidly emerging economies, and new partnerships are emerging between the public and private sectors. At the same time, the private sector is increasingly looking at how to best serve farmers. As a summary of this discussion, the closing speaker reminded the need to support civil society organizations and farmers – who are key stakeholders driving change – as well as the need to unlock capacity and finance to scale up new innovation business models.⁵³

Finally, the group talked about the challenges of living in capitalism and ways to overcome or mitigate those challenges. Some options were discussed like a universal basic income as well as time banks and other alternative economies.⁵⁴

Time banking, as well as the Food Corps program being offered by the Eco Just Food Network, were discussed. Some of the concerns around time banking were issues around trust, reciprocity, as well as the difficulty of getting folks to move away from values based on our current economic system.⁵⁵

Group 1: Time Banking & Alternative Economies This group started with an overview of the Eco Just Food Network's Food Corps program, which connects folks from urban communities to rural farmers in need of help. This led to a discussion of the program's use of a time bank, as well as of how that time bank connects to the St. James Town Community Co-op's time bank. The reciprocity of this relationship, as well as reciprocity as one of the foundational concepts of time banking was also discussed. The group also talked about how living inside a capitalist system shapes our attitude towards work such that we need these alternative economic systems to make it easier for us to recognize and reward the labour that keeps our communities and our food system going.⁵⁶

Increased support and funding to help farmers through the organic transition process is needed. Increased capital and technical assistance is needed, and more research on organic agriculture needs to be underway. Extension support will help us understand on-farm challenges and solutions, and science-based information and tools need to be more accessible.⁵⁷

Some panellists found that government financing and investments from philanthropists can aid in the transformation. For better transformation, it was found that healing frameworks should be used and implementation of intergenerational knowledge and knowledge transfer.⁵⁸

Some participants felt that in addition to climate change adaptation and resilience - more emphasis needs also to be placed on how smallholder food systems can frequently outcompete industrial agriculture in terms of climate change mitigation - and that

⁵³ 463:5 p 6 in 155_Apr_27_21_FCDO_Multi

⁵⁴ 464:17 p 8 in 185_Apr_14_21_Local Farm_Multi

⁵⁵ 464:23 p 11 in 185_Apr_14_21_Local Farm_Multi

⁵⁶ 464:25 p 13 in 185_Apr_14_21_Local Farm_Multi

⁵⁷ 468:48 p 7 in 219_May_10_21_OTA

⁵⁸ 472:12 p 6 in 241_May_19_21_IFAD_Food Tank_Multi

smallholder farm organizations ought to be channels for climate mitigation programmes such as REDD+ - rather than all the finance ending up with brokers and consultants.⁵⁹

Elimination of poverty and food insecurity Have tax credits to procure local purchases; buy local; support polyculture; governments need to commit to food security and to understand the desire of Canadians to grow local and eat local; strengthen the link between climate change and food insecurity.⁶⁰

...providing small-scale female farmers and business leaders with access to finance (e.g. through hatching programs).⁶¹

First, governments have an important role to play in guiding the public and private sector towards healthy food through taxes, policies, funding, etc.⁶²

There is a need to focus on improving economic conditions, food access and living wages to work towards a future of equitable livelihoods.⁶³

...need upfront money to purchase the starter materials, else it puts huge stress due to loans and interests.⁶⁴

Underpinning all of this is that is the need for governments to create a supportive framework for SMEs in a sector where producers (i.e., smallholder farmers) tended to be in the informal economy and therefore invisible and unaccounted for. Governments have to also create legal frameworks that make it easier for them to operate, transact, and access credit.⁶⁵

For input marketing, improvement in the supply of new varieties of cocoa seed, mechanized equipment, security of cocoa land and availability of trained extension officers and availability of credit facilities were called for.⁶⁶

Ensure public and private finance only supports the transition toward nature-positive regenerative farming practices.⁶⁷

Access to jobs and job creation

Create a clearer career trajectory to entice young farmers to enter the agricultural workforce and start the regeneration process.⁶⁸

⁵⁹ 473:24 p 8 in 244_June_09_21_Macqueen_Multi

⁶⁰ 476:18 p 8 in 264_May_06_21_Arrell Food_Multi

⁶¹ 485:22 p 6 in 288_May_20_21_GAN_Multi

⁶² 486:63 p 12 in 291_May_21_21_Polman_Prabha

⁶³ 487:42 p 10 in 293_May_22_21_City of San Antonio

⁶⁴ 492:21 p 7 in 302_June_01_21_FAO_ICC_Multi

⁶⁵ 494:13 p 6 in 308_June_09_21_FAO_Pinduoduo_Multi

⁶⁶ 499:22 p 6 in 394_June_01_21_Egyir I

⁶⁷ 501:66 p 12 in 397_June_04_21_WHO_Multi

⁶⁸ 383:6 p 7 in 425_June_30_21_CIPS

Establishment of hands-on practical units and stations within training institutions to support livelihoods, youth employment and agri-production,⁶⁹

The localized food system also helps to create employment locally, so that children are no longer left behind.⁷⁰

Discussion topic : Fair trade policies: Import, export and tax regimes in countries will allow farmers to focus on products that are competitive on national, regional and international markets. Recommendation 1: address urban migration by developing rural areas and providing the youth and women (gender mainstreaming) with meaningful jobs and income Who: policy makers, private sector How: this can be achieved by developing rural areas and decentralizing the rural system in order to address urban migration, by providing especially the youth and women (gender mainstreaming) with meaningful jobs and a fair income. The producers should be well organised to contribute to the rural development and be competitive in the food systems that affect them.⁷¹

Digital/automated agriculture: high tech, data-driven. The group discussed the need to embrace helpful technology while also fostering employment and keeping a sacred connection to the land, this being particularly true for communities in Northern Canada.⁷²

Implement youth economic empowerment programs to reduce high unemployment rate among youth in the region.⁷³

We can advance equitable livelihoods in the food system by supporting local markets for local farmers to earn quality incomes; by marketing agriculture and creating more enticing jobs within the agriculture industry and utilizing more homemade products to support Caribbean food sustainability rather than depending on imported food.⁷⁴

Facilitate access to agricultural lands for young women • Promote and support women and youth participation in value chains by providing capital and financing mechanisms to invest in agriculture, as well as creating job opportunities and developing needed skills such as negotiation and project management.⁷⁵

Africa's rural areas and food systems will have to play a bigger role in absorbing young job seekers than they did in other regions, given the continued growth of rural populations.⁷⁶

⁶⁹ 414:28 p 6 in 455_May_14_21_Ekwamu_A

⁷⁰ 444:25 p 10 in 027_Feb_02_21_CBCGDF_UNFSS

⁷¹ 457:109 p 22 in 120_Apr_27_21_Mauderli_U

⁷² 464:21 p 11 in 185_Apr_14_21_Local Farm_Multi

⁷³ 33:5 p 6 in 077_Mar_09_21_ESCWA_FAO

⁷⁴ 37:85 p 11 in 095_Mar_27_21_Chinapoo C_Multi

⁷⁵ 38:51 p 10 in 096_Mar_29_21_ESCWA.

⁷⁶ 57:4 p 4 in 005_Dec_11_20_Aggrey J

Focus on broad-based growth, not just on youth, to create an economic environment in which food system businesses can thrive and generate jobs for both young and old.⁷⁷

...provide decently rewarded employment across the supply chain, with skills and training. Action to be taken by Business owners, and Government.⁷⁸

In order for food systems to be more inclusive, sustainable and healthy, further efforts are needed to 1) create jobs, 2) raise incomes across food value chains, 3) reduce risks for those most marginalized within the system, and 4) increase value distribution.⁷⁹

It was highlighted how the absence of an articulation of shareholders does not allow overcoming the challenges the region faces. Therefore, addressing the issues of rural development from a more holistic perspective is considered important, which should result in better training, access to basic services, and new jobs.⁸⁰

This also underscores the importance of farming as a creator of jobs, which ensures the permanence of inhabitants in their territory...b. The role rice plays in Uruguay and its social aspect: It creates 30,000 direct and indirect jobs, provides genuine work, improves the quality of life in cities and towns, and stimulates science and technology.⁸¹

The goal of restructuring is not just to make these value chains inclusive, but also equitable, to eliminate poverty through better jobs, better incomes and value distribution, and the reduction of risks for small-scale producers without compromising the environment.⁸²

Farm families will also need to have better, more flexible off-farm employment opportunities, in particular attractive employment opportunities in well-serviced rural digital hubs.⁸³

Promote agricultural enterprise development with policy reform on labor wages and employment opportunities in agriculture. Need options to address seasonality of labor in agriculture.⁸⁴

Promotion of jobs in agriculture will also contribute to the food systems.⁸⁵

Attract young people to farmers, cultivating and incentivizing youth to work in the rural environment.⁸⁶

⁷⁷ 57:7 p 4 in 005_Dec_11_20_Aggrey J

⁷⁸ 57:10 p 5 in 005_Dec_11_20_Aggrey J

⁷⁹ 58:6 p 6 in 006_Dec_16_20_UNDESA

⁸⁰ 91:21 ¶ 83 in 186a_Apr_15_21_Caballeros_eng

⁸¹ 99:11 ¶ 70 – 71 in 258a_Apr_23_21_IICA_eng

⁸² 105:26 pp 21 – 22 in 007a_Dec_18_20_NAAGD

⁸³ 114:40 p 9 in 074_May_18_21_O'Mara_Teagasc

⁸⁴ 124:18 p 6 in 135_June_08_21_Calub_Gregorio

⁸⁵ 160:87 p 12 in 278_May_18_21_Gregorio B

⁸⁶ 166:67 p 10 in 300_May_27_21_Alesso_Pommeret

Creation of direct and indirect jobs, which makes it possible to have a dynamic at the level of the territories and therefore to locally create purchasing power.⁸⁷

Food systems should be able to create many types of jobs.⁸⁸

Provide employment and business opportunities for refugee youths.⁸⁹

Focus efforts on making value chains inclusive through the generation of decent employment and improving resilience through social protection.⁹⁰

Emphasis on Agricultural diversification and rural employment generation and enhanced agro-based economic activities.⁹¹

Promoting local agro-processing industry to increase employment opportunities for youth in villages & reducing migration to urban areas.⁹²

An important part of this work has been around community and socioeconomics as they have seen the loss of fellow farmers so they aimed to build a process that could employ and retain more people in rural communities.⁹³

However, as a main conclusion all participants agreed that the participatory and inclusive coalition building process under the UNFSS is a promising step ...to generate the momentum for identifying and supporting initiatives to bring about the food systems transformation needed to create employment opportunities for rural youth, particularly in agri-food systems and emerging green sectors and to support the empowerment of youth to productively contribute to and benefit from sustainable rural livelihoods.⁹⁴

Universities in Africa can trigger food systems transformation to ensure safe and nutritious food for all, shift to sustainable consumption, boost nature-positive production, promote full and productive employment, as well as build resilience to vulnerabilities, shocks and stress.⁹⁵

There is a huge opportunity to use climate change adaptation and ecosystem restoration as a source of jobs creation. It is far more economical to create a job in ecosystem restoration, than to create one in construction, which is the typical recovery program. This approach to green growth could help to create and support essential livelihoods in the wake of the pandemic.⁹⁶

⁸⁷ 167:19 p 8 in 304_June_02_21_FAO_Multi

⁸⁸ 183:21 p 9 in 338_May_27_21_UNHCR

⁸⁹ 183:23 p 9 in 338_May_27_21_UNHCR

⁹⁰ 189:14 p 6 in 344_May_30_21_COAST

⁹¹ 189:15 p 6 in 344_May_30_21_COAST

⁹² 245:14 p 7 in 478_June_19_21_SEWA

⁹³ 252:14 p 8 in 485_June_22_21_Levesque_SD

⁹⁴ 275:4 p 6 in 508_June_30_21_GDPRD

⁹⁵ 279:2 p 6 in 512_July_01_21_Malawi President_Ekwamu

⁹⁶ 305:11 p 7 in 538_July_09_21_IDS_Multi

Private sector must be part of recovery efforts, with a clear role to play in provision and distribution of nutritious and affordable food, in new modes of production that supports climate resilience. There is a huge opportunity to use climate change adaptation and ecosystem restoration as a source of jobs creation, and green growth could help to create and support essential livelihoods in the wake of the pandemic.⁹⁷

Impact of male out migration from rural areas: In pre-pandemic situations, insufficient local opportunities contributed to the phenomenon of male out migration, which in turn increased the vulnerability of female-headed households. With COVID-19, migrants who have lost employment in urban areas began to return back to their communities, which were not equipped to reintegrate them, and this phenomenon disrupted the social norms that had been developed to cope with male out migration. For both situations, rural job generation was viewed as a potential solution.⁹⁸

While regular added labor may be waning directly for farm-paid employment, production agriculture remains resilient for jobs in other areas along the supply chain or Jobs, which have remained available and abundant in on-farm professional services (most of which are locally-connected in rural communities), such crop and field consultancy, animal health and nutrition services and consultancy, environmental compliance services and consultancy, legal consultancy, accounting and financial management services and consultancy, laboratory testing services o Jobs in development, engineering, and manufacturing of technology and equipment o Jobs in agricultural product manufacturing and distribution, such as seed, soil amendments, fertilizer, animal health, pest management or Jobs in on-farm infrastructure, such as fences and grain bins (many of which are from locally-based, rural businesses) o Jobs in processing and production that may be suitable for rural communities.⁹⁹

The creation of jobs and income to reduce poverty through the diversification of agricultural and non-agricultural employment and the development of infrastructure is essential: at this level it is necessary to support and to reinforce the entrepreneurial vision of youth as well as support for the poorest families in rural just as in urban zones and extra urban zones for the creation of micro-gardens and micro-orchards in order to improve the food security of households.¹⁰⁰

There are structural problems related to food access, especially the current poverty situation in the country; approximately 20% of the population lives in poverty, which prevents access to decent food - jobs need to be created in order to encourage the country's economic growth.¹⁰¹

The goal of restructuring is not just to make these value chains inclusive, but also equitable, to eliminate poverty through better jobs, better incomes and value distribution,

⁹⁷ 305:26 p 10 in 538_July_09_21_IDS_Multi

⁹⁸ 316:32 p 11 in 549_July_14_21_Meah N

⁹⁹ 339:16 p 5 in 494a_June_23_21_US Farmers

¹⁰⁰ 341:6 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

¹⁰¹ 354:8 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

and the reduction of risks for small-scale producers without compromising the environment.¹⁰²

Private sector must be part of recovery efforts, with a clear role to play in provision and distribution of nutritious and affordable food, in new modes of production that supports climate resilience. There is a huge opportunity to use climate change adaptation and ecosystem restoration as a source of jobs creation, and green growth could help to create and support essential livelihoods in the wake of the pandemic.¹⁰³

We need much more investment in the food system, and we need access to jobs and at least minimal social protection for those affected by hunger.¹⁰⁴

Improving agricultural value chains plays a critical role in rural reinvigoration: improving access to inputs, building storage and processing facilities, strengthening transportation systems and broadening market access through stakeholder linkages, digital platforms, and demand-driven production. Mitigating the impacts of male out migration through rural job generation, strengthening social safety nets, and safeguarding farmers' incomes through the enforcement of minimum standard pricing and the promotion of domestic production can also contribute to rural reinvigoration.¹⁰⁵

Focus on broad-based growth, not just on youth, to create an economic environment in which food system businesses can thrive and generate jobs for both young and old.¹⁰⁶

Environment and climate smart investment

Provide financing to private institutions on projects that adopt sustainable production systems and establish new consumption behaviors that take into account the requirements of sustainability and waste reduction • Increase investment in innovation and logistics systems such as climate-smart agriculture and improve post-harvest operations, infrastructure, packaging and cooling centers to reduce food waste and loss.¹⁰⁷

We not using what we have (natural resources). Make use of our natural resources. Use solar energy and reserve energy for other things. There is a need to invest in and support greater deployment of energy and water efficiency technology. Global funds and grants should target and support investments that address the nexus The circular economy models and principles and opportunities will be critical in navigating and addressing issues across the nexus.¹⁰⁸

¹⁰² 105:26 pp 21 – 22 in 007a_Dec_18_20_NAAGD

¹⁰³ 305:26 p 10 in 538_July_09_21_IDS_Multi

¹⁰⁴ 197:11 p 8 in 352_June_04_21_Troughton J

¹⁰⁵ 316:11 p 6 in 549_July_14_21_Meah N

¹⁰⁶ 57:7 p 4 in 005_Dec_11_20_Aggrey J

¹⁰⁷ 38:31 p 8 in 096_Mar_29_21_ESCWA

¹⁰⁸ 52:4 p 6 in 087_Mar_20_21_Chinapoo C_Multi

Investors and donors should prioritize climate-smart investments across food systems and value chains. Green bond issues, carbon credits, and sequestration should create income for farmers to cover the cost of transition to more sustainable agriculture.¹⁰⁹

Factoring in climate risk within business operations can help create the business case for climate action.¹¹⁰

Some climate policy initiatives were also mentioned, as well as the global innovation Lab for climate finance, which seeks to develop blended finance for mitigation and adaptation. This example was highlighted as an effective way to know what type of work could be better. In this case, for example, some models have been shown as useful to bring some capital market players into investment in agriculture. The ideal state would be to coordinate with industry/national advisory boards to develop and adopt generally-accepted climate/natural capital accounting and valuation methodologies; climate-related financial risk disclosures.¹¹¹

Support school feeding programs at scale, as well as investments that are cognizant of climate change and the pandemic recovery needs.¹¹²

A call for the establishment of a Financing Facility for Food Security in Africa, to scale up climate-resilient and successful agricultural technologies and strengthen commodity value chains for both staple food and cash crops.¹¹³

Center climate change in all decisions and support SSF communities in preparing for climate change impacts with funding, capacity building initiatives, and increased access to data on impacts.¹¹⁴

The development of methane abatement solutions, such as red seaweed, could be a major gamechanger. Uptake of renewable energy and electric vehicles would also help reduce emissions across the value chain.¹¹⁵

There is need to improve understanding of stakeholders needs and potential adopt and/or scale up climate-smart and nature-positive innovations for agriculture.¹¹⁶

One such innovation that also promotes biodiversity conservation is the nursery agribusiness. Maybe the government can invest in the multiplication of plant varieties that are resistant to climate change and local varieties, particularly in seed development.¹¹⁷

¹⁰⁹ 61:32 p 7 in 020_Jan_26_21_IFAN

¹¹⁰ 120:44 p 11 in 117_Apr_22_21_Dinesh D_Multi

¹¹¹ 120:61 p 12 in 117_Apr_22_21_Dinesh D_Multi

¹¹² 153:25 p 7 in 253_Apr_29_21_AFDB_Multi

¹¹³ 153:38 p 9 in 253_Apr_29_21_AFDB_Multi

¹¹⁴ 158:24 p 6 in 272_May_12_21_Battista W

¹¹⁵ 159:16 p 6 in 275_May_13_21_Dornom H

¹¹⁶ 161:12 p 6 in 279_May_18_21_Yoovatana M_Multi

¹¹⁷ 161:21 p 8 in 279_May_18_21_Yoovatana M_Multi

To achieve climate mitigation in cropping systems, increased conservation agriculture practices and nature based solutions need to be implemented.¹¹⁸

In particular, crop zoning that recognizes natural resource availability and climate stress, both presently and in the future, can be used to better inform cropping decisions and support to successfully develop value chains.¹¹⁹

Investing in solar for irrigation and food processing has good potential and need more development.¹²⁰

Investing in Artificial Intelligence for Climate Risk Profiling to expand early action financing, enhance early warning systems and upgrading the capacity to act.¹²¹

Mainstreaming the climate impact- invest needed for new agricultural seeds that would be stress tolerance.¹²²

Establishing innovative financing mechanisms to provide farmers and other stakeholders with access to capital, including climate finance.¹²³

Invest in agricultural production that integrates restoration actions (positive conversion) of ecosystems.¹²⁴

Participants also identified an opportunity for small and medium size enterprises to leverage shorter, more agile supply chains. A key component of sustainable food business is paying farmers a better-than-fair wage while also providing accessibility to consumers. Small and medium-sized businesses are at a disadvantage in terms of economies of scale, but they can reduce intermediaries in the supply chain to maximize return to farmers, allowing farmers to invest in sustainable initiatives such as reforestation efforts or pollinators habitats. In this way, small businesses can chart the path forward for larger, more established companies and supply chains.¹²⁵

The need for a global nature-positive target by 2030: although there is no silver-bullet, the climate movement's playbook is being applied to nature-related challenges, including calls for a global COP, and standardised and rigorous investment frameworks.¹²⁶

Loans and financing for investment and working capital, with grants for the transition from conventional production systems to agroecological systems. Provide special financing for the transition phases and what this implies given that these are periods in

¹¹⁸ 177:17 p 6 in 332_May_24_21_FAO_UNDP

¹¹⁹ 177:27 p 6 in 332_May_24_21_FAO_UNDP

¹²⁰ 177:29 p 6 in 332_May_24_21_FAO_UNDP

¹²¹ 186:111 p 16 in 341_May_28_21_Sewraj_KS

¹²² 189:8 p 6 in 344_May_30_21_COAST

¹²³ 274:22 p 7 in 507_June_30_21_AKADEMYA2_FANPRAN

¹²⁴ 304:42 p 8 in 537_July_08_21_ANP_WWF

¹²⁵ 319:17 p 8 in 553_July_15_21_Food Tank_Oatly

¹²⁶ 329:12 p 7 in 563_July_20_21_ClimateWorksAustralia

*which maximum productivity is not reached while these changes are being implemented.*¹²⁷

*Financing from the national budget of systems for measuring and certifying the benefits of the systems implemented to act on climate change.*¹²⁸

*Tax benefits for biological supplies for soils, fertilization, plant/animal health. • Invest at least 1% of the budget in agriculture, and half to FA.*¹²⁹

Finance derisking

*...increase access to land and capital, connect younger farmers to the land, address their property issues making sure that land is deeded to someone, build strong partnerships with 1890 Land grant Institutions and community NGO organizations.*¹³⁰

*The expansion of access to credit for sustainable systems;*¹³¹

*Panellists believe that finance itself does not unlock investment opportunities, and thus good investment opportunities must have not only funding, but be well designed, prepared and de-risked.*¹³²

*African governments need to start funding their own institutions as this will enable Africans to set their own priorities including revisiting/valuing own indigenous knowledge and practices (sustainable practices).*¹³³

*Providing financial support and climate risk finance and transfer mechanisms to protect farmers and allow them to take risks and move toward more sustainable and resilient practices.*¹³⁴

*Enhancing gender-responsive climate and disaster risk finance and transfer; closing the gender gap in financial inclusion and facilitating women to own and scale up businesses.*¹³⁵

*Explore payments for ecosystem services.*¹³⁶

*Leveraging public funding to promote private financial investments, such as concession financing and de-risking.*¹³⁷

¹²⁷ 343:29 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

¹²⁸ 344:18 p 12 in 408a_June_11_21_COPROFAM_CLOC_Eng

¹²⁹ 350:21 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

¹³⁰ 356:41 p 6 in 409_June_13_21_Mone S

¹³¹ 389:109 p 9 in 431_June_22_21_CEBOS_EMBRAPA

¹³² 411:15 p 6 in 452_Apr_27_21_IFAD_Multi

¹³³ 425:23 p 6 in 466_June_17_21_Ekwamu A

¹³⁴ 428:17 p 6 in 469_June_17_21_de Silva R

¹³⁵ 428:19 p 7 in 469_June_17_21_de Silva R

¹³⁶ 429:119 p 7 in 470_June_17_21_Burian_Multi

¹³⁷ 429:175 p 12 in 470_June_17_21_Burian_Multi

De-risking food systems through innovation - making progress with climate and information systems.¹³⁸

Create tax incentives to bring new technologies for famers, such as no-till farming, that will mitigate the risk for farmers.¹³⁹

It was suggested that NGOs could fill this gap by acting as loan conduits if banks would give them good (lower) interest rates. Having worked with farmers for so long, NGOs would be in a better position to facilitate and manage collateral-free lending. In reality though, banks do not lend to NGOs and would rather pay the penalties for not complying with the required allocation.¹⁴⁰

Food equity will include increasing income for small farmers; favouring farmers more as participants, and consumers less so, with more accessible financing and easing capital flows to farmers directly.¹⁴¹

De-risk Agriculture to make it attractive to financiers.¹⁴²

One SME felt that although the barriers to access funding should be reduced to stimulate innovation, it may be beneficial to structure them as loans rather than grants.¹⁴³

Access to capital or proactively accessing grants if you're doing beneficial things, help value chains have access to consumer data. Upcycling groups and consumer oriented groups said there has to be a level playing field to get data and educate consumers.¹⁴⁴

Establish strong SSF organizations so that they are able to provide service to members with governments and other organizations supporting them with access to finance, pre and post-harvest facilities, capacity building, fishing technologies for marine and fresh water resources.¹⁴⁵

Financing regimes should include ongoing coaching, mentorship and advisory support to help de-risk projects and encourage strong partnerships in design, execution, monitoring and improvement of science based, data inclusive, high impact mitigation, adaptation and resilience projects.¹⁴⁶

Government coordination and public finance to de-risk investments from the private sector • “Green growth” business transition, incubation and acceleration support for local entrepreneurs and businesses.¹⁴⁷

¹³⁸ 429:180 p 12 in 470_June_17_21_Burian_Multi

¹³⁹ 429:223 p 15 in 470_June_17_21_Burian_Multi

¹⁴⁰ 460:116 p 17 in 131_May_25_21_IISLA Ventures

¹⁴¹ 486:82 p 13 in 291_May_21_21_Polman_Prabha

¹⁴² 489:24 p 7 in 297_May_26_21_FAO_ICC_Multi

¹⁴³ 495:22 p 7 in 309_June_10_21_ICC_EIT_Multi

¹⁴⁴ 497:37 p 7 in 314_June_16_21_ICC_US Farmers_Multi

¹⁴⁵ 503:33 p 7 in 399_June_9_21_AFA_Multi

¹⁴⁶ 37:43 p 7 in 095_Mar_27_21_Chinapoo C_Multi

¹⁴⁷ 39:16 p 8 in 097_Mar_30_21_EcoAgriculture Partners

*...to “enable agricultural trade” it would be important to de-risk participation of smallholder farmers in GVCs, deploying adequate trade finance, technical support to meet standards in export markets, increased investment in infrastructure to support smallholder farmers with low rates of commercialization...*¹⁴⁸

*Increasing the funding facilities available to smallholder farmers will require amongst other things, the commercial aggregation of farmers, access to a well-structured data management system, the development of farmer-centric insurance products to hedge risks, the deployment of both traditional and innovative sources of finance and incentivizing financial institutions to fund the sector.*¹⁴⁹

*It underlined the importance of bridging the financing gap for these small and medium-scale entrepreneurs and the fact that this requires working both on the "demand side" of finance - particularly through effective platforms and initiatives to support access to information and skills development (including financial skills development) for young (aspiring) entrepreneurs, and on the "supply side", through better use of de-risking capital, shared metrics to assess investibility of new or existing enterprises, and better coordination among lenders and investors.*¹⁵⁰

*There is need for much greater focus on de-risking by reducing transaction costs associated with financing small scale enterprises and young entrepreneurs, strengthening due diligence to increase the chances of successful investments, educating investors, and improving value chain functioning and risk-sharing across value chain actors - rather than only on financial de-risking of specific transactions.*¹⁵¹

*To get private sector engaged Government can and needs to play the role of catalyst and specifically focused on risk reduction, not just investment risk but also government stability within and across regions as the agriculture sector is highly fragmented, with diverse and context specific production, financial and investment costs.*¹⁵²

*We need to appreciate the various sources of risk in the natural as well as institutional environments and address these as well. Similarly, shocks to the market from both domestic and international sources can result in price volatility. This directly affects the economic returns from agriculture, the livelihood of farmers, and in the long run, the capacity of farmers to invest and innovate. Derisking private sector financing could mobilize, an estimated, over \$2 trillion of private capital towards food system transformation.*¹⁵³

*Blended Finance models: de-risking the new partnerships and innovative business models such as the Global Agriculture and Food Security Programme (GAFSP).*¹⁵⁴

¹⁴⁸ 40:1 p 6 in 101_Apr_1_21_Doaa A

¹⁴⁹ 46:9 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

¹⁵⁰ 48:6 p 6 in 049_Feb_23_21_SAFIN_Multi

¹⁵¹ 48:16 p 9 in 049_Feb_23_21_SAFIN_Multi

¹⁵² 61:22 p 6 in 020_Jan_26_21_IFAN

¹⁵³ 61:42 p 4 in 020_Jan_26_21_IFAN

¹⁵⁴ 65:39 p 9 in 037_Feb_12_21_Food Systems for the Future_Multi

...to farmers: o incentivize small-holder farmers to food system transformation by ensuring that they have a sufficient maneuvering space to take risk and change the way they operate (currently, they have a small profit margin (1-2%), so making changes requires taking relatively large risks compared to other food system players).¹⁵⁵

One should pay attention to what is produced and how it is produced in order to save natural resources and species. For example, could new species replace rice, and could animal protein be replaced with plant-based protein? Encouragement towards agroecological and other environmentally friendly methods should be increased in order to reduce environmental damage. These are often location-based and require strong know-how to invest in. As any change in methodology is a potential risk for the farmer, the change processes must be supported and de-risked for sustained transition to take place.¹⁵⁶

Financing directed to cooperation and local product development as well as to the development process of smallholders. Finance instruments that advance practical problem solving, development and enable long-term multi-actor cooperation.¹⁵⁷

Strive for innovations: Research and funding are needed to address environmental challenges — including identifying and measuring the impact of specific innovations. Small farmers in particular need access to this research and funding. Governments can incentivize and invest in researching sustainable and innovative practices.¹⁵⁸

Their impact can be maximized by being targeted about the way in which these tools are deployed (e.g., to crowd-in private sector financing, not crowd it out), by intervening in the segments of the economy where they have the greatest comparative advantage (e.g. in de-risking private capital, in serving bankable clientele, etc.), and by ensuring their own robust governance.¹⁵⁹

Objective is: (1) to mobilize private investment in agriculture (PDBs as issuers of green bonds); and (2) redeploy that capital through green financial products to incentivize best practices on the ground and de-risk investments.¹⁶⁰

...development and issuance of integrated services and green financing instruments (e.g. insurance, advisory/extension services, etc.) to incentivize best practices and de-risk investments.¹⁶¹

The objective would be to design, deliver and trigger innovation, help rural financial institutions learn from one another, and improve access to value chain specific

¹⁵⁵ 68:52 p 11 in 052_Feb_25_21_EUFIC

¹⁵⁶ 81:28 p 9 in 118_Apr_21_21_Huvio T

¹⁵⁷ 81:50 p 10 in 118_Apr_21_21_Huvio T

¹⁵⁸ 86:9 p 7 in 153_Apr_28_21_GCNEF_Multi

¹⁵⁹ 117:3 p 6 in 085_Mar_17_21_IFAD_FSFS

¹⁶⁰ 117:9 p 7 in 085_Mar_17_21_IFAD_FSFS

¹⁶¹ 117:12 p 7 in 085_Mar_17_21_IFAD_FSFS

*information and funds to de-risk and increase investments in ‘last mile’ agricultural actors.*¹⁶²

*ADDRESSING INVESTMENT RISKS: (1) Allow farmer cooperatives/communities to receive financing to lower risks and costs (2) Direct more public and private funding towards science-based innovation to de-risk investments (3) Step-up innovation around risk mitigation & sharing solutions (e.g. climate finance lab, blended finance pilots) (4) Develop tools for climate and biodiversity risk assessment tailored to investment officers of local / regional banks.*¹⁶³

*To overcome the lack of bankable projects, we discussed that science and innovation can be used for de-risking blended finance structures and delivering efficient, effective and transformative technical assistance at a pre-investment stage. This is needed to prioritize deal flow to help investors understand the risks and implement those strategies needed in terms of adaptation.*¹⁶⁴

*Financing and investment for nutrition needs to be enhanced.*¹⁶⁵

*We must create safety nets to account for shocks. These safety nets should be funded by governments, agro-corporations, and built into trade deals to protect the workers.*¹⁶⁶

*Expand access to finance for farmers and food systems’ actors, through reducing risks of lending to agricultural value chains, and attract greater private sector financing into agriculture...*¹⁶⁷

*Policy approaches should look at how to de-risk access to different markets, to create an enabling environment for innovation, and to attract more value-added processing nationally (food production in Canada).*¹⁶⁸

*Sensitization of insurance companies to establish agricultural insurance is imperative.*¹⁶⁹

*Access to sites that are suitable for bee farming to maximize yields and protect the communities. This will enable increased profits that will support farm livelihoods.*¹⁷⁰

*Third, sustainable agriculture approaches that have positive impacts on the environment need innovative financing solutions which make it easier and quicker for farmers and businesses to access finance.*¹⁷¹

¹⁶² 117:15 p 8 in 085_Mar_17_21_IFAD_FSFS

¹⁶³ 120:16 p 6 in 117_Apr_22_21_Dinesh D_Multi

¹⁶⁴ 120:35 p 10 in 117_Apr_22_21_Dinesh D_Multi

¹⁶⁵ 144:29 p 13 in 229_May_18_21_NFP_Rabobank_Multi

¹⁶⁶ 151:26 p 11 in 240_May_27_21_Schwartz A

¹⁶⁷ 153:14 p 6 in 253_Apr_29_21_AFD_B_Multi

¹⁶⁸ 156:21 p 9 in 263_May_06_21_CCGA

¹⁶⁹ 176:41 p 12 in 331_May_24_21_LNFU

¹⁷⁰ 176:62 p 14 in 331_May_24_21_LNFU

¹⁷¹ 177:37 p 8 in 332_May_24_21_FAO_UNDP

*Finance: Access to finance is very difficult for primary producers and yet it is a critical production factor. The majority of smallholder farmers are struggling to access finance.*¹⁷²

*...state-owned banks must prioritize loans for food producers with various conveniences and low-interest rates.*¹⁷³

*The XRC enables research that can lower physical, environmental or financial risk while achieving high-impact outputs with meaningful societal engagement.*¹⁷⁴

*Improve farmers' social protection scheme.*¹⁷⁵

*Develop agricultural insurance system to help farmers reduce the risks of natural disasters.*¹⁷⁶

*The European Union has established environmental requirements. However these requirements must be accompanied by support measures and financial aid for the implementation of new technologies to achieve the proposed objectives.*¹⁷⁷

*An inclusive multi-stakeholder approach to strengthen the linkages between private and public finance is needed, supporting small-holders by making investments in SFS more attractive (de-risking), including through innovation and digitalization, following the patterns of a green, blue and circular economy.*¹⁷⁸

*The participants also agreed on the following solutions: 1. Promotion of sustainable education is needed in low-resource areas - perhaps through the incentive of free school meals. 2. Start working at the local level. There could be a global agenda, but initiatives should start at the local level. 3. Financial investments and monitoring from richer countries to shifting to sustainable agriculture.*¹⁷⁹

*Finally, it is important to identify models that are relatively low risk, require low investment and provide quick returns, especially for those youth groups that don't have the access to financing.*¹⁸⁰

*Food companies can offer longer term contracts and/or higher prices to farmers that agree to produce more sustainably (measured against their own operation/benchmark and verified by an external party), to derisk and financially incentive the transition to more sustainable practices.*¹⁸¹

¹⁷² 185:45 p 10 in 340_May_27_21_Mamba_L

¹⁷³ 188:36 p 8 in 343_May_28_21_Abdullah_S

¹⁷⁴ 197:50 p 13 in 352_June_04_21_Troughton J

¹⁷⁵ 199:36 p 7 in 354_June_07_21_NAMAC

¹⁷⁶ 220:7 p 6 in 378_June_07_21_My Mai Bac

¹⁷⁷ 240:4 p 8 in 284_May_19_21_INTERPORC_English

¹⁷⁸ 247:7 p 6 in 480_June_21_21_CiHEAM_Multi

¹⁷⁹ 259:35 p 12 in 492_June_23_21_Liu JA

¹⁸⁰ 275:26 p 8 in 508_June_30_21_GDPRD

¹⁸¹ 276:50 p 10 in 509_June_30_21_FFA_Nestlé

Tailor low-cost interventions to the retail or value chain type and use of risk-based approaches and risk communication.¹⁸²

In terms of recommendations, the young farmers suggested the need for microfinance organisations to improve on their products and tailor make them for youth, the need to revise interest rates and insurances and also to consider concessions or grace period for loan repayment.¹⁸³

Economic sustainability is essential to ensure that companies in the food system are able to use sustainable practices. For example, while regenerative agriculture on farms is ideal, it may be a financial risk that farmers are not able to take or invest in. Participants identified that it is important to create legislative changes that incentivize farmers to move towards sustainable practices.¹⁸⁴

For the countries included in this dialogue, rural and agricultural investment priorities include the development and dissemination of climate-smart crop varieties and technologies, pivoting to more resilient farming systems, nutrition-sensitive cropping systems, crop insurance, digitalisation of agriculture and real-time access to weather data, among others.¹⁸⁵

Participants saw an enormous opportunity for government and policies to better support sustainable and regenerative practices. Many companies are investing in farmers, but a system-level shift is needed. Farmers can be given the freedom to be brave, take risks, and make mistakes in the transition towards a better system. Better policies can properly compensate farmers and farm workers while keeping the cost of sustainably and ethically grown food affordable to all.¹⁸⁶

Under the uncertainties of climate in dryland regions, we should incorporate crop insurance. Only 6% of the cropped area in India is insured. Farmer friendly crop insurance products may be offered by the Government and private insurance companies to cover the risk of crop in dryland regions.¹⁸⁷

The participants noted that small farmers need financial and technical support to grow and sell more nutritious varieties of crops. Primarily, as it is a big risk for many farmers to change what they are currently growing without any financial support or incentive. In other words, it might not always be profitable or comparably profitable for them to grow more sustainable and environmentally friendly crops. Furthermore, different regions experience difference realities, both in terms of the agroecological and the socioeconomic conditions in which they operate. Therefore, State funded technology and

¹⁸² 280:66 p 9 in 513_July_01_21_Weise S

¹⁸³ 282:24 p 11 in 515_July_01_21_EastAfricanFarmers

¹⁸⁴ 310:43 p 10 in 543_July_13_21_YRYFC

¹⁸⁵ 316:6 p 6 in 549_July_14_21_Meah N

¹⁸⁶ 319:19 p 8 in 553_July_15_21_Food Tank_Oatly

¹⁸⁷ 324:24 p 15 in 558_July_16_21_RICH_ICRISAT

innovation are essential particularly when it comes to helping small farmers grow more sustainable produce and/or reducing their food loss and waste.¹⁸⁸

Investment change is happening at pace and at scale, with almost daily announcements of global investors developing products and funds for natural capital investment. The focus on climate and climate risk has grown significantly in the last 12 to 18 months, and there is a rapid shift amongst leaders to focus on nature and nature-risk, meaning attention is turning to how nature is measured, valued, accounted for and disclosed.¹⁸⁹

Access to finance for smallholders remains problematic across commodities and across borders. Financial institutions, brands and/or governments will need to financially incentivize smallholders and producers to help de-risk the transition to “more sustainable” production practices.¹⁹⁰

They request the Venezuelan state to transform welfare food policies, incorporating the modes of production, distribution and consumption of indigenous peoples as intercultural public policy, and to incorporate traditional items in School Food Programs, Food Houses, and Local Supply and Production Committees (CLAP). They require technical and financial support for the production initiatives, distribution and commercialization of their own food items.¹⁹¹

Incentives for producers and the promotion of national agricultural insurance are indispensable.¹⁹²

Funding farmers

To reform subsidy and regulatory regimes controlling food network and address the shortfall in sustainable food system funding by redeploying financial support for the revival of indigenous traditional food culture and conservation or other sustainability projects.¹⁹³

In addition, governments and the private sector can help promote these services and remove constraints that limit their availability and access; - Interventions aimed at the rural world should comply with the priorities and real needs of farmers; - Each state should establish a guarantee fund for loans granted to farmers and their organizations.¹⁹⁴

Develop and strengthen the supervision and support of farmers in preparing loan applications. Review credit conditions for small farms with appropriate rates, products, and terms - Diversify financing products - Develop international cooperation to set up

¹⁸⁸ 326:24 p 9 in 560_July_19_21_Arbuthnott_Multi

¹⁸⁹ 329:9 p 6 in 563_July_20_21_ClimateWorksAustralia

¹⁹⁰ 334:1 p 2 in 139a_May_27_21_WBCSD

¹⁹¹ 346:3 p 6 in 417a_June_18_21_Fernandez L_Eng

¹⁹² 351:4 p 6 in 422a_June_28_21_PROLIDER_Eng

¹⁹³ 354:15 p 8 in 407_June_10_21_CSIPN_Aborigen Forum

¹⁹⁴ 510:29 p 12 in 079a_May_27_21_NGA_Soung_Eng

*assistance and financing programs for small farms - Develop an integrated financing model based on value chains.*¹⁹⁵

*...nutritious food security and growing the next generation of resilient small farmers and their communities...*¹⁹⁶

*Target support at food SMEs a. Most SMEs participants in our breakout room believe that with more direct and practical support from the government agencies and international NGOs, they can purchase equipment and expand their production, and maybe offset some of the inherent problems with agriculture such as high initial capital input, long payback period and unpredictable risk factors. b. These supports can come in various forms such as infrastructure improvement, funding, business consulting, and technology know-how, but they must be direct, feasible, and easily accessible. c. Although China has made a tremendous effort in the past decades to focus on sustainable development. As a developing country, we still have a long way to go in terms of building a better food system, not only for the 1.4 billion people but the whole globe as well. SMEs in China are thriving, and they need more target support more than ever.*¹⁹⁷

*Grant Indigenous Youth tailor-made affordable credit facilities to allow them financial stability to carry forward Indigenous Peoples Food Systems and to support the development of Indigenous Youth's enterprises. Create spaces for Indigenous Peoples to sell our products. Ensure decent equal employment opportunities that guarantee labour rights free of discrimination and with social protection.*¹⁹⁸

*Provision of funding and support for small-medium scale enterprise.*¹⁹⁹

*Provision of funding especially in subsidizing the premium on insurance for farmers in a bid to ensure they are well equipped to tackle risks and future shocks.*²⁰⁰

*Panelists noted that investment opportunities must be demand driven and serve the interests of small-holder farmers.*²⁰¹

*Government are finally catching up with NGO's—how can we make this easier and be visible so funding is allocated to local grower and buyer frameworks that are relevant and appropriate and let communities decide.*²⁰²

With regards to providing interim funding and/or alternative livelihood to farmers in transition, an agriculture expert suggested that targeted interventions on food provision be considered, given that 30-40% of farmer's income is spent on food. This would involve providing 'insurance crops' or open pollinated seeds that require low input and are easy

¹⁹⁵ 520:4 p 7 in 107a_June_22_21_Trimarchi A_Eng

¹⁹⁶ 356:81 p 10 in 409_June_13_21_Mone S

¹⁹⁷ 393:26 p 9 in 435_June_08_21_FAO_ICC_UNFSS

¹⁹⁸ 394:19 p 6 in 436_June_16_21_GIYC_Multi

¹⁹⁹ 397:48 p 10 in 439_June_17_21_INAI

²⁰⁰ 397:60 p 11 in 439_June_17_21_INAI

²⁰¹ 411:16 p 6 in 452_Apr_27_21_IFAD_Multi

²⁰² 427:25 p 11 in 468_June_18_21_Mayne A

to grow to serve as a safety net for their own household food requirement. Once personal consumption needs are secured, farmers would have greater incentive to experiment with small-scale organic practices, putting them in a better position to transform their conventional farms.²⁰³

An NGO participant also suggested building an ecosystem that would cater to and fund both the development and trade aspirations of farmers. Development funding would support capacity building whilst trade support would improve market linkages. A platform that could allow capital from private investments, government funding and/or international aid to support both components would have to be established. It was also suggested that the platform should move through a circular model that supports the entire supply chain.²⁰⁴

Overall, more funding is needed, but also better funding. To ensure no geography is left out, there must be a combination of national and international investments. In relation to ensuring no one is left out, taking into account social equity and fostering a just rural transition are also key, as there is no one-size-fits-all solution given the diversity of contexts and needs at farmer level.²⁰⁵

To start with, participants emphasized the need to put farmers first. Too many existing commitments focus solely on companies, while farmers need to know that they are also part of the solution. Additionally, and because they run the highest risks, farmers need better access to investments. However, they also often risk their land as collateral and therefore need to be provided with alternatives and assistance.²⁰⁶

Food equity will include increasing income for small farmers; favouring farmers more as participants, and consumers less so, with more accessible financing and easing capital flows to farmers directly.²⁰⁷

One action item for determining shifts in sustainable consumption patterns is the need to set aside funding to obtain data on food production, distribution and purchasing.²⁰⁸

More funding for SMEs who are lacking capital and barriers to growing are too difficult.²⁰⁹

Support for small and medium non-formalized producers, focus on the informal economy. Many times you cannot do business with them due to billing and administrative issues, segregating agroecological and local products, making it impossible to open businesses for this group.²¹⁰

²⁰³ 460:83 p 9 in 131_May_25_21_IISLA Ventures

²⁰⁴ 460:112 p 16 in 131_May_25_21_IISLA Ventures

²⁰⁵ 463:60 p 11 in 155_Apr_27_21_FCDO_Multi

²⁰⁶ 463:62 p 12 in 155_Apr_27_21_FCDO_Multi

²⁰⁷ 486:82 p 13 in 291_May_21_21_Polman_Prabha

²⁰⁸ 487:30 p 8 in 293_May_22_21_City of San Antonio

²⁰⁹ 489:22 p 7 in 297_May_26_21_FAO_ICC_Multi

²¹⁰ 496:9 p 7 in 312_June_15_21_FAO_ICC_Multi

Another way of rewarding good practices – make grants / funding accessible as a reward for “doing the right thing.”²¹¹

For social sustainability, cocoa farmer pension scheme and other livelihood improvement schemes for cocoa farmers are being implemented along the cocoa value chain in Ghana...²¹²

Supporting local farmers is of critical importance. Oftentimes they are unable to access grants or other forms of support as funding support is directed toward a scale that cannot be achieved on islands.²¹³

Prioritize the opening of funding tracks to support indigenous and small farmers in island settings as well as farm-to-school initiatives.²¹⁴

Farmers need support (and a rationale) to grow and sell more nutritious varieties of crops. It’s a big risk to many farmers to change what they’re currently growing, and it’s not necessarily more profitable to do so.²¹⁵

Funding should support farmers...²¹⁶

In order to do this, those with power and financial capital should invest in farmers and educational curricula should be decolonized.²¹⁷

This should include supports to incentivise and remunerate farmers for both food and ecosystem services, encourage environmentally-friendly farming and support high-welfare systems.²¹⁸

Financing schemes have to be tri-partite to be measurable and instead of providing funding to individual farmers, cooperatives should be formed and given access to these funds. Blended finance is essential to drive innovation. This would guarantee knowledge and capacity sharing.²¹⁹

Develop small-size ticket financing solutions for smaller farmers, distinguish between blended finance for the farmers and for off-takers (3) Build relationships between farmers and local financial actors.²²⁰

²¹¹ 497:36 p 7 in 314_June_16_21_ICC_US Farmers_Multi

²¹² 499:17 p 6 in 394_June_01_21_Egyir I

²¹³ 21:5 p 6 in 115_Apr_24_21_Foronda_Multi

²¹⁴ 21:7 p 6 in 115_Apr_24_21_Foronda_Multi

²¹⁵ 30:10 p 7 in 064_Mar_4_21_Farming First

²¹⁶ 52:15 p 9 in 087_Mar_20_21_Chinapoo C_Multi

²¹⁷ 93:15 p 6 in 217_May_6_21_Schwartz A

²¹⁸ 114:7 p 6 in 074_May_18_21_O'Mara_Teagasc

²¹⁹ 115:35 p 10 in 075_Mar_10_21_IFAN

²²⁰ 120:14 p 6 in 117_Apr_22_21_Dinesh D_Multi

*Finally, there is a need for improved policy coherence and institutional decentralization in addition to making more services available to farmers in terms of finance, digital tools, direct support to farmers.*²²¹

*Catalyze the commitment of funding and financing for "bottom-up" changes.*²²²

*Give farmers contracts for funding, example farmers in Davie, getting them contracts with the USDA.*²²³

*Encourage, fund, and educate traditional farmers on new technologies to yield higher nutritional crops by using hydroponic and aquaponic.*²²⁴

*Environmental and financial sustainability – farmers must be financially supported to manage their farms (e.g. changes in practice to reduce N such as multi species/reseeding costs).*²²⁵

*The Ministry of Agriculture and Food security should negotiate with financial resource providers to create revolving funds that aid producers to buy modern equipment that support production of high quality and larger quantities.*²²⁶

*Financial aids for farmers in the form of loans and grants.*²²⁷

*Financiers should provide farmer-friendly financing products.*²²⁸

*Government should establish an agriculture fund that will act as collateral for smallholder farmers.*²²⁹

*Development and investment agencies could help in providing grants, funds for supporting agriculture projects. Donor funding could make a meaningful difference if they were to support the establishment of a Farmers Bank.*²³⁰

*Governments should be lobbied to establish special disaster relief funds to assist farmers to kick-start businesses affected by natural calamities/pandemics ...*²³¹

*Participants identified that the national financial system must begin to make small producers visible as reliable customers and consider the supports/guarantees that buyers offer.*²³²

²²¹ 135:14 p 6 in 193_Apr_19_21_Ringler_Kassim

²²² 158:21 p 6 in 272_May_12_21_Battista W

²²³ 166:136 p 17 in 300_May_27_21_Alesso_Pommeret

²²⁴ 166:155 p 19 in 300_May_27_21_Alesso_Pommeret

²²⁵ 173:89 p 16 in 328_May_19_21_Lalor_Teagasc

²²⁶ 176:63 p 14 in 331_May_24_21_LNFU

²²⁷ 176:135 p 19 in 331_May_24_21_LNFU

²²⁸ 185:16 p 7 in 340_May_27_21_Mamba_L

²²⁹ 185:17 p 7 in 340_May_27_21_Mamba_L

²³⁰ 185:27 p 7 in 340_May_27_21_Mamba_L

²³¹ 186:24 p 8 in 341_May_28_21_Sewraj_KS

²³² 187:28 p 8 in 342_May_28_21_Peralta T

*Develop natural resources user contracts recognising the land rights of pastoralists living in conservation areas - Allocate resources (funds) to strengthen land use among pastoralists and develop infrastructure to increase food production among them.*²³³

*Systematic redirection of investment, funding, research and policy focus towards needs of small farmers.*²³⁴

*Farmers should be more involved in low emissions development discussions and brought to the table for co-creating solutions.*²³⁵

*The economic premium paid by the society for the sustainable products has to reach the farmer and this will be the main driver for the transition to a more sustainable model.*²³⁶

*Discussants have identified the following potential solutions to overcome barriers: Advisory and training programs for farmers, Peer networks, Subsidies (with a shift from action to a measurable outcome), Flexibility of farmers, Access to funding and incentives, Research and scientific clarity on definitions and measurement methods.*²³⁷

*Give farmers access to financial institutions. Micro-credit and insurance increase farmers' capacity to be part of the value chain. One of the ideas proposed is to work for reducing land tenure and increasing possession of land over the years, as farmers often do not think in a long-term perspective.*²³⁸

*Asides this, adequate funding must be made available to agricultural entrepreneurs in order to boost their productivity and ensure abundant food is available to the populace. In a Nigerian state currently plagued by insecurity, the Nigerian government should ensure that every farmer is guaranteed security for their lives and for their produce.*²³⁹

*Producers (farmers and ranchers) need financial and technical assistance to help de-risk the transition to more sustainable practices. It will take a coordinated, multi-factor approach (banks and lenders, insurers, CDFIs, government, food and ag brands, agri-business corporations, others) and agreed standards to ensure the transition is accessible and equitable for producers.*²⁴⁰

*Emphasis on direct support and subsidies to the sector disconnected from agribusiness technologies and/or production and in favor of biodiversity and environmental protection (disconnected payments).*²⁴¹

²³³ 202:23 p 8 in 358_May_11_21_ILC_Multi

²³⁴ 253:3 p 7 in 486_June_23_21_AFA_Multi

²³⁵ 264:14 p 6 in 497_June_24_21_Fontes_Multi

²³⁶ 264:73 p 11 in 497_June_24_21_Fontes_Multi

²³⁷ 276:38 p 9 in 509_June_30_21_FFA_Nestlé

²³⁸ 327:41 p 10 in 561_July_19_21_OCCAM

²³⁹ 337:7 ¶ 7 in 389a_May_27_21_ASEF

²⁴⁰ 338:4 p 2 in 484a_June_24_21_WBCSD_USFRA

²⁴¹ 350:23 p 9 in 421a_June_21_21_COPROFOAM_CLOC_Eng

Government subsidies

*...lower taxes and fees on starting a small business...*²⁴²

*Nature positive production is already economically viable, but we fail to recognize it because we do not measure a range of negative and positive externalities across the value chain. We need perverse subsidies to be 'repurposed' to pro-nature alternatives, which would allow the price that consumers pay to better represent the 'true cost' of food.*²⁴³

*Opportunity and need to promote subsidies for fruits and vegetables.*²⁴⁴

*Discussions led to the establishment of important axes to achieve a more sustainable and equitable food system. In particular, cooperation with the political authorities was recommended in order to set up subsidies that could help farmers invest in good quality equipment and facilitate their work and the achievement of a satisfactory production yield. These subsidies could also make it possible to invest in quality and certified seeds, and in sustainable agricultural inputs for production that respects the environment and does not risk the health of consumers. In addition, it would improve production, in terms of both quantity and quality, without increasing the prices of raw materials and staple foods in the local diet and decreasing the purchasing power of Nigeriens. With subsidies for agricultural inputs, it will be easier for farmers to secure an income and establish a fair food system.*²⁴⁵

*Many new technologies take time to become cost-effective, but if policy makers help entrepreneurs by offering carbon credits, emissions taxes or providing real incentives, it would be a big boost to overcome this initial moment of inertia and to have a wider choice available more quickly.*²⁴⁶

*A concrete solution that came forward to stimulate competitiveness for fair practices and incorporating hidden costs into food systems - implemented by governments and policymakers - is a tax reform that would reduce VAT for fair trade products. This reform should also include subsidising sustainable producers.*²⁴⁷

*The losses at the level of the distributors are enormous; they can go up to about 40%. Distributors must pay for unsold and discarded products. To reduce these costs, they can donate to associations and/or give for processing. This reduces costs. Tax reform (reduced VAT for fair trade products) + subsidize sustainable producers. The State could reduce value-added taxes for fair trade products to incentivise more sustainable and fair practices by producers.*²⁴⁸

²⁴² 166:13 p 7 in 355_June_14_21_FAO

²⁴³ 359:39 p 8 in 403_June_10_21_ESCAP_Multi

²⁴⁴ 515:6 ¶ 273 in 094a_June_09_21_Luchetti T_Eng

²⁴⁵ 517:6 p 7 in 100a_June_10_21_Hainikoye IM_Eng

²⁴⁶ 363:7 p 6 in 414_June_16_21_Le More_d'Antino

²⁴⁷ 364:15 p 6 in 415_June_16_21_van Schoonhoven M

²⁴⁸ 364:37 p 11 in 415_June_16_21_van Schoonhoven M

*Provision of modern equipment for farmer at subsidized costs to boost large scale production.*²⁴⁹

*Revision of the national food based dietary guideline.*²⁵⁰

*Government: Subsidizing the cost of modern tools and improved inputs*²⁵¹

*Provision of funding especially in subsidizing the premium on insurance for farmers in a bid to ensure they are well equipped to tackle risks and future shocks.*²⁵²

*Central to the notion of an inclusive food system, is ensuring people can participate in discussions on how to transform the food system and what type of food system should exist in their community and country. Good governance and policies should create the conditions for this to happen. Generation Z, the first generation to have grown up with access to the Internet and portable digital technology from a young age, in the region are becoming more interested and engaged in the food systems shift towards sustainability. (CEJA and Act4Change).*²⁵³

*It is possible to shift subsidies and put that revenue into positive investments in the agricultural sector, specifically agroecology. The feedback loops between biodiversity loss, climate change, and the food system are substantial. We need to view our food system as a positive contributor to climate mitigation, rather than as part of the problem. Agroecology is one solution.*²⁵⁴

*There need to be more policies that support women financially, such as taxes and subsidies to get women involved.*²⁵⁵

*Unhealthy food options and processed food is cheaper for the consumer due to subsidies on foods like wheat, corn and soy. There is a need to subsidize healthy foods such as fruits, vegetables, and nuts. This would result in lowering the price of healthy food for the consumer.*²⁵⁶

*Drive progress with government regulations and laws that repurpose subsidies, and support incentive programs.*²⁵⁷

*Reducing exorbitant interest rates that put unreasonable burdens on farmers, particularly smallholder farmers. For example, 20+% in West Africa.*²⁵⁸

²⁴⁹ 397:21 p 7 in 439_June_17_21_INAI

²⁵⁰ 397:27 p 8 in 439_June_17_21_INAI

²⁵¹ 397:41 p 9 in 439_June_17_21_INAI

²⁵² 397:60 p 11 in 439_June_17_21_INAI

²⁵³ 403:29 p 9 in 444_May_25_21_FAO_UNICEF_Multi

²⁵⁴ 409:21 p 7 in 450_Mar_11_21_IFAD_Multi

²⁵⁵ 410:18 p 7 in 451_Apr_06_21_IFAD_Multi

²⁵⁶ 423:16 p 7 in 464_June_10_21_IFAD_UNFSS_Multi

²⁵⁷ 429:157 p 10 in 470_June_17_21_Burian_Multi

²⁵⁸ 429:176 p 12 in 470_June_17_21_Burian_Multi

*Government needs to play a very important role in providing assistance and partnering with farmers to protect them. For example, providing crop insurance and subsidies for bad harvests, to help them feel secure.*²⁵⁹

*Gender Integration in food systems. Research has shown that empowering women leads to several positive outcomes along the food value chain and hence addressing the unique challenges faced by women is key. Moreover, research has shown that when women farmers have equal access to agricultural inputs (fertilizer and seed) as men, yield can increase by 19%. Considering all the challenges that women face, several strategies need to be put in place or those already in place should allow for better inclusivity. Foremost, there is a need to factor in women when structuring policies and ensure that women also occupy positions of leadership. Subsequently, there is need for policies that ensure women have access to productive resources such as fertilizer and seed. This can be executed through subsidies for inputs that can be accessed through digital platforms i.e. the E-voucher system. Also, digitalization would help deal with the time constraint faced by women. Further, support for women led MSMEs to ensure they have equity in accessing markets and attain greater bargaining power is instrumental and increase for energy supply for running production and value addition processes carried out by women farmers, need to be factored. A clear focus should be made on women and youth farmers to strengthen their participation in agriculture. There is therefore (1) need for redirecting policies to focus on gender inclusivity and financial inclusivity (2) need to follow policy implementation for successful outcomes on gender equality in food systems and (3) need for sustainable collaboration and establishment of partnerships, globally and locally, for increased women empowerment within the food system and gender equality.*²⁶⁰

*Adapting bio technology, Increasing awareness on safe, nourished and healthy food, Promoting bio safety technology with government subsidy, Expansion of appropriate agricultural mechanization for small and marginal farmers...*²⁶¹

*Subsidy to agri. machinery (irrigation, ploughing, harvesting etc.)*²⁶²

*Throughout the discussion, participants agreed that public investment remains essential to support research and transition for farmers. In particular, identifying ways to repurpose and realign agricultural subsidies would provide the right incentives to engage investors and ensure investments align with the SDGs and climate change targets. For example, innovation in sustainable protein sources is particularly appealing for investors, as food systems transformation and ESG criteria have risen to the top of the agenda.*²⁶³

*Second, we must tackle subsidies and how they distort the market.*²⁶⁴

²⁵⁹ 429:225 p 15 in 470_June_17_21_Burian_Multi

²⁶⁰ 433:11 p 7 in 474_June_18_21_Matu_Opiyo

²⁶¹ 450:36 p 9 in 391_May_31_21_FAO_Multi

²⁶² 450:54 p 11 in 391_May_31_21_FAO_Multi

²⁶³ 463:12 p 11 in 155_Apr_27_21_FCDO_Multi

²⁶⁴ 463:51 p 9 in 155_Apr_27_21_FCDO_Multi

The third key message was the use of policies to help farmers transition. Policies can level the playing field by reshuffling regulatory tools and looking out for factors that may hinder the transition. Currently, the competition is not equal, and good practice requires using taxes, custom codes, and procurement guidelines. Furthermore, subsidies could be redirected to SME and farmer levels.²⁶⁵

Federal policies: There are many federal policies that could be improved to promote the development of equitable organic food systems. Subsidy reform is needed; there should be long-term incentives for sustainable farming, rather than subsidies for conventional farmers not using sustainable practices. Crop insurance reform is needed to provide an adequate safety net for organic farmers.²⁶⁶

Providing further support to SMEs, specifically through tailored subsidies to address significant costs that prevent SMEs from moving to the next level (e.g. capex for technology, equipment or infrastructure)²⁶⁷

Further, we urge policy makers to increase participation and inclusion of Arctic Indigenous Peoples, youth, and knowledge in policy discussions and decisions to sustain our traditional food systems through the Arctic; to respect and recognize the ethical and equitable engagement of Indigenous Knowledge in research, policy and decision making in all governance systems that may impact Arctic Indigenous Peoples' food systems.²⁶⁸

Direct subsidies to support regenerative practices and the uptake of alternative non-animal-sourced proteins.²⁶⁹

Interested in governance of the food systems summit - hopes it will mark a change from the moment of being seen as doing something to actually doing something.²⁷⁰

We need to deal with governance.²⁷¹

- redirection of Government subsidies and investment to support local farmers to create their circular economies and not only profit-driven...²⁷²

In low-income countries people are not able to afford energy innovations, there should be some subsidies that push people to invest in those innovations.²⁷³

The importance of local level collectives such as FPOs, women's Self Help Groups (SHGs) and cooperatives in bringing about the transition to natural farming on the ground was acknowledged. The role of the government in this transition was also

²⁶⁵ 463:65 p 12 in 155_Apr_27_21_FCDO_Multi

²⁶⁶ 468:47 p 7 in 219_May_10_21_OTA

²⁶⁷ 492:10 p 6 in 302_June_01_21_FAO_ICC_Multi

²⁶⁸ 500:30 p 8 in 396_June_01_21_Arttjeff_Multi

²⁶⁹ 501:68 p 12 in 397_June_04_21_WHO_Multi

²⁷⁰ 502:16 p 7 in 398_June_07_21_NCD Alliance

²⁷¹ 502:27 p 9 in 398_June_07_21_NCD Alliance

²⁷² 504:81 p 12 in 400_June_09_21_Viera_Pollmeier

²⁷³ 19:11 p 8 in 109_Apr_13_21_Jacobs-Mata I

*discussed, in terms of incentivizing and subsidizing natural farming (such as compensation for ecosystem services) instead of chemical intensive agriculture.*²⁷⁴

*Subsidize environmentally friendly agriculture practices: permaculture.*²⁷⁵

*The repurposing of agricultural subsidies: It was agreed that a major overhaul of the current system of agricultural subsidies is needed to stop subsidizing “business-as-usual” which encourages unsustainable practices and start subsidizing “food system transformation.”*²⁷⁶

*One panelist also stressed the importance for countries to better target government subsidies to the most vulnerable to maximize inclusion and ensure equitable livelihoods.*²⁷⁷

*Governments have a key role to play to provide the right environment to promote new financing modalities...The need for acceleration will require the clarification of the costs of reforming food subsidies (both implementation and compensation costs) towards subsidy/taxation mechanism that offer positive incentives for sustainable food systems...*²⁷⁸

*Massive stimulus for private sector engagement through creating enabling business environment, trade policies based on best practices, science, innovation, incentives including tax holidays for more fresh foods.*²⁷⁹

*Subsidies for finance cost for SMEs.*²⁸⁰

*Stakeholders must work together to (1) increase income for those in different sectors by subsidizing maintenance products and fertilizers.*²⁸¹

*Plots of land used for growing crops are left unprotected and subject to recurring theft from individuals. Participants recommended that land be reserved exclusively for market gardens and that crop maintenance products be subsidized to lower their cost (fertilizer, herbicide, fungicide, etc.).*²⁸²

*Influencing policymakers: there are corporations that are currently profiting off of the food system as it is now. This is through government subsidies awarded to particular food industries, like animal livestock.*²⁸³

²⁷⁴ 28:14 p 9 in 023_Jan_29_21_Bharat K S

²⁷⁵ 33:20 p 7 in 077_Mar_09_21_ESCWA_FAO

²⁷⁶ 40:2 p 7 in 101_Apr_1_21_Doaa A

²⁷⁷ 58:22 p 8 in 006_Dec_16_20_UNDESA

²⁷⁸ 61:12 p 5 in 020_Jan_26_21_IFAN

²⁷⁹ 64:1 p 5 in 035_Feb_9_21_Hussein AO

²⁸⁰ 65:6 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁸¹ 73:2 ¶ 18 in 033a_Feb_6_21_Serge BDS_ENG

²⁸² 73:21 ¶ 31 in 033a_Feb_6_21_Serge BDS_ENG

²⁸³ 94:10 p 9 in 225_May_13_21_Schwartz A

a) Subsidies for healthy foods: the current food system subsidizes livestock and therefore meat consumption. If fruits and vegetables production was provided with government subsidies, the consumer would not have to pay higher prices for healthier foods. By making the playing field between food options more level and fair, corporations can have less ability to influence the narrative around what food should be and what foods should be promoted.²⁸⁴

In low-income countries people are not able to afford energy innovations, there should be some subsidies that push people to invest in those innovations.²⁸⁵

Moreover, a market-based approach is needed, working with existing lenders to make more efficient use of subsidies.²⁸⁶

Water has to be taken as a commodity otherwise savings in water may not be possible. Revisiting the subsidies in the water sector is critical. Work is required on mapping and modeling water subsidies and creating space for sustainable agriculture by measuring the costs and benefits attached to each subsidy. Likewise, distortions created by such programs must become transparent.²⁸⁷

Rising energy demand in wake of population growth can be met by the government through subsidizing solar energy for farmers.²⁸⁸

It was noted that additional incentives might be required, including smart subsidies, to support farmers in adopting new technologies that would support both water and food security outcomes.²⁸⁹

Ensure that government subsidies are going towards supporting the vulnerable communities/farmers etc.²⁹⁰

Much of the cultural and religious messaging will not succeed unless subsidies for CAFOs and animal products are shifted towards plant based foods.²⁹¹

We need to repurpose subsidies to nature-positive production.²⁹²

Subsidies on bio-organic fertilisers & pesticides to promote organic and even agroecological farming...²⁹³

Subsides on Soil analysis: The food chain starts with what we produce on the soil, but what is already in the soil is crucial to know before amending with fertilizers. By doing a

²⁸⁴ 94:12 p 10 in 225_May_13_21_Schwartz A

²⁸⁵ 119:17 p 8 in 109_Apr_13_21_Jacobs-Mata I

²⁸⁶ 120:53 p 11 in 117_Apr_22_21_Dinesh D_Multi

²⁸⁷ 129:32 p 12 in 159_Apr_21_21_Hafeez M

²⁸⁸ 129:71 p 17 in 159_Apr_21_21_Hafeez M

²⁸⁹ 135:12 p 6 in 193_Apr_19_21_Ringler_Kassim

²⁹⁰ 135:57 p 12 in 193_Apr_19_21_Ringler_Kassim

²⁹¹ 163:7 p 6 in 292_May_21_21_ProVeg_Multi

²⁹² 163:42 p 11 in 292_May_21_21_ProVeg_Multi

²⁹³ 186:72 p 12 in 341_May_28_21_Sewraj_KS

*soil analysis, the nutrients in the soil are known thus avoiding the use of excessive or unnecessary fertilizers. Make the soil analysis accessible to farmers, partly the government and partly the farmers pay.*²⁹⁴

*Government and private sectors should be lobbied to step up with subsidies/ schemes to promote self- sufficiency that would address threats of high import bill, natural calamities & pandemics.*²⁹⁵

*Allocation of subsidized inputs such as chemical fertilizers, irrigated water, tractor, high-producing & climate-adaptive varieties of seeds, pesticides, etc.*²⁹⁶

*Cost of inputs such as seed and feed is observed to be usually high during times of disasters, however prices offered to resource constrained fish farmers are low. Government should support, for instance the reduction of production cost by reducing electricity tariffs and providing subsidies for feed and seed. Efforts to create and enhance online market platforms for fish products to improve farmers' returns should be strengthened.*²⁹⁷

*Lastly, some members discussed that alternative aquatic food sources (seaweed, bivalves) can be much more sustainable but there is a lack of consumer demand. Members were optimistic that the public could be nudged towards consuming these through government support (subsidies, or levies on less sustainable options), but there was agreement that nonetheless greater sustainability for foods with large demand (salmon, fish) is paramount.*²⁹⁸

*Directing government to provide subsidies and funding Reallocate and redirect subsidies away from animal products (dairy and meat) and shift towards plant-based food growing.*²⁹⁹

*They mentioned that other farmers get subsidies on grinding machines, they would like this too.*³⁰⁰

*Subsidies for plant-based agricultural production and transition away from subsidizing animal agriculture/ reduce it at least. Importantly, include animal farmers in the transition, help them move to plant-based farming through training, loaning material and supporting them economically.*³⁰¹

²⁹⁴ 186:77 p 14 in 341_May_28_21_Sewraj_KS

²⁹⁵ 186:86 p 14 in 341_May_28_21_Sewraj_KS

²⁹⁶ 189:5 p 6 in 344_May_30_21_COAST

²⁹⁷ 211:15 p 8 in 367_May_27_21_Kachulu_Thilsted

²⁹⁸ 243:35 p 11 in 319_June_30_21_Fredriksson O

²⁹⁹ 260:2 p 6 in 493_June_23_21_Kevany_Van

³⁰⁰ 267:77 p 12 in 500_June_26_21_Edible Issues

³⁰¹ 270:26 p 7 in 503_June_29_21_Schnyder_Boura

Subsidy schemes, farmers' incentives (price premiums), sustainability outcome (carbon) markets and differential taxation systems could mitigate true transition costs and pricing; products produced by nature should be less taxed than processed ones.³⁰²

...it is imperative to look at the cost of emerging technology and subsidise the same for the youth and also improve on distribution of digital infrastructure throughout the region not just in urban settings.³⁰³

Subsidies and grants for companies developing foods with enhanced nutritional value.³⁰⁴

Subsidies can also be shifted. OECD agricultural subsidies totaled US\$720 billion/year from 2018-20, yet only one in six dollars promoted sustainable productivity growth and agricultural resilience. Shifting more money to agroecology would be game changing.³⁰⁵

Regenerative practices need to be incorporated in agriculture and should be encouraged through government grants and bursaries. Individuals should be encouraged to follow sustainable diets which generate low and decreased food waste. Sustainable diets should be locally sourced, financially accessible and culturally appropriate for all Canadians.³⁰⁶

Participants agreed that freedom means not relying on (predominantly Westernized) grocery stores for food...Additionally, relatively expensive and inaccessible foods, such as whole vegetables and fruits that are recommended by the 2019 Canada's Food Guide, should be subsidized in order for the food system to reflect accessibility to a nutrient-diverse, healthy range of food for consumers.³⁰⁷

Governments especially in parts of India and Africa need to look at subsidising and championing indigenous varieties of food such as millet and fonio which are more nutritious than traditionally subsidised wheat and rice crops. This would make the nutritious food more affordable and would support women who are often the smaller scale farmers.³⁰⁸

Subsidized investment loans and working capital for the transition from conventional to agroecological systems.³⁰⁹

Government subsidies and incentives: this was considered to be a vital aspect of normative elements and policies for food donation, whether these were direct economic incentives, facilitating other processes, distinctions, easing formalities, etc.³¹⁰

In North America governmental policies can be very influential, while subsidies 70 in the EU play an even more important role. Communication between industries, 71 local

³⁰² 276:25 p 6 in 509_June_30_21_FFA_Nestlé

³⁰³ 282:28 p 12 in 515_July_01_21_EastAfricanFarmers

³⁰⁴ 300:30 p 8 in 533_July_07_21_Gazit GS

³⁰⁵ 302:53 p 10 in 535_July_08_UNESCO Chair on Food

³⁰⁶ 310:18 p 6 in 543_July_13_21_YRYFC

³⁰⁷ 310:21 p 7 in 543_July_13_21_YRYFC

³⁰⁸ 311:26 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

³⁰⁹ 343:7 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

³¹⁰ 355:9 p 7 in 567a_July_21_21_FLWRN_FBN_Eng

farmers, governments and communities and education of local communities 72 and final consumers towards sustainability issues is another crucial point.³¹¹

Incentives

As a second point, emphasis was placed on the need to view the production chain as a "whole". This means that small producers, farmers or laborers cannot be ignored throughout the chain. Following this idea, it was proposed to identify incentives to encourage farmers who have already changed their way of working to continue doing so and to cause a snowball effect.³¹²

Promote the digitization of agriculture through appropriate incentives.³¹³

...rewarding responsible (environmentally friendly) production and consumption...³¹⁴

To create incentives (financial and nonfinancial) and encourage the development of indigenous community-based food practices³¹⁵

Developing incentives for markets and grocery stores to help small farmers through developing alternative strategies that support BIPOC small farmers by purchasing directly from BIPOC small farmers or BIPOC small farm organizations;³¹⁶

Increase incentive programs that promote building relationships with local Black Indigenous farmers and farmers of color.³¹⁷

Government to provide incentives to farmers in form of reduce taxes and credits.³¹⁸

The region could increase food access and utilization by providing incentives to steer food consumption towards more diverse, healthy, and balanced diets by populations, especially women, children, and the urban poor, and improvement in food marketing and raise awareness.³¹⁹

Many new technologies take time to become cost-effective, but if policy makers help entrepreneurs by offering carbon credits, emissions taxes or providing real incentives, it would be a big boost to overcome this initial moment of inertia and to have a wider choice available more quickly.³²⁰

³¹¹ 362:16 p 2 in 505a_June_29_21_Borchard_UNC

³¹² 516:2 ¶ 283 in 098a_June_10_21_Caballeros C_Eng

³¹³ 520:27 p 9 in 107a_June_22_21_Trimarchi A_Eng

³¹⁴ 166:15 p 7 in 355_June_14_21_FAO

³¹⁵ 354:30 p 9 in 407_June_10_21_CSIPN_Aborigin Forum

³¹⁶ 356:66 p 8 in 409_June_13_21_Mone S

³¹⁷ 356:68 p 8 in 409_June_13_21_Mone S

³¹⁸ 357:35 p 7 in 401_June_10_21_Ekwamu_A

³¹⁹ 359:10 p 6 in 403_June_10_21_ESCAP_Multi

³²⁰ 363:7 p 6 in 414_June_16_21_Le More_d'Antino

Governments can implement incentives and create competitiveness for sustainable products and as such move companies in a different direction.³²¹

Incentive programs that provide founding opportunities and help vendors start online business needs further discussion.³²²

Putting into practice the payment market for environmental services, related to sustainable practices, biodiversity conservation, in situ conservation of genetic resources, carbon stock...³²³

Pay community members to be part of advisory boards. Include residents that aren't usually involved in these processes and aren't already affiliated with organizations that already have access to power in the city.³²⁴

Panelists agreed that governments have a role to play in creating more sustainable food systems through policy, taxation, and incentives.³²⁵

To address some of these issues and target more sustainable consumption patterns, the group agreed that the BSFA should authorise a higher price on unhealthy food through the application of Fat and Sugar taxes as against more healthier food option...³²⁶

A need is to incentivize some of the local growers within their society. They will be working in order to provide food within the society and the communities rather than focusing on very huge business opportunities which provide food but most of the food are high in calories and sugar.³²⁷

- How will we incentivize or recognize farmers for using conservation agriculture?³²⁸

The need to address the infrastructural deficit that affects the food systems and address the issue of incentives as well as structural vulnerability.³²⁹

What are the solutions and challenges to strengthen food systems governance and develop participatory and inclusive policies and plans? Creating incentives for women's participation in governance mechanisms³³⁰

Provide incentives for adopting innovations and solutions. For example: • Incentivize smallholder farmers to transition to more sustainable practices. Incentivize farmers to improve the quality and sustainability of livestock production, as is already done in Germany. Incentivize farmers to promote carbon sequestration. Find financial solutions

³²¹ 364:14 p 6 in 415_June_16_21_van Schoonhoven M

³²² 368:17 p 13 in 412_June_15_21_CBCGDF_Multi

³²³ 389:111 p 9 in 431_June_22_21_CEBOS_EMBRAPA

³²⁴ 404:26 p 7 in 445_May_26_21_ICLEI USA

³²⁵ 410:20 p 8 in 451_Apr_06_21_IFAD_Multi

³²⁶ 418:29 p 8 in 459_June_01_21_Rashid Md J

³²⁷ 423:18 p 7 in 464_June_10_21_IFAD_UNFSS_Multi

³²⁸ 424:19 p 7 in 465_June_16_21_Congressional Hunger

³²⁹ 425:14 p 6 in 466_June_17_21_Ekwamu A

³³⁰ 428:40 p 7 in 469_June_17_21_de Silva R

*to bring measurement tools, such as remote sensing, to smallholder farmers in developing countries; otherwise, measurement is prohibitively expensive.*³³¹

*Award early adopters of carbon markets. This will help uncover the value of improving soil health.*³³²

*Disincentivize banks that do not provide banking services for women.*³³³

*The popularity of healthy dishes should be used as a criterion for healthy competition among different cafeterias, with corresponding incentive mechanisms.*³³⁴

*We need to start supporting agroecological systems and Indigenous Peoples' food systems with the same way we support industrial production systems through comparable allocation of resources, extension services, trainings, research, and land designation. This would include increased localized production through market incentives for local economies of scale, incentives to promote agrobiodiversity working with local chefs, restaurants and markets, and increased support of conservation and biocentric production.*³³⁵

*Also, disseminating good consumption criteria, reducing huge post-harvest losses, incentives and scaling up certain practices that facilitate access to food such as e-commerce will help make the transition.*³³⁶

*Information on healthy and sustainable diets, agroecological management must be disseminated on a large scale while valuing local knowledge and know-how. Also, disseminating good consumption criteria, reducing huge post-harvest losses, incentives and scaling up certain practices that facilitate access to food such as e-commerce will help make the transition.*³³⁷

*Recommendation 3: national, regional, and global trade regimes need to shift to become more favourable to smallholders in developing countries and incentivise sustainable production methods Who: WTO, international institutions, governments, international farmers' organisations. How: this can be achieved through global communication, lobbying, and political advocacy in favour of fair trade and a more equitable food system. The new trade rules need to acknowledge current imbalances in global food trade and seek to support the competitiveness of smallholders in developing countries and the environmental sustainability of food production.*³³⁸

*Where trade is involved, build capacity for border staff so they know which laws exist and understand them. * Information on healthy and sustainable diets, agroecological management must be disseminated on a large scale while valuing local knowledge and*

³³¹ 429:156 p 10 in 470_June_17_21_Burian_Multi

³³² 429:163 p 11 in 470_June_17_21_Burian_Multi

³³³ 430:22 p 6 in 471_June_08_21_van Liere M

³³⁴ 444:11 p 6 in 027_Feb_02_21_CBCGDF_UNFSS

³³⁵ 449:15 p 6 in 390_May_28_21_UNPFII_FAO

³³⁶ 457:49 p 8 in 120_Apr_27_21_Mauderli_U

³³⁷ 458:47 p 8 in 123_May_04_21_Mauderli_U

³³⁸ 458:53 p 10 in 123_May_04_21_Mauderli_U

*know-how. Also, disseminating good consumption criteria, reducing huge post-harvest losses, incentives and scaling up certain practices that facilitate access to food such as e-commerce will help make the transition. * Provide regular information on product prices, taking advantage of social networks so that small producers know where to take their products and not sell at below-market prices.³³⁹*

Going beyond, farmers need incentives to adopt innovations. Making the business case for farmers notably includes showing that innovative solutions can be affordable, and that they stand as investments rather than costs.³⁴⁰

Federal policies: There are many federal policies that could be improved to promote the development of equitable organic food systems. Subsidy reform is needed; there should be long-term incentives for sustainable farming, rather than subsidies for conventional farmers not using sustainable practices. Crop insurance reform is needed to provide an adequate safety net for organic farmers.³⁴¹

Now, mostly ingredients are crossing borders to fuel the processing industry. Some companies are experiencing growth but there are not enough organic ingredients in the supply chain to meet demand. With the right government support and incentives, this could change.³⁴²

Governance/Policy/Finance re healthy food access: Access to healthy products should improve and become equitable. There needs to be incentives given to people to buy healthy food. The State must protect food prices to lower the costs of a healthy diet...³⁴³

Governance/Policy: Greater support of small-scale production, particularly in relation to desertion and migration from the countryside to the city; including incentives, that allow a living wage and livelihood so that producers can remain working and living in rural areas.³⁴⁴

The public sector should become more involved in the local food supply, in terms of incentivizing greater local production and consumption.³⁴⁵

A farmer needs to be incentivised by owning the land, so they can apply sustainable practices.³⁴⁶

Additionally, there were suggestions to focus on incentivizing businesses to manage food waste and land use for green initiatives.³⁴⁷

³³⁹ 459:44 p 8 in 125_May_11_21_Mauderij_COSUDE

³⁴⁰ 463:63 p 12 in 155_Apr_27_21_FCDQ_Multi

³⁴¹ 468:47 p 7 in 219_May_10_21_OTA

³⁴² 468:63 p 11 in 219_May_10_21_OTA

³⁴³ 474:22 p 6 in 246_June_09_21_Boza_Kanter

³⁴⁴ 474:31 p 7 in 246_June_09_21_Boza_Kanter

³⁴⁵ 474:37 p 11 in 246_June_09_21_Boza_Kanter

³⁴⁶ 486:46 p 9 in 291_May_21_21_Polman_Prabha

³⁴⁷ 487:38 p 9 in 293_May_22_21_City of San Antonio

*Government incentives to help the small ones formalize, impulse and local and national impact.*³⁴⁸

*Producing green energy on dairy farm, could reduce the cost of doing business. In PA, been working very diligently to change the regulations that would require a fair pay rate for electricity that is generated. However many states won't pay a premium for this, makes it not profitable and disincentivizes. If we could reward that type of technology, it can become accessible to smaller farms. Would be awesome to see 50% of them providing electricity to neighboring homes and business - rewarding good practices.*³⁴⁹

*The plan includes a package of interventions in agriculture (i.e., incentives for agroecology and small farmers, food loss, public procurement, regulation of glyphosate), health (i.e., targeting children's first 1000 days, revised dietary guidelines, public awareness campaigns), food environments (i.e., taxing unhealthy processed foods, front-of-pack warning labels, food advertising restrictions), and school environments (i.e., space, curricula, and nutrition standards).*³⁵⁰

*Partnerships. We would like to see incentivization of profitable networking. Partnerships are key for change. There should be an incentive for collaboration.*³⁵¹

*We believe that the government can become one of those food system game changers, incentivizing people to join the farming business, and encouraging the next generation to trust and get involved.*³⁵²

*Get specific funds and bring either tax benefits or other incentives to allow people to get started. They often want to act, but don't know how. This can also have a snowball effect.*³⁵³

*- incentivize local stores to invest in local food; and not just resell big corps highly processed products.*³⁵⁴

*Engage and align with new allies from other sectors rather than only the health sectors.*³⁵⁵

*Fostering inclusivity within the food systems is paramount for sustainable livelihoods.*³⁵⁶

³⁴⁸ 496:32 p 7 in 312_June_15_21_FAO_IOC_Multi

³⁴⁹ 497:35 p 7 in 314_June_16_21_IOC_US Farmers_Multi

³⁵⁰ 501:3 p 8 in 397_June_04_21_WHO_Multi

³⁵¹ 504:20 p 6 in 400_June_09_21_Viera_Pollmeier

³⁵² 504:60 p 10 in 400_June_09_21_Viera_Pollmeier

³⁵³ 504:63 p 10 in 400_June_09_21_Viera_Pollmeier

³⁵⁴ 504:83 p 12 in 400_June_09_21_Viera_Pollmeier

³⁵⁵ 361:20 p 6 in 405_June_10_21_NCD Alliance

³⁵⁶ 415:22 p 6 in 456_May_17_21_Ekwamu_A

*And with research institutions, where there is a lot of niche work that's disconnected from other efforts. Incentivize harmonization between these efforts and make sure the tools are broader and less niche...*³⁵⁷

*Recommendation 3: present a clear agenda and incentives for the private sector to create an interface between informal and formal economies (formalize trade) Who: policy makers, civil society, private sector How: to formalize trade, there should be incentives for the private sector and an agreeable agenda, where it is clear what will be achieved, what actions are required and stakeholders this will affect.*³⁵⁸

*Further investment in public goods relevant to agriculture and rural livelihoods, to create an enabling environment in which farmers are empowered to make the right choices. This includes improving infrastructure, sharing knowledge through climate advisory services or advice on markets, disease and pest threats, as well as building evidence on what works. This will also incentivize and pull in private sector investment. Closing the economic development gap through health, education and other infrastructure will position smallholder farmers on a level playing field and enable them to compete.*³⁵⁹

*Another important aspect that was identified to be key to conserving nature in the WEF nexus is behaviour change. Behaviour change is needed on two fronts, i.e. both the behaviour of producers and that of consumers should be considered, scrutinised, and changed to enhance the protection of nature in WEF systems. Achieving such changes usually requires incentives for actors to implement change, especially financial incentives. Understanding incentive structures and cross-scale impacts requires further investigation.*³⁶⁰

*All sectors involved with agriculture should come together to explore and test new farming models for access to land, increasing farmer engagement with sustainable methods of production and exploring incentives for these practices, such as "payment for results".*³⁶¹

*Government needs to play a role in incentivizing natural farming and setting up Farmer Producer Organisations (FPOs), especially for small and marginal farmers.*³⁶²

*Provide incentives for healthy consumption and buying healthy food.*³⁶³

*There must be practical, monetary support of any local efforts to preserve biodiversity, Finding ways to monetize offsets for low emission and carbon sequestration.*³⁶⁴

³⁵⁷ 429:274 p 19 in 470_June_17_21_Burian_Multi

³⁵⁸ 458:83 p 22 in 123_May_04_21_Mauderli U

³⁵⁹ 463:40 p 7 in 155_Apr_27_21_FCDO_Multi

³⁶⁰ 19:42 p 15 in 109_Apr_13_21_Jacobs-Mata I

³⁶¹ 22:11 p 7 in 116_Apr_21_21_Hein JR

³⁶² 28:18 p 7 in 023_Jan_29_21_Bharat K S

³⁶³ 32:2 p 6 in 071_Mar_11_21_ESCWA_FAO

³⁶⁴ 37:78 p 10 in 095_Mar_27_21_Chinapoo C_Multi

*Providing incentives for the adoption of nature-friendly technologies, entrepreneurs, climate smart agriculture, with special focus on the water, food and energy nexus as main derivatives for agricultural development and food security in the region.*³⁶⁵

*Increasing the funding facilities available to smallholder farmers will require amongst other things, the commercial aggregation of farmers, access to a well-structured data management system, the development of farmer-centric insurance products to hedge risks, the deployment of both traditional and innovative sources of finance and incentivizing financial institutions to fund the sector.*³⁶⁶

*Game-changing solutions require a combination of better financial tools and products meeting the needs of young food entrepreneurs, incentive mechanisms for FSPs and investors, and common metrics and standards to reduce transaction costs and improve transparency and competitiveness in the financial ecosystem.*³⁶⁷

*Educate consumers through transparently shared information to guide their choices, and consider including financial incentives that reward purchases of less packaged, plant forward foods.*³⁶⁸

*Improved access to financing and incentives Access to farming lands, connect vulnerable groups to opportunities and access to incentives.*³⁶⁹

*Actions to provide end-to-end solutions to transform food systems should include access to healthy food, consider young people in agriculture, strengthen local supply chains and economic incentives through innovation systems.*³⁷⁰

*Incentivize farmers. Who: Businesses, government agencies, and schools. Assess: Data and evidence, evaluating trade-offs. Challenge: Scaling solutions. Outcome: USD 320 billion annually from public and private finance is unlocked to create business opportunities for sustainable finance.*³⁷¹

*Actions: Align current spending, including by OECD countries (presently \$530 billion annually in farm subsidies), with incentives to advance the SDGs.*³⁷²

*Incentives are needed to encourage banks to provide faster and context specific financing to SMEs.*³⁷³

³⁶⁵ 38:13 p 6 in 096_Mar_29_21_ESCWA

³⁶⁶ 46:9 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

³⁶⁷ 48:17 p 9 in 049_Feb_23_21_SAFIN_Multi

³⁶⁸ 51:32 p 10 in 086_Mar_20_21_Rosatan B

³⁶⁹ 54:21 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

³⁷⁰ 55:22 p 7 in 001_Nov_5_20_CGIAR

³⁷¹ 56:30 p 7 in 002_Nov_19_20_CGIAR

³⁷² 56:30 p 7 in 002_Nov_19_20_CGIAR

³⁷³ 61:23 p 6 in 020_Jan_26_21_IFAN

*There needs provision of greater incentives for financial institutions that understand farming to provide new instruments that support new practices, inputs, food products, and processes.*³⁷⁴

*One way to get there might profit from initiatives aiming at setting up a new tradition pattern, where our natural need for a sense of belonging couples with the revaluation of ancient know-how blended with innovative approaches. Often this can happen with an initial incentive, thus with a political will.*³⁷⁵

*Tax exemption for foreign investments and capital investments on Education for SMEs on policies and how to deal with government bureaucracies.*³⁷⁶

*Proposal: create incentives and penalties throughout the food system: To reduce food waste, a different waste stream system, such as households paying per weight waste, incentives for farmers to reduce agriculture waste and for consumers to buy "ugly" fruits and vegetables. Solutions such as taxes on ultra-processed food and differential VAT on healthy food create incentives to consume healthy diets on the production and consumption. Proposal: reducing food waste – promoting better consumption and purchasing through policies.*³⁷⁷

*Proposal: creating incentives – financial and logistics- for sustainable treatment of metropolitan's food waste.*³⁷⁸

*...send the right incentives to all food chain actors, from farmers to consumers; o prioritize food donation for human consumption (over that for animal feed); o facilitate food donation through taxation (using e.g. tax breaks)...*³⁷⁹

*EU CAP: financial incentives should be available to drive radical change, e.g. to mitigate risks for stakeholders and enable risk interventions; there is plenty of money available, but not distributed such to support production focused on sustainability and healthfulness...*³⁸⁰

*Providing incentives towards sustainable food systems o Investments & incentives by public and private sector are needed: encouraging responsible food supply and consumption with neutral or positive environmental impact (tax incentives, procurement), responsible businesses, labelling, and work on legislative measures.*³⁸¹

*Redirect incentives, policies and priorities for support to the very large “small-scale” sector. Policies for people are needed, not just for the economy.*³⁸²

³⁷⁴ 61:25 p 6 in 020_Jan_26_21_IFAN

³⁷⁵ 62:8 p 6 in 021_Jan_27_21_Donati L

³⁷⁶ 65:45 p 10 in 037_Feb_12_21_Food Systems for the Future_Multi

³⁷⁷ 66:18 p 6 in 041_Feb_17_21_Adler D

³⁷⁸ 66:23 p 6 in 041_Feb_17_21_Adler D

³⁷⁹ 68:45 p 10 in 052_Feb_25_21_EUFIC

³⁸⁰ 68:51 p 11 in 052_Feb_25_21_EUFIC

³⁸¹ 68:64 p 12 in 052_Feb_25_21_EUFIC

³⁸² 76:28 p 30 in 189a_April_16_21_Ateneo de Manila

*Another short-term goal is creation of economic incentives for farmers transition to nature-positive practices. These could include carbon sequestration tax credits or other financial incentives. Restrictive tax policy or mandates may only further impair low-income farmers' abilities.*³⁸³

*Economic incentives for ecosystem services, to promote nature-positive methods of farming that produce co-benefits of food production, soil regeneration, carbon storage, and biodiversity.*³⁸⁴

*While this issue is largely focused on the resilience of a food system, consumption of affordable and nutritious food is heavily influenced by food supply chains. The ability to purchase healthy food options is fragmented across socioeconomic lines, but misaligned incentives within the market structure of food suppliers render healthy consumption a difficult problem to solve without public/private cooperation. Given the overreliance on a lack of diversity in the food supply market and the culture of fast-food dominance in the US food system, public/private partnerships to shift incentives will be a focal point of increasing healthy consumption in the US. Government interventions such as sugar taxes or subsidizing healthy produce could potentially improve incentives to purchase and consume healthy foods but do not address the larger barriers to nutritious consumption.*³⁸⁵

*Phase out or penalize current practices that result in environmental and public health externalities (and/or incentivize sustainable, healthy options).*³⁸⁶

*Investigate better incentives to rebalance consumption, nutrition, health, sustainability, and welfare. Informing government policies related to subsidy programs.*³⁸⁷

*Public policies have a role in incentivizing direct investments to support private action and guaranteeing access to markets through adequate infrastructures.*³⁸⁸

*Bring political incentives.*³⁸⁹

*Intensifying food production within the city through incentivising small scale farmers to produce and providing the right assistance with access to finance, production technology and access to markets. In addition the opportunity of schools and institutions such as prisons, hospitals were identified as they have access to large parcels of land which could potentially be used as intensive production and education centers.*³⁹⁰

Taking stock of the food system in Nairobi county by identifying all related activities, stakeholders and initiatives as well as going further to ensure that the right linkages are

³⁸³ 88:20 p 10 in 162_Apr_16_21_Fountain G

³⁸⁴ 88:25 p 10 in 162_Apr_16_21_Fountain G

³⁸⁵ 88:29 p 13 in 162_Apr_16_21_Fountain G

³⁸⁶ 95:15 p 8 in 227_May_18_21_Tarawali S

³⁸⁷ 95:30 p 9 in 227_May_18_21_Tarawali S

³⁸⁸ 100:9 p 6 in 282_May_18_21_Romeo R

³⁸⁹ 101:46 p 13 in 285_May_20_21_TFFF_Multi

³⁹⁰ 103:2 p 6 in 325_May_19_21_ICLEI Africa_Multi

made between different stakeholders as well as incentives directed towards those that require support to build capacity.³⁹¹

Technical experts: Many people are shying away from studying agriculture related subjects which is dangerous for the county and country. Efforts must therefore be geared towards incentivising people to study agriculture and food-related subject.³⁹²

Redirect incentives, policies and priorities for support to the very large “small-scale” sector. Policies for people are needed, not just for the economy.³⁹³

Participants noted that transparency will directly enable the leveling and normalization of multiple firms. However, there are only carrots and not enough sticks to incentivize.³⁹⁴

...establishing incentive mechanisms for rewards and punishments and raising national awareness.³⁹⁵

Getting the narratives right on the priorities and incentives.³⁹⁶

This should include supports to incentivise and remunerate farmers for both food and ecosystem services, encourage environmentally-friendly farming and support high-welfare systems.³⁹⁷

In order to enact change, targeted education programmes for producers and processors will be needed, as well as improved labelling/certification, benchmarking of animal welfare on farms and incentives for higher standards.³⁹⁸

Finally, incentives for farmers to change to high welfare systems are required at retail and policy level.³⁹⁹

Incentives will also be required to scale-up promising approaches and tools.⁴⁰⁰

To maximise the potential of technologies in enabling fair, safe and sustainable supply chains, concerted efforts will be required to scale up and provide targeted education, including incentives & supports.⁴⁰¹

There is a need for frameworks that involve policy incentives, smart partnerships, farmer communities especially in the design process of innovations and investment.⁴⁰²

³⁹¹ 103:3 p 6 in 325_May_19_21_ICLEI Africa_Multi

³⁹² 104:20 p 8 in 326_May_5_21_ICLEI Africa_Multi

³⁹³ 105:38 p 30 in 007a_Dec_18_20_NAAGD

³⁹⁴ 106:8 p 4 in 051a_Feb_24_21_Google

³⁹⁵ 107:28 ¶ 27 in 176a_Mar_25_21_AGFEP

³⁹⁶ 113:19 p 6 in 070_Mar_09_21_Akinbamijo,O

³⁹⁷ 114:7 p 6 in 074_May_18_21_O'Mara_Teagasc

³⁹⁸ 114:67 p 12 in 074_May_18_21_O'Mara_Teagasc

³⁹⁹ 114:72 p 12 in 074_May_18_21_O'Mara_Teagasc

⁴⁰⁰ 114:74 p 13 in 074_May_18_21_O'Mara_Teagasc

⁴⁰¹ 114:82 p 13 in 074_May_18_21_O'Mara_Teagasc

⁴⁰² 115:34 p 10 in 075_Mar_10_21_IFAN

There is significant scope for PDBs to mobilize additional finance to invest in agriculture and food economies, to channel it in ways that incentivize sustainable practices, and to invest in and promote innovations that accelerate sustainable practices and help more efficiently reach 'last mile' rural clients.⁴⁰³

Objective is: (1) to mobilize private investment in agriculture (PDBs as issuers of green bonds); and (2) redeploy that capital through green financial products to incentivize best practices on the ground and de-risk investments. This requires: (1) technical capacity and a package of clearly defined products; (2) standardized, simplified approaches to identify, track, and validate impact; (3) better understanding amongst investors of the risk profile of green agricultural investments; (4) risk-sharing vehicles (e.g. blending finance); (5) incentives to justify the higher price of green products (e.g., tax breaks); and (6) favourable policy and regulatory environments.⁴⁰⁴

Achieving such changes usually requires incentives for actors to implement change, especially financial incentives. Understanding incentive structures and cross-scale impacts requires further investigation.⁴⁰⁵

Ways to address these limiting factors CREATING INCENTIVES: (1) Work towards a price of food that reflects the true social and environmental costs of production.⁴⁰⁶

Reduce investment barriers/incentivize farmers, e.g. by lowering certification costs for smallholders, approving longer-term loans linked to sustainability targets, lowering interest rates (6) Financial institutions to have top management-endorsed sustainability objectives and to create incentives for staff to get this type of deals off the ground.⁴⁰⁷

The discussion focused a lot around the topic of incentives. Incentives within commercial and development Banks: it can be a challenge to convince people in a bank to take on and see through the blended finance from beginning to end because it's usually outside the business-as-usual type of transactions and it requires more time and more effort. Incentives for corporates: it would be ideal if the shareholders would also evaluate the corporates according to criteria that are more aligned with sustainability. Agriculture. Incentives for the farmers. If there's no client demand from the corporate side or from the farm side, even if we can get commitments and more blended finance, it simply won't work. So, the farmer and the corporate would need to see how a better food system can also benefit them.⁴⁰⁸

Governments need to also create incentives for financial institutions by creating and providing co-financing systems.⁴⁰⁹

⁴⁰³ 117:4 p 6 in 085_Mar_17_21_IFAD_FSFS

⁴⁰⁴ 117:9 p 7 in 085_Mar_17_21_IFAD_FSFS

⁴⁰⁵ 119:60 p 15 in 109_Apr_13_21_Jacobs-Mata I

⁴⁰⁶ 120:5 p 6 in 117_Apr_22_21_Dinesh D_Multi

⁴⁰⁷ 120:7 p 6 in 117_Apr_22_21_Dinesh D_Multi

⁴⁰⁸ 120:22 p 8 in 117_Apr_22_21_Dinesh D_Multi

⁴⁰⁹ 122:22 p 7 in 127_May_13_21_IJAFN_CWFS

Need to lobby with the concerned government agencies for incentivizing the providers of healthy and safe food.⁴¹⁰

Give incentives for greater private sector investment in agriculture.⁴¹¹

We need to ensure guidance and regulations are clearly communicated and incentivised to ensure maximum support from farmers and land managers. We need positive incentives and support needs to be in place with a focus on education to reduce barriers to social change in practices which incorporate circularity principles which are nexus-smart.⁴¹²

Then work on system of incentives and disincentives for the introduction of renewable energy systems and high-efficiency irrigation systems...Financial incentives: Incentives are pre-requisite for making possible substantial saving for energy use at the farm level particularly for groundwater pumping. There is also a need to replace the traditional primitive methods of water application with other efficient methods through better extension service. Thus financial incentives through proper policies and strategies should enable farmers to adapt the modern and renewable energy technologies in the farming systems. Such technologies, if adapted on larger scale, will tap the exploitation of groundwater sources like solar pumping system. Incentives for small farmers: Policies must be modified so that they can provide incentives to the small farmers who are 70-80% of the farming community for using renewable energy for pumping.⁴¹³

The food environment needs to be changed to incentivise healthy foods and disincentivise wide availability of highly processed unhealthy foods, including working through corporate governance mechanisms.⁴¹⁴

It was noted that additional incentives might be required, including smart subsidies, to support farmers in adopting new technologies that would support both water and food security outcomes.⁴¹⁵

Water markets may incentivize lower water use amongst users and distinguish between water prices for irrigation use versus household use. Employing incentive mechanisms embedded in water markets can encourage sustainable investor and consumer behavior leading to reallocation of water sources across different sectors (e.g. agriculture, manufacturing, and public water supply). Also, strengthening regulations to reduce wasteful water use and to boost water-saving technologies.⁴¹⁶

Developing case-specific solutions and incentives for farmers to encourage implementation of climate-oriented action.⁴¹⁷

⁴¹⁰ 124:10 p 6 in 135_June_08_21_Calub_Gregorio

⁴¹¹ 124:37 p 8 in 135_June_08_21_Calub_Gregorio

⁴¹² 126:14 p 7 in 142_May_11_21_Carter L_Dennis S

⁴¹³ 129:8 p 9 in 159_Apr_21_21_Hafeez M

⁴¹⁴ 134:7 p 6 in 190_Apr_16_21_Cullen N

⁴¹⁵ 135:12 p 6 in 193_Apr_19_21_Ringler_Kassim

⁴¹⁶ 135:18 p 8 in 193_Apr_19_21_Ringler_Kassim

⁴¹⁷ 135:38 p 10 in 193_Apr_19_21_Ringler_Kassim

*Providing incentives for farmers and Water Users Associations to conserve water.*⁴¹⁸

*Incentives and support systems, opportunities for programs and competitions should be included as part of policy implementation.*⁴¹⁹

*Additionally, it needs to be clear what's in it for partners in the MSP, and a clear set of incentives needs to be there, such as the ability to create synergies by working with partners that complement each other.*⁴²⁰

*Another challenge is to have a long-term perspective as well as good incentives, which are more than just having a (future) profit and are based on real problems.*⁴²¹

*Financial incentives need to be directed towards actions that adhere to climate and people-friendly practice, rather than subsidising certain crops.*⁴²²

*Fundamental to increase the efficiency of foods and create conditions to do so: partnerships, State, businesses to support those who can't have food or consume the calories necessary. Today those partnerships are weak, and be better regulated. And even incentivize good positive legislation to enhance good practices (like Chile).*⁴²³

*Creating economic incentives, selecting appropriate data baselines, and recognizing local and regional context will strengthen engagement in sustainability measures.*⁴²⁴

*To address these issues, the group discussed the need for more financial incentives and mechanisms to support a road to zero emissions and carbon sequestration.*⁴²⁵

*A key part of driving this impact will be providing dairy farmers with the tools and increasing financial support through corporate and institutional investment, government incentives to farmers for sustainable practice, better technology to drive a circular economy and reduce packaging waste, and models of consumption that push consumers to pay for more sustainable products.*⁴²⁶

*There should be a way on how society can pay back the farmers as payment for ecosystem services.*⁴²⁷

*Eighty-seven percent of poll participants agreed that incentives in terms of funds.*⁴²⁸

⁴¹⁸ 135:71 p 14 in 193_Apr_19_21_Ringler_Kassim

⁴¹⁹ 142:16 p 9 in 216_May_06_21_Ben_Aniabi

⁴²⁰ 144:17 p 11 in 229_May_18_21_NFP_Rabobank_Multi

⁴²¹ 144:42 p 15 in 229_May_18_21_NFP_Rabobank_Multi

⁴²² 145:20 p 9 in 230_May_19_21_Allen K

⁴²³ 149:34 p 13 in 235_May_25_21_Gonzalez B_Multi

⁴²⁴ 156:9 p 6 in 263_May_06_21_CCGA

⁴²⁵ 159:14 p 6 in 275_May_13_21_Dornom H

⁴²⁶ 159:20 p 6 in 275_May_13_21_Dornom H

⁴²⁷ 161:32 p 8 in 279_May_18_21_Yoovatana M_Multi

⁴²⁸ 162:29 p 7 in 287_May 20_21_Akinbamiyo_Y

Using economic incentives as a way of directing individuals to the best diet...⁴²⁹

Create government incentives through tax incentives for supermarkets prioritizing local farmers products.⁴³⁰

Have municipal governments also incentivize local farmers to create their own composting facility on site to process local food scraps.⁴³¹

Financial incentives are required where capital investment in hardware is required. There is an opportunity for the agricultural investment scheme, which is operated by the Department of Agriculture Food and the Marine, to be expanded to support investments in digital at a farm level.⁴³²

Making use of incentives: What are the incentives for doing the right thing? Smart incentives and disincentives need to be created to align actors in sectors of the food system.⁴³³

Provision of fiscal incentive for investment in the agricultural sector.⁴³⁴

Incentives and schemes: Attract young farmers or the new farmers with ideas to implement and build their projects. Many people are discouraged to opt for farming as it is a risky business.⁴³⁵

Drive food suppliers to seek the best interest of children by incentivizing the provision of healthy, convenient, and affordable foods.⁴³⁶

Use and change the economic system. What destroys our planet should cost, what is good should be promoted. True cost accounting is needed, and we should use subsidies and taxation in a way that will lower the burden on the planet.⁴³⁷

Revival of ethnic cuisines and engagement of indigenous communities in maintaining land resources for diversified food is only possible through incentive-based, and culturally-driven conservation.⁴³⁸

However, the small and medium scale farmers who took part in the dialogue said that farmers are often unwilling or financially unable to take up these innovations, it seems important to create incentives for farmers to actually adopt these technologies. One way could be through financial support and incentives from governments, another would be through the purchasing power of more aware consumers. Penalising bad use of water.

⁴²⁹ 163:28 p 9 in 292_May_21_21_ProVeg_Multi

⁴³⁰ 166:69 p 10 in 300_May_27_21_Alesso_Pommeret

⁴³¹ 166:97 p 13 in 300_May_27_21_Alesso_Pommeret

⁴³² 173:57 p 12 in 328_May_19_21_Lalor_Teagasc

⁴³³ 180:44 p 10 in 335_May_26_21_Laar_Multi

⁴³⁴ 186:32 p 8 in 341_May_28_21_Sewraj_KS

⁴³⁵ 186:79 p 14 in 341_May_28_21_Sewraj_KS

⁴³⁶ 196:11 p 7 in 351_June_03_21_CIF_Multi

⁴³⁷ 214:6 p 8 in 370_June_01_21_WWF Sweden

⁴³⁸ 222:19 p 10 in 380_June_08_21_Shakya_Chettri

Taxes and fines could penalise inefficient use of water...Rewarding efficiency in water use. Incentives and subsidies could support the implementation of new technologies, water monitoring, and change in production systems (for example hydroponic cultures). Public water banking. This practice was mentioned as a useful tool to reallocate water according to criteria of equity, efficiency, and sustainability.⁴³⁹

The lack of incentives for landowners to leave some of their land in a natural state for the benefit of biodiversity and the community is a major constraint. Areas left in a natural state, particularly when they are on private farmland, are sometimes perceived as unproductive and a source of lost revenue. Community recognition and financial reward for ecological goods and services may be one way to address this perception.⁴⁴⁰

Explore restorative and multi-trophic integrated aquaculture (IMTA) systems: More financial and legislative incentives for researchers and innovators to explore scalable solutions in circular and restorative aquaculture practices.⁴⁴¹

The speakers also highlighted some of the elements needed to enable food systems transformation. These include the need to: foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion; mobilize resources to implement actions at scale, through sustainable investments (public, private, blended) and other instruments such as public incentives (subsidies, taxes); harness the potential of innovation and technology, making them accessible to farmers/fishers/foresters; identify trade-offs between actions/sectors and strategies to minimize them; foster behavioural change across food systems actors through education and awareness building.⁴⁴²

Participants concluded that in order to drive best practices in the agricultural transition there needs to be recognition of the diversity of regions and the need to avoid a one-size-fits-all approach in defining what is needed. To drive this change, greater collaboration and links are needed all along the supply chain, particularly between consumers and producers, to share existing knowledge and support a full system change, and to incentivise and reward producers for taking action.⁴⁴³

The group also proposed that the national goals on food waste reduction could be more ambitious than UN targets of 50% reduction. They felt that more tax incentives or policy should be available for the business that practice waste reduction solutions throughout their operations.⁴⁴⁴

Two key policy recommendations were presented by the development sector representative: diversifying agri-food commodities to meet market demand, with a focus on food and nutrition, safety and quality; and greening and enhancing resilience of

⁴³⁹ 227:18 p 10 in 385_June_09_21_Lazzaris S

⁴⁴⁰ 232:7 p 6 in 226_May_17_21_Oteyami O_English

⁴⁴¹ 243:15 p 8 in 319_June_30_21_Fredriksson O

⁴⁴² 247:16 p 8 in 480_June_21_21_CIHEAM_Multi

⁴⁴³ 248:1 p 6 in 481_June_23_21_Global Counsel

⁴⁴⁴ 256:17 p 10 in 489_June_22_21_Rare China Centre_Multi

*investments, with a focus on pricing environmental services and establishing incentive mechanisms.*⁴⁴⁵

*Stakeholders involved in investments approached the issue of sustainability in two ways. First, by focusing on production systems that provide tangible benefits to investors and end-users; and then via a more transformative approach that incentivizes broader sustainability impact within a longer timescale. These pathways generally align with short- and long-term views on food systems transformation, and can be implemented in parallel if there is coordination and collaboration among the relevant sectors.*⁴⁴⁶

*Tax incentives and penalties are needed, based on set sustainability metrics backed by strong research and evidence, to support and ensure farmers and businesses truly implement sustainable practices.*⁴⁴⁷

*At the end of the Dialogue, all participants voted on the solutions that they thought should be the ones to take priority. These are: 1. Workshops and dialogues between policymakers and scientists (science-policy co-creation sessions) 2. Re-establish connection between consumers and food, including early education curriculum 3. Food labelling procurement incentives, market barriers & ethical restrictions for sustainable marketing 4. Turn sustainability from a single word into a multi-dimensional framework of metrics that captures more context, including social, ethical, environmental and economic impacts. 5. Financial incentives and monitoring from richer countries to support shift to sustainable agriculture in low-resource countries/regions*⁴⁴⁸

*The participants also agreed on the following solutions: 1. Promotion of sustainable education is needed in low-resource areas - perhaps through the incentive of free school meals. 2. Start working at the local level. There could be a global agenda, but initiatives should start at the local level. 3. Financial investments and monitoring from richer countries to shifting to sustainable agriculture.*⁴⁴⁹

*Sustainable development framework: the transition to a more sustainable model demands relevant long-term investments, which require well-defined policies, laws and economic incentives.*⁴⁵⁰

*The right incentives need to be properly allocated throughout the value chain, especially for the producers/farmers, who often incur most of the costs to become sustainable.*⁴⁵¹

*End consumers, banks and governments should also play a role in creating such incentives/compensation for the additional cost related to implementing sustainable practices across the value chain.*⁴⁵²

⁴⁴⁵ 257:10 p 6 in 490_June_22_21_Yasmi Y

⁴⁴⁶ 257:30 p 11 in 490_June_22_21_Yasmi Y

⁴⁴⁷ 259:11 p 6 in 492_June_23_21_Liu JA

⁴⁴⁸ 259:16 p 6 in 492_June_23_21_Liu JA

⁴⁴⁹ 259:35 p 12 in 492_June_23_21_Liu JA

⁴⁵⁰ 264:29 p 6 in 497_June_24_21_Fontes_Multi

⁴⁵¹ 264:31 p 6 in 497_June_24_21_Fontes_Multi

⁴⁵² 264:32 p 6 in 497_June_24_21_Fontes_Multi

*These incentives should also improve the livelihood of the smaller farmers and promote sustainable economic growth.*⁴⁵³

*Incentivize innovations and investments that help lower agriculture's vulnerability to climatic/environmental impacts and lead to more affordable healthy food consumption.*⁴⁵⁴

*Apply food system governance that realigns research, policy, and incentives.*⁴⁵⁵

*Incentivize the use of seaweed based materials/products by shifting the perceived value of seaweed products.*⁴⁵⁶

*Incentivizing shifts in the existing models - Incentivizing procurement of seaweed - Incentivizing the expansion of landscape under seaweed production - Incentivizing the exploration of native species and their production and potential.*⁴⁵⁷

*Also the food import needs to be properly managed and controlled with incentives given to local producers to trade off those imported foods. In this way the imports will be regularly reviewed and reduced as local production increases.*⁴⁵⁸

*The right incentives to be devised to encourage local productions and to reduce import level on certain foods.*⁴⁵⁹

*Educate fishermen on how to work sustainably or change their methods (e.g., to aquaculture combined with other practices) and financially incentivise them to cooperate.*⁴⁶⁰

*Incentives to plant-based advocates.*⁴⁶¹

*Food suppliers and retailers should commit to providing and incentivising sustainable food options – it needs to be the easy choice for consumers, not a burden.*⁴⁶²

*Food companies can offer longer term contracts and/or higher prices to farmers that agree to produce more sustainably (measured against their own operation/benchmark and verified by an external party), to derisk and financially incentive the transition to more sustainable practices.*⁴⁶³

⁴⁵³ 264:34 p 6 in 497_June_24_21_Fontes_Multi

⁴⁵⁴ 265:10 p 6 in 498_June_24_21_Danquah E

⁴⁵⁵ 266:13 p 6 in 499_June_25_21_GANSF

⁴⁵⁶ 267:29 p 8 in 500_June_26_21_Edible Issues

⁴⁵⁷ 267:31 p 8 in 500_June_26_21_Edible Issues

⁴⁵⁸ 268:18 p 6 in 501_June_28_21_Kairo K

⁴⁵⁹ 268:32 p 7 in 501_June_28_21_Kairo K

⁴⁶⁰ 270:21 p 7 in 503_June_29_21_Schnyder_Boura

⁴⁶¹ 270:24 p 7 in 503_June_29_21_Schnyder_Boura

⁴⁶² 276:48 p 10 in 509_June_30_21_FFA_Nestlé

⁴⁶³ 276:50 p 10 in 509_June_30_21_FFA_Nestlé

Regarding reward for farmers, it is crucial to recognise the farmers' efforts (farmers are not rewarded for the eco-services they deliver).⁴⁶⁴

Create a public/private partnership developing financial incentives complementary to the CAP support.⁴⁶⁵

It is urgent to stop short term economic thinking and explore alternative financial incentives (slow money, municipal bonds geared to green infrastructure investments, ecosystem services payments etc.), seek inclusion and territoriality. Policies should support bonding and bridging through social networks.⁴⁶⁶

Financial innovation and incentive mechanisms is one of the key actions in the food system to reduce food loss and facilitate the transformation of food system. With a loan system designed by policy banks to cover all segments of the food supply chain, a series of credit products could be harnessed to benefit small farmers and serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc.⁴⁶⁷

Incentives/disincentives such as taxes and subsidies need to be put in place as a way of promoting the consumption of nutritious diets.⁴⁶⁸

Governments must do more to incentivise the growth of crops that are currently imported and/or to increase the diversity of crops being grown within their borders. Only then will small farmers and corporations pay more attention to a nations overall food security.⁴⁶⁹

State Governments need to implement financial incentives to encourage small farmers to grow more sustainable and environmentally friendly produce. However, this is not enough. Large companies purchasing and using the small farmers produce to make their products also need to be held accountable. For instance, it is common knowledge that such companies will say anything to promote their brand and/or to sell their products. However, what are they actually doing to encourage small farmers to be organic, to be environmentally conscious, to use less water and so on... These are once again issues that must be redressed by policy makers as a matter of extreme urgency.⁴⁷⁰

We will need to see both developed and developing countries make good use of technological improvements in efficiency and mitigation strategies that are incentivized by policy.⁴⁷¹

Government action to incentivize importation of nutritious foods.⁴⁷²

⁴⁶⁴ 276:60 p 11 in 509_June_30_21_FFA_Nestlé

⁴⁶⁵ 276:66 p 11 in 509_June_30_21_FFA_Nestlé

⁴⁶⁶ 302:47 p 9 in 535_July_08_UNESCO Chair on Food

⁴⁶⁷ 318:13 p 6 in 551_July_15_21_FAO_ESCAP_Multi

⁴⁶⁸ 321:11 p 6 in 555_July_15_21_Zombe K

⁴⁶⁹ 326:19 p 7 in 560_July_19_21_Arbuthnott_Multi

⁴⁷⁰ 326:31 p 11 in 560_July_19_21_Arbuthnott_Multi

⁴⁷¹ 331:1 p 6 in 565_July_20_21_Mitloehner_Kebreab

⁴⁷² 333:71 p 13 in 568_July_21_21_Cooper-Liverpool M

Access to finance for smallholders remains problematic across commodities and across borders. Financial institutions, brands and/or governments will need to financially incentivize smallholders and producers to help de-risk the transition to “more sustainable” production practices.⁴⁷³

Producers (farmers, ranchers, growers) must be “at the table” in creation of financial incentives and standards that reward and measure producers for sustainability practices including those related to climate-smart agriculture.⁴⁷⁴

Regarding the durability and sustainability of the production systems, the principles of sustainable agriculture were presented as relevant for three levels of need: economic viability, prevention of damage to the environment, and socioeconomic equity... To do this, the group insisted on the need and urgency to adopt measures of economic incentives and to promote appropriate new technologies in order to guarantee a stable offering of foodstuffs with adequate nutritional value to which the vulnerable groups will have access.⁴⁷⁵

Smaller cities kept up purchases of produce from family farms from the start of the process, incentivizing local production in partnership with government entities to provide technical assistance, to organize the production and diversification of the produce supplied.⁴⁷⁶

Define “incentivize”, does this refer to financing? The prime rate is an incentive. Consider the participation of other sectors. Take into account vulnerable women groups, they have little access to these incentives and financing possibilities. Observe existing incentive programs and strengthen women's participation in them. The credit conditions of the banks do not allow the participation of small-scale producers. Government intervention should be considered to facilitate access to these programs by small-scale producers.⁴⁷⁷

Ways to generate positive changes in food donation: there was agreement among the participants regarding the role that incentives could play in terms of promoting food donation, as well as aspects related to raising awareness and capacity building.⁴⁷⁸

There is a need for financial incentives, clear education paths, and structured 129 approaches to providing resources to entice young farmers into agricultural 130 careers if northern agriculture is to be successful.⁴⁷⁹

⁴⁷³ 334:1 p 2 in 139a_May_27_21_WBCSD

⁴⁷⁴ 338:2 p 2 in 484a_June_24_21_WBCSD_USFRA

⁴⁷⁵ 341:5 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

⁴⁷⁶ 342:13 p 7 in 393a_June_01_21_Food of Tomorrow_Eng

⁴⁷⁷ 353:6 p 6 in 424a_June_28_21_PROLIDER_Eng

⁴⁷⁸ 355:5 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

⁴⁷⁹ 362:26 p 3 in 505a_June_29_21_Borchard_UNC

Innovation

*Business credit and knowledge about Business credit; Understanding alternative cooperative models, development and management for small farms.*⁴⁸⁰

*Indigenous Peoples need mechanisms and spaces and access to funds/funding. How else can we develop the programs and projects that allow young people to stay at home to do and value these activities?*⁴⁸¹

*In the context of high international uncertainty and volatility of raw materials markets, amid the high level of international debt, it is essential to implement a policy that would contribute to increasing the competitiveness and resource availability of agro-businesses, and which would not exert additional pressure on the costs of manufacturers and consumers and indirectly affect the rise in prices of agro-industrial products.*⁴⁸²

*Develop tools and increase access to financial services adapted to the rural world with an acceptable single-digit interest rate: Better access to financial services such as credit, insurance and financial savings mechanisms can help all farmers, but in particular small farmers who are more exposed to risk and do not have alternative sources of private capital. Financial services can help increase on-farm productivity and business development along food system value chains by providing a mechanism for risk management, investing in improved technologies, mechanizing agricultural systems, or expanding into more viable businesses...*⁴⁸³

*Remove administrative and regulatory barriers to improve incentive mechanisms and make it easier for farms to access these mechanisms.*⁴⁸⁴

*Provide funds to Indigenous community members grow traditional food plants and provide tools to create businesses for these foods, which are purchased through public procurement programs.*⁴⁸⁵

*Finance can serve as a driver for change; however, the financial system needs to be overhauled by moving towards finance that prioritizes positive impacts. TCA can serve as a powerful instrument to drive change.*⁴⁸⁶

They are the engines for technologies and innovations generations including; crop varieties, vaccines, diagnostic tools for managing risks from biosecurity and climate change. Universities need to be brought to the center of the food systems this enable them play this critical role and help in the delivery of nutritious and safe food, improved financial sustainability of farm enterprises, greater engagement with communities, engagement with policy makers and change their culture of doing business by for

⁴⁸⁰ 356:55 p 7 in 409_June_13_21_Mone S

⁴⁸¹ 394:34 p 9 in 436_June_16_21_GIYC_Multi

⁴⁸² 507:6 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

⁴⁸³ 510:27 p 12 in 079a_May_27_21_NGA_Soung_Eng

⁴⁸⁴ 520:21 p 9 in 107a_June_22_21_Trimarchi A_Eng

⁴⁸⁵ 394:47 p 10 in 436_June_16_21_GIYC_Multi

⁴⁸⁶ 409:15 p 6 in 450_Mar_11_21_IFAD_Multi

*example making universities easily accessible and open to the smallholder farmers and communities.*⁴⁸⁷

*Further, there is need to embrace innovations in technology including in TVET institutions.*⁴⁸⁸

*With youth – include them in decision making and empower them to bring innovative solutions to farming, and the rest of the food system, as they are often early adopters of technology.*⁴⁸⁹

*Create blended finance mechanisms and tailored financial instruments for farmers and increase the total availability of finance.*⁴⁹⁰

*In certain locations this could be transition financing to move from unstable production to stable production methods, i.e. to reduce deforestation in Latin America.*⁴⁹¹

*Grow financial investments in innovative and sustainable solutions by: Promoting multi-lateral funding and creating a flow of financial investments in regions that are trying to advance agricultural innovation.*⁴⁹²

*Driving procurement to regions that are advancing agricultural innovation.*⁴⁹³

*Using carbon financing approaches to compensate regions for emissions reductions.*⁴⁹⁴

*Developing innovative payment systems to support sustainable farming. For example, using digital tech for consumer payments to go directly to farmers.*⁴⁹⁵

*Ensure that the other half of investment is not actively undermining the SDGs. That is, if more than half of investment in agricultural innovation provides end-to-end solutions that support the SDGs, those efforts might yield limited results if there is little or no control over the other half of investment.*⁴⁹⁶

Market and infrastructure. Need for digitalization and ensuring women are aware of inclusion in digital market access Developing strategies for women to be able to access funds especially in the case that loans require physical collateral and have high interest rates which women are not able to pay back Need for partnerships that engage women in policy making on various food systems and agricultural activities Support women

⁴⁸⁷ 409:20 p 7 in 450_Mar_11_21_IFAD_Multi

⁴⁸⁸ 415:37 p 8 in 456_May_17_21_Ekwamu_A

⁴⁸⁹ 429:132 p 7 in 470_June_17_21_Burian_Multi

⁴⁹⁰ 429:150 p 10 in 470_June_17_21_Burian_Multi

⁴⁹¹ 429:151 p 10 in 470_June_17_21_Burian_Multi

⁴⁹² 429:174 p 12 in 470_June_17_21_Burian_Multi

⁴⁹³ 429:177 p 12 in 470_June_17_21_Burian_Multi

⁴⁹⁴ 429:178 p 12 in 470_June_17_21_Burian_Multi

⁴⁹⁵ 429:184 p 12 in 470_June_17_21_Burian_Multi

⁴⁹⁶ 429:185 p 12 in 470_June_17_21_Burian_Multi

*businesses and allow them to be part of the partnerships Bank customer segmentation to address the financial needs of women.*⁴⁹⁷

*Climate action and inclusive financing- Access to green finance Inspire confidence among ladies to tap into funds that can help them invest in agriculture. A member mentioned the climate action fund that has been initiated by the world-bank. One of the members also stated that there is a lack of awareness among women on such initiatives and there is therefore need for awareness creation one such programmes are started. Kenya is largely arid and semi-arid (89%) and therefore innovative ways should be sought to shift reliance from rain-fed agriculture. These include: Irrigation machinery, irrigation pumps and drilling of water ponds, climate smart agriculture local innovations Create financial products at the bank level that cater for women such as agricultural insurance products that support women. Agro-forestry- This can be done through encouraging tree planting among faring households especially fruit trees that can help mitigate on the effects of climate change. Soil health - support and promote soil rejuvenating through local solutions to enhance productivity and conserve biodiversity. Promote urban farming and use of kitchen gardens among land constrained women and urban farmers.*⁴⁹⁸

*First, to get the support and facilitation needed, there must be greater clarity on the cost of innovation to guide demand.*⁴⁹⁹

*The second key message that emerged from the discussion is that solutions from the innovation ecosystem can make it easier for farmers – for example through packaged solutions such as coupling insurance with climate information, or media innovation (including educational entertainment shows on national and regional TV programs). Participants also pointed to conditioned solutions as an option – such as financial innovation offered by banks in Brazil, who are conducting assessments to help identify gaps at farm level and offer tailor-made support.*⁵⁰⁰

*Innovative value addition to cocoa beans or its waste products by farmers will create new streams of income generation so as to maximize their cocoa market diversification strategies.*⁵⁰¹

*Entities that finance agriculture also need to be part of the process of meeting food security and other SDGs. Otherwise, their terms or leases can come in conflict the way farms seek to operate more sustainably.*⁵⁰²

Beef producers, for example, have taken great strides in grazing management and taking advantage of new ways to utilize government cost programs. The swine industry has focused on implementing sustainability measures to mitigate methane and greenhouse gases. The pork industry over the last decade has been working on decreasing its

⁴⁹⁷ 433:12 p 7 in 474_June_18_21_Matu_Opiyo

⁴⁹⁸ 433:16 p 7 in 474_June_18_21_Matu_Opiyo

⁴⁹⁹ 463:50 p 9 in 155_Apr_27_21_FCDO_Multi

⁵⁰⁰ 463:64 p 12 in 155_Apr_27_21_FCDO_Multi

⁵⁰¹ 499:8 p 10 in 394_June_01_21_Egyir I

⁵⁰² 8:7 p 6 in 169_Apr_6_21_Shea E

environmental footprint – and has built partnerships up and down the value chain, making it easier to take on sustainability initiatives. Cost-share programs, both privately and publicly funded, are very important to these types of ventures.⁵⁰³

The need for financing models to enable the exchange was also emphasized as well as the need for policy implementation that concretize these priorities.⁵⁰⁴

Funding – Funding for non-conventional food systems initiatives, such as regenerative agriculture, is often difficult to source.⁵⁰⁵

The idea that farming is a business that has to provide financial as well as ecological returns should be mainstreamed.⁵⁰⁶

Reduce industrial costs by reducing taxes imposed on food factories and inviting them to exploit the largest available percentage of production capacity, adopting special prices for fuel (especially electricity) and supporting use of renewable energy equipment.⁵⁰⁷

Development of traditional and innovative sources of finance, (such as, crowdfunding, diaspora investment, franchising, fintech, etc) and tailored risk-management products such as farmer-centric insurance products for each value chain.⁵⁰⁸

Game-changing solutions require a combination of better financial tools and products meeting the needs of young food entrepreneurs, incentive mechanisms for FSPs and investors, and common metrics and standards to reduce transaction costs and improve transparency and competitiveness in the financial ecosystem.⁵⁰⁹

A fifth and final proposal was to better track and coordinate development finance at the source given that it is difficult to track the large number of operators. In short, donors could publicly disclose the projects they fund and create a comprehensive database/visual geo-localization of all projects. They should also request new entities asking for their support to develop synergies with at least 2 ongoing initiatives from this map. Block chain could be used to trace the resources at the level of end-beneficiaries to foster synergies and avoid duplication.⁵¹⁰

Scoring models that can guide the development of financial models for agri-SMEs and technology solutions providers. c) A global competition allowing small entrepreneurs to access large pools of capital based on random selection, to be used for innovation piloting. d) Local investor networks pooling resources to tap and finance local tech innovations e) A global townhall initiative for agtech innovations to showcase innovations and share experiences/support each other. f) A global blended facility or country-level

⁵⁰³ 8:31 p 11 in 169_Apr_6_21_Shea E

⁵⁰⁴ 19:3 p 7 in 109_Apr_13_21_Jacobs-Mata I

⁵⁰⁵ 29:50 p 6 in 044_Feb_18_21_Bharat K S

⁵⁰⁶ 29:53 p 10 in 044_Feb_18_21_Bharat K S

⁵⁰⁷ 38:40 p 9 in 096_Mar_29_21_ESCWA

⁵⁰⁸ 46:27 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

⁵⁰⁹ 48:17 p 9 in 049_Feb_23_21_SAFIN_Multi

⁵¹⁰ 48:26 p 11 in 049_Feb_23_21_SAFIN_Multi

blended facilities pooling capital for start-up ag-tech entrepreneurs to pilot their innovations.⁵¹¹

More flexible innovative financing systems with modified systems of risk management, coaching and technical support is needed 3. There is need to examine the processes/bureaucracy involved in climate smart financing and develop investment regimes more aligned to SDGs that do not simply copy and paste traditional risk models and regimes of the banking sector 4. There is need to position financing regimes to better align and accelerate action on global goals and to better account for the risk in not taking action on climate risk. Reparation should also be aligned to discussion and need to develop sustainable and resilient food systems.⁵¹²

Crowd funding Innovative sustainable financing.⁵¹³

Technology is key to overcoming informational challenges leveraging also financial innovations and improved warehouse receipt systems, improved regulations and standards also help overcome information gaps.⁵¹⁴

Encourage digital payment options such as mobile banking to reduce information asymmetry and link warehouse receipts to financial system to support farmers' access to credit.⁵¹⁵

Attract Small and medium enterprises through innovative financing to produce diverse nutritious foods.⁵¹⁶

Design blended structures with a deliberate agenda of data generation, financing innovation, learning, and informing policy, rather than just with an agenda of mobilizing capital on a time-bound basis.⁵¹⁷

A long-term goal is to dismantle current economic lock-ins for American agriculture practices. One method involves restructuring farm subsidy policies, specifically crop insurance, to be more environmentally friendly and could involve insurance that is not crop-specific but applies to all crops. Another policy approach involves reforming antitrust policies for the nation's largest industrial farms.⁵¹⁸

Economic incentives for ecosystem services, to promote nature-positive methods of farming that produce co-benefits of food production, soil regeneration, carbon storage, and biodiversity. Cost share programs for investments in new practices. Payment for ecosystem services through tax credits. Restructure crop insurance program practices o

⁵¹¹ 48:30 p 12 in 049_Feb_23_21_SAFIN_Multi

⁵¹² 52:3 p 6 in 087_Mar_20_21_Chinapoo C_Multi

⁵¹³ 54:22 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

⁵¹⁴ 61:21 p 5 in 020_Jan_26_21_IFAN

⁵¹⁵ 61:36 p 8 in 020_Jan_26_21_IFAN

⁵¹⁶ 64:8 p 5 in 035_Feb_9_21_Hussein AO

⁵¹⁷ 65:30 p 8 in 037_Feb_12_21_Food Systems for the Future_Multi

⁵¹⁸ 88:21 p 10 in 162_Apr_16_21_Fountain G

*Competitive prices for farmers; make the profit from taking land out of production higher than what would have been produced with poor practices.*⁵¹⁹

*Involve the financial institutions to finance food system actors' dealings in the city. Also exploring innovative finance measures or ways of organisation such as Savings and Credit Co-operatives (SACCOs) to facilitate saving and access to loans especially for small scale farmers and informal actors across the food value chain).*⁵²⁰

*World Bank and all other financial institutions should revoke the existing financial packages for construction of NPK fertiliser plants, and bring it to an immediate halt.*⁵²¹

*Advance innovation on institutional aspects for participatory planning of investments that can then be financed through blended solutions.*⁵²²

*Financing innovation: Rebrand and repackage seaweed projects to better appeal to blue investors; protect the intellectual property of coastal communities; better understand market signs and production costs; and collaborate across stakeholders.*⁵²³

*All felt that the creation of seaweed research and funding institutions could provide financial support to the industry, bring costs down, and make scaling-up production a more achievable goal. Some participants also noted that lack of utilization of all parts of the plant keeps costs high.*⁵²⁴

*This would require innovation in access to finance and insurance for farmers with only small plots of land or those who do not own any land, as well as access to technology and investment in bringing the technology to farmers.*⁵²⁵

*Explore innovative financing mechanisms like blended finance, and simultaneously build knowledge and capacity through technical assistance allowing research engagements and sectoral analysis.*⁵²⁶

*It was noted that finance is needed at three key stages of the innovation process: 1. Incubation 2. Start-up 3. Acceleration.*⁵²⁷

*Investments in value added and domestic food production. Strong value added and local and regional food systems are needed to increase consumer choice/availability of domestic food supplies and diversify market risk. Increased investment, innovation, and productivity can overcome existing barriers.*⁵²⁸

⁵¹⁹ 88:25 p 10 in 162_Apr_16_21_Fountain G

⁵²⁰ 103:33 p 10 in 325_May_19_21_ICLEI Africa_Multi

⁵²¹ 116:6 p 6 in 076_Mar_11_21_Tan R

⁵²² 120:15 p 6 in 117_Apr_22_21_Dinesh D_Multi

⁵²³ 121:6 p 6 in 121_Apr_28_21_Doumeizel V

⁵²⁴ 121:39 p 11 in 121_Apr_28_21_Doumeizel V

⁵²⁵ 135:1 p 6 in 193_Apr_19_21_Ringler_Kassim

⁵²⁶ 144:38 p 14 in 229_May_18_21_NFP_Rabobank_Multi

⁵²⁷ 153:34 p 9 in 253_Apr_29_21_AFDB_Multi

⁵²⁸ 156:5 p 6 in 263_May_06_21_CCGA

*There is need to look at innovative financial systems.*⁵²⁹

*Need for green entrepreneurship...Circular blue economy.*⁵³⁰

*Establishment of agricultural innovation grants to support farmers and easy access to financial resources.*⁵³¹

*Innovative financing solutions are required for farmers and businesses to advance the sustainable agricultural commercialization.*⁵³²

*There needs to be recognition of the innovation that has taken place so far within industry and consideration and support needs to be given to allow for continued innovation which will be impactful in mitigating GHG emissions even further.*⁵³³

*For small scale farmers, to develop a model to increase productivity and reduce costs*⁵³⁴

*...World Resources Institute (WRI) proposed; i) a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North, ii) guarantee the Global South real access to technology, and iii) increase opportunities for vocational training in agri-food production to equip workers to optimise the use of available technologies.*⁵³⁵

*Currently poor farmers have limited access to formal finance which forces them to seek loans from informal money lenders at exorbitant interest rates, that end up trapping poor families in a vicious cycle of poverty and oppression. Under current lending terms provided by the informal money lenders, poor farmers end up losing all their resources and properties to pay back the loans. Action is needed to end such exploitation of poor farmers by informal financial agencies. Fish farmer associations should be empowered to create and run own credit operations for fisher communities. Addition efforts can be made where loans at low or concessional interest rates may be provided. This would require capacity building and start-up funds with close monitoring and regulation by relevant government agencies.*⁵³⁶

*Start-up venture capital funds are needed to enable young graduates to adapt agriculture as their careers.*⁵³⁷

Entry points for investors from the need for blended financial models for local and regional supply chain development, to increased conversations across financial entities

⁵²⁹ 161:36 p 9 in 279_May_18_21_Yoovatana M_Multi

⁵³⁰ 175:12 p 6 in 330_May_19_21_RYFP_UNMGCY

⁵³¹ 176:33 p 10 in 331_May_24_21_LNFU

⁵³² 177:30 p 6 in 332_May_24_21_FAO_UNDP

⁵³³ 178:31 p 11 in 333_May_25_21_GMA_Multi

⁵³⁴ 199:17 p 6 in 354_June_07_21_NAMAC

⁵³⁵ 208:6 p 6 in 364_May_26_21_DPIHD

⁵³⁶ 211:19 p 9 in 367_May_27_21_Kachulu_Thilsted

⁵³⁷ 226:13 p 8 in 384_June_09_21_Ekwamu A

(e.g. private equity, family offices, philanthropy, banking) for them to work together to derisk investments in the space.⁵³⁸

Innovative financing instruments such as impact bonds and blended finance were viewed as potential tools for increasing investments from the private sector; it was also suggested that new investors should be cultivated from the younger generation.⁵³⁹

Payment for environmental services could come from premium at commodity prices and/or carbon monetization.⁵⁴⁰

Adopt pro-poor financial innovations for small producer in the aquatic sector.⁵⁴¹

More innovation needed for farming seaweed but also for processing and extraction of certain elements from seaweed.⁵⁴²

ADB, EIB, and GCF have confirmed to work together to set up the INCFF to support green agri-business platform while the International Fund for Agricultural Development and FAO can potentially join this important endeavor later after further discussions. This dialogue brought together a number of development organizations and created an opportunity to kickstart an innovative financing platform to transform our food system for a green and resilient recovery, and future.⁵⁴³

...Establishing innovative financing mechanisms to provide farmers and other stakeholders with access to capital, including climate finance.⁵⁴⁴

To overcome the barriers such as the “business as usual approach”, “policy inertia” and “resistance in government”, decision makers need to better manage those challenging changes (which mainly are coming from the ‘big food’ industry) and trade-offs.⁵⁴⁵

Innovative mechanisms of financing such as blended finance vehicles being implemented in Indonesia (Tropical Landscape Finance Facility) and in India (Sustainable India Finance Facility) provide inspiration for Sri Lanka to also explore such options in the country through collaborations between the different stakeholders. The Global Alliance for a Sustainable Planet (GASP) offered support to Sri Lanka and invited local stakeholders to collaborate with them. SLBA SBI has been also exploring such blended finance facility in Sri Lanka for sometime.⁵⁴⁶

⁵³⁸ 252:37 p 14 in 485_June_22_21_Levesque_SD

⁵³⁹ 257:26 p 10 in 490_June_22_21_Yasmi_Y

⁵⁴⁰ 264:24 p 6 in 497_June_24_21_Fontes_Multi

⁵⁴¹ 266:38 p 8 in 499_June_25_21_GANSF

⁵⁴² 267:58 p 11 in 500_June_26_21_Edible_Issues

⁵⁴³ 269:22 p 6 in 502_June_28_21_Zhang_Basher

⁵⁴⁴ 274:22 p 7 in 507_June_30_21_AKADEMYA2_FANPRAN

⁵⁴⁵ 283:29 p 8 in 516_July-01_21_Anastasiou_K

⁵⁴⁶ 284:3 p 6 in 517_July_03_21_Perera_A

...OECD agricultural subsidies totaled US\$720 billion/year from 2018-20, yet only one in six dollars promoted sustainable productivity growth and agricultural resilience. Shifting more money to agroecology would be game changing.⁵⁴⁷

Financial innovation and incentive mechanisms is one of the key actions in the food system to reduce food loss and facilitate the transformation of food system. With a loan system designed by policy banks to cover all segments of the food supply chain, a series of credit products could be harnessed to benefit small farmers and serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc.⁵⁴⁸

The government has a big role to play in making necessary changes. Because policies support industrialized agriculture, affordability remains a main concern in scaling sustainable production practices, as well. Participants spoke about how better policies can support sustainable and regenerative systems by incentivizing farmers to experiment with different ways of farming...Policy may also reimagine how consumers interact with food labels and expand what those labels look like to include factors like carbon footprint and animal welfare.⁵⁴⁹

Investment

Increase investments in agricultural research; - Strengthen and support OP-research consultation frameworks in Central Africa...⁵⁵⁰

Investment: Investing in the use of innovative technology that addresses cross-sectoral environmental challenges such as water scarcity, pollution, and droughts e.g RussKap's Atmosphere Water Generators for drip irrigation and Insitu potable drinking water supply.⁵⁵¹

Young people have an important role in sustainable production as they are the hinge between ancestral practices of resource recovery and adding added value or professionalization of agricultural or livestock practices. Their expectations and role are more as advisors than as farmers: between the new and the ancestral recovery, where is the role of young people. It is necessary to consider the expectations of studies and work of young people.⁵⁵²

Increasing investments in BIPOC small farmer's production.⁵⁵³

To enhance resilience, there is also need of policy reforms and harmonization, coordinated investment, leverage resources to support ongoing efforts, improve

⁵⁴⁷ 302:53 p 10 in 535_July_08_UNESCO Chair on Food

⁵⁴⁸ 318:13 p 6 in 551_July_15_21_FAO_ESCAP_Multi

⁵⁴⁹ 319:10 p 6 in 553_July_15_21_Food Tank_Oatly

⁵⁵⁰ 510:24 p 11 in 079a_May_27_21_NGA_Soung_Eng

⁵⁵¹ 512:11 p 7 in 088_May_28_21_Divine NTF

⁵⁵² 523:8 p 8 in 113a_July_06_21_Fernandez I_Eng

⁵⁵³ 356:67 p 8 in 409_June_13_21_Mone S

*governance, use of traditional and scientific knowledge to trigger innovation, generate sufficient data for evidence based recommendations and actions, and need to empower women and youth.*⁵⁵⁴

*Social protection system should be leveraged, by expanding investments in social protection systems that take food security and the nutritional needs of vulnerable populations into considerations.*⁵⁵⁵

*The region needs collaboration on technology transfer for more productive and climate resilient crops and practices, proper economic valuation of natural capital, and the improved access of farmers to land and social services. A business-conducive environment to attract private sector investments towards agricultural infrastructure is needed to grant farmers and consumers in the region access to wider markets and better products. This in turn calls for collaboration for regional standards and improved trade, as well as improved platforms linking food surplus and deficit countries to ensure food security.*⁵⁵⁶

*School meals investment pays back (e.g. 1 dollar of investment pays 9 dollars back) but other approaches are needed (e.g., agricultural policies, fiscal measures, public procurement, warning labels, among others)...*⁵⁵⁷

*The dominant prosperity/capita/development narrative being consistently focused on what will damage economies instead of also considering investment in health, environment and well-being aspects as keys to development and prosperity.*⁵⁵⁸

*One of the keys is the willingness to invest in factories and hardware. Without infrastructure, foodtech companies cannot do research on their own. Fortunately, we are seeing more and more investors willing to invest in it.*⁵⁵⁹

*The participation and involvement of all stakeholders at the discussion table on product development and on future needs has been recognized as a key point in the spread of new plant varieties. Farmers recognize the need to be partners in the process of developing new plant varieties, with the involvement of the public and private sectors, to provide investment in areas where there is not necessarily a sizeable market return as well as in those minor crops.*⁵⁶⁰

*The food policies supported by the Italian Ministry for Agriculture were highlighted to be linked to each other and to global policies (e.g. Agenda 2030, Farm to Fork Strategy). As part of the National Recovery and Resilience Plan, it was pointed out that next investments should be aimed at enhancing the supply chains of MD products.*⁵⁶¹

⁵⁵⁴ 357:41 p 7 in 401_June_10_21_Ekwamu_A

⁵⁵⁵ 359:15 p 6 in 403_June_10_21_ESCAP_Multi

⁵⁵⁶ 359:16 p 6 in 403_June_10_21_ESCAP_Multi

⁵⁵⁷ 361:12 p 6 in 405_June_10_21_NCD Alliance

⁵⁵⁸ 361:17 p 6 in 405_June_10_21_NCD Alliance

⁵⁵⁹ 363:11 p 6 in 414_June_16_21_Le More_d'Antino

⁵⁶⁰ 369:32 p 8 in 413_June_15_21_WFO_ISF

⁵⁶¹ 386:24 p 7 in 429_July_05_21-CIHEAM Bari

*Investment, strengthening the linkages between potential investors, food producers, RD&I intensive organizations and startups should be prioritized. Agri-food entrepreneurs are seen as an important stakeholder since they have the ability to prospect investments, and they could work more closely with farmers and researchers. Payment mechanisms for environmental services and amplifying the access to credit for smallholders were also highlighted, as well as long-term financing models. In relation to the Brazilian rural credit policy, it was mentioned that it demands a revision of priorities in order to be more inclusive. Currently, most of the credit is given to the production of commodities, and the scalability of transformative solutions demand strategies to diversify food production with special attention to the use of local biodiversity for food.*⁵⁶²

*The need to professionalize the management of forest assets in integrated systems and invest in research on the management of native species, creating leasing business models for managing the forest component, so the farmer does not need to specialize in this activity.*⁵⁶³

*Finally, to scale innovative solutions, capturing investments from venture capital and angel investors was suggested, by involving more startups.*⁵⁶⁴

*Investment, strengthening the linkages between potential investors, food producers, RD&I intensive organizations and startups should be prioritized. Agri-food entrepreneurs are seen as an important stakeholder since they have the ability to prospect investments, and they could work more closely with farmers and researchers.*⁵⁶⁵

*Finally, to scale innovative solutions, capturing investments from venture capital and angel investors was suggested, by involving more startups.*⁵⁶⁶

*Moreover, greater involvement of and investment by the private sector actors need to be ensured with a focus on increasing diversity, including biodiversity, of production and consumption.*⁵⁶⁷

*Call for more responsible capital to invest in long-term impact projects.*⁵⁶⁸

*INVESTMENTS and policies need to be tailored to build an agri-food system which creates good conditions for people who are producing our food. This includes overcoming the digital divide, improving access to technology, knowledge and skills, and allowing farmers to work collectively, including peer to peer learning.*⁵⁶⁹

⁵⁶² 389:14 p 7 in 431_June_22_21_CEBOS_EMBRAPA

⁵⁶³ 389:37 p 9 in 431_June_22_21_CEBOS_EMBRAPA

⁵⁶⁴ 389:67 p 11 in 431_June_22_21_CEBOS_EMBRAPA

⁵⁶⁵ 389:80 p 7 in 431_June_22_21_CEBOS_EMBRAPA

⁵⁶⁶ 389:165 p 11 in 431_June_22_21_CEBOS_EMBRAPA

⁵⁶⁷ 392:8 p 7 in 434_June_02_21_Hanan_KA

⁵⁶⁸ 393:33 p 10 in 435_June_08_21_FAO_ICC_UNFSS

⁵⁶⁹ 403:13 p 7 in 444_May_25_21_FAO_UNICEF_Multi

It is important to not assume that investment opportunities and finance are connected, or lead to one another. These investment opportunities need to be designed, prepared for and tended to.⁵⁷⁰

Increase investment in research on innovation in agri-food systems and diets.⁵⁷¹

Increase investment in development and application of agricultural digital technologies⁵⁷²

Further youth as new entrants in agriculture are innovative and could provide new models and tools for transforming the science and technology of agriculture through the research and this could offer immense opportunities with clear returns on investment.⁵⁷³

Africa needs to depend on its intelligence to inform its foresight and strategy investment planning, measurement, accountability and learning to inform investments and redesign of adaptation measures. African universities are best place to undertake this.⁵⁷⁴

For Africa, especially Sub-Saharan Africa, to realize its full agricultural potential to bolster its food systems, there is need for significant investments in key productivity-enhancing innovations to harness science solutions for growth.⁵⁷⁵

There is need to increase investment in agriculture from 3.3 % of annual GDP by African Countries whose commitment is 10%.⁵⁷⁶

promote policies that ensure economic incentives to invest in agricultural production and modern inputs.⁵⁷⁷

...increase investment in agricultural research (human resource and infrastructure) from the current average of 1 % of agricultural GDP.⁵⁷⁸

The governments need to start investing in the Youth whilst considering donor funding as a catalyst to the entire process.⁵⁷⁹

Investing in rural development, skills development, capacity-building, and entrepreneurship training for youth and farming communities.⁵⁸⁰

⁵⁷⁰ 411:15 p 6 in 452_Apr_27_21_IFAD_Multi

⁵⁷¹ 414:22 p 6 in 455_May_14_21_Ekwamu_A

⁵⁷² 414:23 p 6 in 455_May_14_21_Ekwamu_A

⁵⁷³ 415:20 p 6 in 456_May_17_21_Ekwamu_A

⁵⁷⁴ 416:10 p 7 in 457_May_20_21_Ekwamu_A

⁵⁷⁵ 416:16 p 8 in 457_May_20_21_Ekwamu_A

⁵⁷⁶ 425:9 p 6 in 466_June_17_21_Ekwamu_A

⁵⁷⁷ 425:10 p 6 in 466_June_17_21_Ekwamu_A

⁵⁷⁸ 425:11 p 6 in 466_June_17_21_Ekwamu_A

⁵⁷⁹ 425:22 p 6 in 466_June_17_21_Ekwamu_A

⁵⁸⁰ 428:12 p 6 in 469_June_17_21_de Silva R

Ensure financial investment – make lines of credit available for smallholders with less guarantee requirements.⁵⁸¹

By 2030, data and digital tools have allowed 100 million farmers - including low-income, smallholder farmer - to increase crop productivity and resilience under a changing climate, and to invest in nature-positive agricultural methods.⁵⁸²

Actively invest in female extension workers throughout the agriculture landscape - Invest in business development for women.⁵⁸³

Findings were that a simple investment could be made with dynamic returns, and has been done in many communities around the world. Using these as an example and also the ideas that we appreciated came from the collaboration in each cohort. An agreement of actions that were expressed among participants were that we need to move market investment from new innovative companies who receive first pick when it comes to implementing innovative market solutions, and shift them to community driven DIY projects, which require less front end investment and provide better returns collectively, and overtime.⁵⁸⁴

The government should ensure that there are policies that can support research and development and also invest in building the capacity, physical infrastructure and human capacity of actors in the food systems, promulgating activities that nudge appropriate behaviour change.⁵⁸⁵

Social safety net program of the government, Investment in agriculture through distributing seeds and fertilizers among smallholders, Financial support to farmers from Upazila Parishad and different NGOs, Distribution of vegetable seeds with appropriate technology at farmer level.⁵⁸⁶

More sustainable production and shorter supply chains will link producers and consumers more closely. Recommendation 1: Developing an enabling environment needs to be based on a systems perspective that includes a change in power structures (land rights), farmers empowerment (through farmers organization) and economics (access to capital). Who: governments and international financial institutions for loans. At the same time, farmer organizations need to be formed bottom up by farmers themselves rather than government. How: The role of the state should be that of an investor to guarantee sustainability, guarantee infrastructure and the required support. Specific action can include ensuring better rural roads so smallholder farmers have access to markets, adopting policy that supports land rights for farmers, and working more closely with the private sector to ensure easier access to capital and investment for farmers, especially women and youth. The majority of smallholder farmers need to organize themselves into

⁵⁸¹ 429:204 p 13 in 470_June_17_21_Burian_Multi

⁵⁸² 429:265 p 19 in 470_June_17_21_Burian_Multi

⁵⁸³ 430:19 p 6 in 471_June_08_21_van Lier M

⁵⁸⁴ 432:7 p 6 in 473_June_18_21_Sheridan S

⁵⁸⁵ 448:16 p 6 in 388_May_03_21_Kambewa_D

⁵⁸⁶ 450:37 p 9 in 391_May_31_21_FAO_Multi

producer cooperatives or other similar systems (youth and women in particular). Service provision to individual smallholders can never become financially viable.⁵⁸⁷

Recommendation 2: secure agricultural areas and implement structural investments (irrigation, storage, and conservation of products) for optimal use of agricultural land by women and young people Who: state and local authorities, with support from civil society and international organisations How: due to low economic returns from agriculture, farmers are selling off land they have received through individual property rights (in countries where land ownership was state-owned). This must be prevented by revaluing agriculture (which will restore the value of agricultural land) and by regulating investment in real estate.⁵⁸⁸

Whilst the issues raised underpin the huge investment needed to improve agricultural infrastructure, a localised system may partly address the problem. MSMEs, for example, could offer pre-processing food storage facilities of local fresh produce to local food processors. It was also pointed out that climate-resilient plant species should be re-introduced, particularly heritage crops traditionally grown in the locality. Diversification could also be phased, where diversified cropping is allocated a small plot first rather than converting the entire farmland. This could also provide alternative income, which should encourage farmers to expand the practice.⁵⁸⁹

3) credit to farmers, where they are given a reprieve of two to three planting seasons, in cash; 4) marketing and investment in education to boost consumer interest; 5) market and processing transformation mechanisms; and 6) building an ecosystem that can be a conduit of trust for farmers.⁵⁹⁰

Instead, investment should be allocated to reform the entire value chain, integrating different aspects of agriculture into a system that promotes food sovereignty.⁵⁹¹

In this context, for smallholders, it was suggested to improve credit systems (better access, favorable conditions) to contribute to reaching a more balanced power between companies and small producers/ cooperatives regarding investments and avoid tensions between the governance of the value chain and territorial governance.⁵⁹²

Second, we must steer public investment towards smallholder farmers and agriculture, and foster public-private partnerships to pull in private sector investment with a focus on evidence-based approaches.⁵⁹³

Stakeholders noted the importance of the campaign in raising issues related to institutional development and support, a repurposing of policies to support farmer-

⁵⁸⁷ 458:61 p 14 in 123_May_04_21_Mauderli U

⁵⁸⁸ 459:79 p 20 in 125_May_11_21_Mauderli_COSUDE

⁵⁸⁹ 460:91 p 11 in 131_May_25_21_IISLA Ventures

⁵⁹⁰ 460:96 p 12 in 131_May_25_21_IISLA Ventures

⁵⁹¹ 460:119 p 18 in 131_May_25_21_IISLA Ventures

⁵⁹² 462:42 p 12 in 133_May_27_21_CIRAD_Multi

⁵⁹³ 463:36 p 7 in 155_Apr_27_21_FCDO_Multi

focused R&D, increased investment in capacity building, as well as in practices that support biodiversity.⁵⁹⁴

In addition to this, participants agreed that doing more co-investment and working with the private sector towards joint sustainability goals can be transformative whilst leveraging multilaterals as mediators. Collaborative engagements could include PPPs and blended finance mechanisms. Participants also asked for increasing investment in proof of concepts, as successful proof of concepts can then be taken to scale.⁵⁹⁵

Financial and technical assistance is especially critical in communities of color and indigenous communities. Technology advancements can help with affordability and accessibility. Investment in the development of local food hubs, enabling schools to have better access to organic options, and empowering communities with the tools they need to feed and nourish themselves is critical.⁵⁹⁶

Organic is proven to work and be scalable, but governments needs to support that development. If all farmers adopt organic practices, we can increase food production and lower yield gap (organic yields are just 8-9% lower than conventional). More policies and investment are needed to support this goal.⁵⁹⁷

Some panellists found that government financing and investments from philanthropists can aid in the transformation. For better transformation, it was found that healing frameworks should be used and implementation of intergenerational knowledge and knowledge transfer.⁵⁹⁸

Investment in ways that consumers receive information that helps them with their choices and helps them understand the way healthy diets and sustainability can be built. The panelists argue that education at all levels is key. Panelists emphasized the importance of knowledge that is held by and shared within Indigenous communities, recommending that a focus is put on intergenerational knowledge and the knowledge transfer that needs to occur from the elders to the youth. A next step identified would be investment in ways that consumers receive information that helps them with their choices and helps them understand the way healthy diets and sustainability can be built.⁵⁹⁹

Investments that strengthen local organizations capacity to engage and negotiate were recommended - and while difficult to realise at a global level, there were felt to be real gains to be had in creating space and building capacity for local organizations to find a voice in local and national fora.⁶⁰⁰

⁵⁹⁴ 463:47 p 8 in 155_Apr_27_21_FCDO_Multi

⁵⁹⁵ 463:59 p 11 in 155_Apr_27_21_FCDO_Multi

⁵⁹⁶ 468:51 p 7 in 219_May_10_21_OTA

⁵⁹⁷ 468:62 p 10 in 219_May_10_21_OTA

⁵⁹⁸ 472:12 p 6 in 241_May_19_21_IFAD_Food Tank_Multi

⁵⁹⁹ 472:14 p 7 in 241_May_19_21_IFAD_Food Tank_Multi

⁶⁰⁰ 473:15 p 6 in 244_June_09_21_Macqueen_Multi

*Analyzing the type of food supported by public policy and investments and shifting focus from production of grains and tobacco for export to support for nutritious whole foods for local consumption.*⁶⁰¹

*Building the investment case.*⁶⁰²

*Invest in post-harvest value chain, access to credit.*⁶⁰³

*Increase investment in SSF.*⁶⁰⁴

*Researchers should monitor the effectiveness of policies that aim to improve food and water systems and develop the evidence base on the impacts of implementation on equity, climate change and the disease burden...*⁶⁰⁵

*Transitioning to more sustainable approaches and to greener economy needs to have climate and environmental dimensions at the centre, involving both human capital, investments and innovation technologies (ICTs). Many of these investments can also enhance agricultural productivity right now, under current climate conditions, and the latest techniques and technologies are useful to share the information on the innovations that drive sustainable agriculture and make the farm operation more profitable. To address climate impacts effectively, it is first necessary to understand the incidence and scale of possible impacts, and then to look for appropriate adaptation strategies. These strategies will build the resilience of the sector in different agro-climatic conditions.*⁶⁰⁶

*Build agency of local leadership and strengthen local food systems through the promotion of indigenous crops and traditional forms of agriculture.*⁶⁰⁷

*Implementing climate insurance mechanisms...*⁶⁰⁸

*By 2030, soil health is managed sustainably through sequestration and organic carbon content, rewarding farmers and land managers through payments for ecosystem services, carbon farming and trading carbon credits.*⁶⁰⁹

*Climate finance is a must; this includes cover crops for smallholders.*⁶¹⁰

*Ensure that production of aquatic foods does not compete for arable land.*⁶¹¹

⁶⁰¹ 501:40 p 8 in 397_June_04_21_WHO_Multi

⁶⁰² 502:30 p 9 in 398_June_07_21_NCD Alliance

⁶⁰³ 503:35 p 8 in 399_June_9_21_AFA_Multi

⁶⁰⁴ 503:43 p 8 in 399_June_9_21_AFA_Multi

⁶⁰⁵ 402:13 p 6 in 443_May_09_21_GIGH

⁶⁰⁶ 403:24 p 9 in 444_May_25_21_FAO_UNICEF_Multi

⁶⁰⁷ 424:10 p 6 in 465_June_16_21_Congressional Hunger

⁶⁰⁸ 428:39 p 7 in 469_June_17_21_de Silva R

⁶⁰⁹ 429:159 p 11 in 470_June_17_21_Burian_Multi

⁶¹⁰ 429:162 p 11 in 470_June_17_21_Burian_Multi

⁶¹¹ 485:41 p 9 in 288_May_20_21_GAN_Multi

...consumers should invest in farmers ...⁶¹²

...agtech investment and adoption needed to be rapidly scaled up to meet these global challenges.⁶¹³

Support for small-scale stakeholders across the globe is also critical. Investments, partnerships, and support to implement lessons learned can help increase global sustainable practices across the board and help smaller businesses and farmers thrive sustainably while alleviating burdens on the environment and the food system.⁶¹⁴

Investments, partnerships, and support to implement lessons learned can help increase global sustainable practices across the board and help smaller businesses and farmers thrive sustainably while alleviating burdens on the environment and the food system.⁶¹⁵

Finally, governments/stakeholders should push for conservation farming techniques to reduce agricultural emissions across the board. The process of transitioning to low-carbon agriculture, especially where infrastructure improvements are needed, will be expensive. Therefore, a huge investment push is needed.⁶¹⁶

Investment in innovation, and the focus on R4D in the region - investment going into agricultural research and development, which is not necessarily aligned to climate or nature, as much as it should be, need to shift into climate foster nature positive pathways. It's not just reorienting investment; it's also increasing the investment to agricultural research and development, especially in under-investing countries. There is a need to address the innovation gap and more investments into innovation.⁶¹⁷

Institutions – invest in the institutions that we have set up for innovation, even national institutions or international institutions, or set up to facilitate those innovation processes. We need to rethink the institutions, what they set up to achieve the SDGs, how they can be realigned, do we need new institutions, and think about coming together to create them.⁶¹⁸

The Dialogue called for concerted efforts by the Government and other stakeholders to catalyze agro-zones, reactivate localized investments and upgrade smallholder farmers (especially women, youth, the disabled) to become investable through adequate training and support, advisory services and access to research opportunities.⁶¹⁹

It was strongly recommended creating access to finance and insurance for smallholder farmers, SMEs and agricultural value chain clusters/cooperatives (e.g. Nigerian Stock

⁶¹² 492:22 p 7 in 302_June_01_21_FAO_ICC_Multi

⁶¹³ 2:3 p 6 in 081_Mar_15_21_CRC

⁶¹⁴ 4:14 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

⁶¹⁵ 4:38 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

⁶¹⁶ 18:8 p 7 in 164_Apr_15_21_Anarbekov_Akramov

⁶¹⁷ 34:2 p 7 in 082_Mar_15_21_Yoovatana M

⁶¹⁸ 34:3 p 8 in 082_Mar_15_21_Yoovatana M

⁶¹⁹ 35:25 p 10 in 084_Mar_17_21_UnyimeAbasi B

Exchange growth board) as a means to spur rural transformation and investment in food systems.⁶²⁰

Invest in local food systems development.⁶²¹

Greater investment in emerging technologies and foods to assess their sustainability credentials.⁶²²

There should be increased investment and support in the design, development and sustaining of national and regional quality infrastructure and architecture that embeds the circular economy into the regional food system, biodiversity and ecosystem management framework. Greater investment is needed to support taking the circular economy projects to scale.⁶²³

Increased investment and support should be aimed at helping the farmers to comply and exceed GFSI, FSSC, FSMA, HACCP, ISO and other standards applicable to food safety and security.⁶²⁴

There is also a need for increased investment into education, training, capacity building and awareness needed to support nature positive production and consumption.⁶²⁵

Sustainable financing regimes need to consider supporting and scaling circular economy projects, There should be increased investment and support in the design, development and sustaining of national and regional quality infrastructure and architecture that embeds the circular economy into the regional food system, biodiversity and ecosystem management framework. Greater investment is needed to support taking the circular economy projects to scale.⁶²⁶

Academia and Ministries of food production need to work closer together to provide additional research and technical assistance in the communities and in putting research and development into action. Regional Governments and donor agencies need to provide increased funding and support to Universities and Colleges through grants and other forms of assistance to enable them to better support sustainable community development endeavours. The Universities and Colleges should be allowed to be investors in social enterprises that help scale climate mitigation, adaptation, community resilience and other activities that give support to improving food sustainability, quality and safety.⁶²⁷

There is need to increase investment into the quality and safety infrastructure that allows for widespread commitment and application of food quality and safety standards.⁶²⁸

⁶²⁰ 35:28 p 11 in 084_Mar_17_21_UnyimeAbasi B

⁶²¹ 36:28 p 9 in 089_Mar_22_21_Gee S

⁶²² 36:32 p 9 in 089_Mar_22_21_Gee S

⁶²³ 37:27 p 6 in 095_Mar_27_21_Chinapoo C_Multi

⁶²⁴ 37:33 p 6 in 095_Mar_27_21_Chinapoo C_Multi

⁶²⁵ 37:42 p 7 in 095_Mar_27_21_Chinapoo C_Multi

⁶²⁶ 37:47 p 7 in 095_Mar_27_21_Chinapoo C_Multi

⁶²⁷ 37:55 p 9 in 095_Mar_27_21_Chinapoo C_Multi

⁶²⁸ 37:57 p 9 in 095_Mar_27_21_Chinapoo C_Multi

*...to “enable agricultural trade” it would be important to de-risk participation of smallholder farmers in GVCs, deploying adequate trade finance, technical support to meet standards in export markets, increased investment in infrastructure to support smallholder farmers with low rates of commercialization...*⁶²⁹

*Participants reflected on the proposal and validated in particular the idea of establishing a sizeable pool of highly patient capital, while recommending considering non-grant options. They further recommended giving adequate attention to strengthening the capacity of recipient financial intermediaries (funds, banks, non-bank financial institutions) to invest in start-ups and in women-led businesses. For the technical assistance component of the facility (which also targets financial intermediaries and investors), participants recommended including training modules that intermediaries can then use to facilitate capacity building for women entrepreneurs, including in some areas – like financial literacy – where some types of financial intermediaries may be well placed to contribute.*⁶³⁰

*The proposed global matching fund for investments by agri-SMEs can be more relevant to or focused on women entrepreneurs’ needs if it provides not only for grants or soft loans but also for in-kind finance (especially via equipment) and technically assistance around its use. The proposed rolling out of digital solutions among rural financial intermediaries and FSPs can be made more relevant to women by also including revolving funds and local savings and credit associations among the types of institutions that can benefit from automation and/or use of digital data and systems.*⁶³¹

*To address infrastructural deficits in the food and agriculture sector, priorities must include increased investment in alternative sources of power, construction of rural roads, the development of more resilient seed varieties, and the regulation of the standard of agricultural machinery imported into the country, amongst others.*⁶³²

*Enhancement of farmer productivity through investment in mechanization and agricultural technology which will positively impact their income and purchasing power).*⁶³³

*The need for increased investment in the construction of rural roads to facilitate easy access to farming communities and enable shorter turnaround times for off-taking activities b) Diversification of electricity sources to alternative sources such as solar energy. c) Renewed focus on value addition by Nigerian farmers to encourage increased infrastructural investment in the sector.*⁶³⁴

Increased participation from strategic investors (broadening the investor landscape). Increased focus beyond the “usual” financiers i.e., commercial banks, impact investors, private equity, DFI’s. This would allow enterprises to benefit from more operational

⁶²⁹ 40:1 p 6 in 101_Apr_1_21_Doaa A

⁶³⁰ 44:11 p 8 in 178_Apr_8_21_AGRA_Multi

⁶³¹ 44:27 p 10 in 178_Apr_8_21_AGRA_Multi

⁶³² 46:8 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

⁶³³ 46:14 p 7 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

⁶³⁴ 46:19 p 9 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

support (if the value proposition for both parties is clear). With the changing investor lens (increasing focus on impact and sustainability), enterprises can be a core part of the strategic players for value chain transformation. c) Reviewing the economics of funding vehicles(esp. private equity) to enhance their ability to provide operational support to enterprises versus solely a focus on financial competencies/returns. Entrepreneurs are asking: Are the vehicles being set up to support their businesses they invest in? Is there mentorship? Is this an equal partnership? In addition, development of investment vehicles that take a platform approach i.e., consolidate various businesses that feed into their eco-system e.g., feed-mill business, poultry business, retailer/off-taker which minimizes risk across each of the value chains but also increases collaboration/learnings between different parties. How would we measure success around such initiatives? • Vocal and effective regional bodies with actual participation from the private sector, able to signal to investors clear priorities and how they will be supported. • Investment vehicles effectively structured to enhance financial and operational performance over longer term investment horizons. • Increased participation from strategic investors and recognition that target enterprises can feed into their supply chains and enhance their financial, social and environmental impact.⁶³⁵

*There is need to find innovative ways to manage the supply, add value and extend the shelf life. Greater investments into the processing capability, capacity and competence would go a long way in improving supply. there is also Need for added value and providing support for sustainable manufacturing.*⁶³⁶

*Different solutions are required for the diversity of the food systems in Latin America with its wide range of products and producers. These solutions already exist for different contexts; however, they need to be scaled up through investments and policies.*⁶³⁷

*Invest not only in education but also more broadly in sectors such as transportation and energy infrastructure to create inclusive food system opportunities.*⁶³⁸

*To overcome regulatory hurdles to supporting early-stage companies and start-ups banks sometimes participate in higher risk financings by forming arms-length investment arms or by attracting other financial institutions to provide financing. Creating a financial structuring vehicle through partnerships which are geared at establishing a pool of individual loans can de-risk them and will attract investment.*⁶³⁹

Governments need to invest in developing tools and methods that create a level playing field globally and that can be used to valorize nature-based solutions. Public sector needs to provide standards and framework to define the prices of food by focusing on water, nutrition, and emissions. Investment in big data informatics and analytics can help with true pricing on natural capital/natural resources to quantify better the value of

⁶³⁵ 48:21 p 10 in 049_Feb_23_21_SAFIN_Multi

⁶³⁶ 54:14 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

⁶³⁷ 55:14 p 5 in 001_Nov_5_20_CGIAR

⁶³⁸ 57:5 p 4 in 005_Dec_11_20_Aggrey J

⁶³⁹ 61:24 p 6 in 020_Jan_26_21_IFAN

*nature positive approaches, inclusiveness, or positive nutritional outcomes designed to position the primary producer.*⁶⁴⁰

*There should be sufficient investment into Food Systems Research and Developments ...⁶⁴¹
Tax exemption for foreign investments and capital investments on Education for SMEs on policies and how to deal with government bureaucracies. There is a need to build good credible investment pipelines: establishing and funding of independent platforms with the required industry-specific know-how, finance, legal, investment, and policy-specific expertise along the entire value chain of investing in the nutritional food asset class to identify, structure, and match attractive sustainable and scalable investment opportunities with potential investors. There is also a need for: • Bundling finance with inputs, knowledge, marketing partnerships • Better define the benefits across all outcomes of investments in nutrition-sensitive agriculture – also environment, social, etc.*⁶⁴²

*Building Good Credible Investment Pipelines Establishing and funding of independent platforms with the required industry-specific know-how, finance, legal, investment, and policy-specific expertise along the entire value chain of investing in the nutritional food asset class to identify, structure, and match attractive sustainable and scalable investment opportunities with potential investors.*⁶⁴³

*Investment of public funds in agriculture should be efficient and with a significant component of R&D, including manpower-saving technology.*⁶⁴⁴

*Promoting increased transparency along the food chain: a shared responsibility o Food chain actors must support healthy and sustainable diets and transform their production and operation methods. This requires human and financial investments and therefore should also bring economic returns.*⁶⁴⁵

*Public sector investment in research or pre-competitive research were considered key to identify and scale, but that information must be available publicly so that all farmers can benefit. Sharing best practices among farmers globally could be another opportunity to support farms of all sizes, but participants recognized that regional and local differences must be considered.*⁶⁴⁶

Another key theme was that food security equates to national security. Private sector must ensure that nutrient-dense, responsibly produced food is accessible, particularly in the most vulnerable communities. There was clear recognition that private sector efforts must go beyond food security and environmental sustainability, and support livelihoods

⁶⁴⁰ 61:30 p 7 in 020_Jan_26_21_IFAN

⁶⁴¹ 63:9 p 6 in 030_Feb_4_21_CAFS_CSAYN

⁶⁴² 65:8 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

⁶⁴³ 65:47 p 10 in 037_Feb_12_21_Food Systems for the Future_Multi

⁶⁴⁴ 66:90 p 13 in 041_Feb_17_21_Adler D

⁶⁴⁵ 68:61 p 12 in 052_Feb_25_21_EUFIC

⁶⁴⁶ 86:24 p 10 in 153_Apr_28_21_GCNF_Multi

*and social equity. Ultimately, private sector must drive major shifts in mindsets, rules of operation and business models to create equitable, sustainable and healthy food systems. Given that the private sector is often at the forefront of change to keep a competitive edge, participants saw an opportunity to better harness this angle. Through activities such as certification or sustainable investment, there is opportunity to motivate and mobilize further transformation.*⁶⁴⁷

*Public sector investment will support and facilitate such policy changes.*⁶⁴⁸

*Livestock has received a lot of negative attention in the past but with the right investments can be transformed to be both economically viable and environmentally sustainable.*⁶⁴⁹

*Investment in digital technologies/infrastructure for people to sell remotely, and not necessarily in stores etc. It would also have been good in situations such as the COVID lockdown.*⁶⁵⁰

*Discussants also reflected on how consumption can be regulated and improved locally. They noted the need for better consumption of nutritious foods through investment in feeding programmes in schools, public hospitals and other government institutions including correctional centres.*⁶⁵¹

*This would require substantial public and private investments with greater connectivity across all sectors and an upgraded logistics system with wider reach.*⁶⁵²

*Redirect incentives, policies and priorities for support to the very large “small-scale” sector. Policies for people are needed, not just for the economy. Until there is a willingness to invest in small-scale businesses, farmers in the uplands will have no access to money other than from loan sharks that impose 10% monthly interest for four months of harvest. The rates are criminal.*⁶⁵³

*Investment syndicates that include multiple capital providers, private or public, streamlines the fundraising efforts for entrepreneurial groups tackling the SDGS, reducing the time it takes for these groups to raise capital. Joint marketing efforts can sway more consumers touching on a broader set of buying patterns. Partnerships can help all organizations involved to fully realize economic benefit; investing together in change makes each discrete investment generate a higher return, and reduce the risk in case of failure.*⁶⁵⁴

⁶⁴⁷ 87:6 p 6 in 160_20_Apr_21_GSI

⁶⁴⁸ 95:17 p 8 in 227_May_18_21_Tarawali S

⁶⁴⁹ 95:45 p 12 in 227_May_18_21_Tarawali S

⁶⁵⁰ 98:5 p 6 in 255_Apr_27_21_ICLEI Africa_Multi

⁶⁵¹ 104:3 p 6 in 326_May_5_21_ICLEI Africa_Multi

⁶⁵² 105:7 p 10 in 007a_Dec_18_20_NAAGD

⁶⁵³ 105:38 p 30 in 007a_Dec_18_20_NAAGD

⁶⁵⁴ 106:16 p 5 in 051a_Feb_24_21_Google

*While funding for these programs can emerge from federal investments, the specifics of any program need to be tailored to community-specific solutions.*⁶⁵⁵

*Increase public investment.*⁶⁵⁶

*In terms of supports, two key areas were identified: (i) support for well-serviced resilient rural communities, including investment in rural broadband and community supports, and (ii) supports for inclusive farm generational renewal.*⁶⁵⁷

*Focus on accessibility and addressing barriers to adoption – cost, communication, skill set, specificity of local and regional context. Investment in broadband infrastructure to bring the technology to those that need it. Need to look at innovation from the lens of underrepresented populations (youth, gender, indigenous populations). A solution – Public investment in rural connectivity and communication platforms.*⁶⁵⁸

*As banks with social impact mandates, they can leverage concessional financing and specific tools to attract investment to the sector (e.g., guarantees, blending instruments, concessional financing for early-stage innovations, etc)*⁶⁵⁹.

*The objective would be to design, deliver and trigger innovation, help rural financial institutions learn from one another, and improve access to value chain specific information and funds to de-risk and increase investments in ‘last mile’ agricultural actors.*⁶⁶⁰

*As a way of building resilience to the economic crisis, Investment in the farming system particularly in the local environment which will improve the farming system and production was stated.*⁶⁶¹

*BUILDING AN INVESTMENT PIPELINE: (1) Create more investment funds with a transformative potential (2) Develop small-size ticket financing solutions for smaller farmers, distinguish between blended finance for the farmers and for off-takers (3) Build relationships between farmers and local financial actors (4) Simplify structures and process of blended finance instruments to attract more investment opportunities/standardize contracts (5) Increase MDBs support when projects are not bankable (6) Advance innovation on institutional aspects for participatory planning of investments that can then be financed through blended solutions (7) Include investors in the blended finance mechanism’s board room, to assure that projects in the pipeline are attractive to them.*⁶⁶²

⁶⁵⁵ 110:4 p 6 in 059_Feb_26_21_O'Doherty M

⁶⁵⁶ 113:12 p 5 in 070_Mar_09_21_Akinbami, O

⁶⁵⁷ 114:37 p 9 in 074_May_18_21_O'Mara-Teagasc

⁶⁵⁸ 115:7 p 6 in 075_Mar_10_21_IFAN

⁶⁵⁹ 117:2 p 6 in 085_Mar_17_21_IFAD_FSFS

⁶⁶⁰ 117:15 p 8 in 085_Mar_17_21_IFAD_FSFS

⁶⁶¹ 118:12 p 8 in 093_Mar_25_21_Adeboye_T

⁶⁶² 120:13 p 6 in 117_Apr_22_21_Dinesh D_Multi

*...the lack of financing for seaweed enterprises and a need for more investment in small scale farmers and advocacy along the value chain.*⁶⁶³

*Investment in Agriculture Sector: Pakistan's investment in the agriculture sector is the lowest in this region. R&D can focus on energy efficient crop varieties and the use of renewable energy.*⁶⁶⁴

*The process of transitioning to low-carbon agriculture, especially where infrastructure improvements are needed, will be expensive. Therefore, a huge investment push is needed.*⁶⁶⁵

*Problem 2 is that nutritious foods that people want to eat are more expensive. Potential solutions include investment in infrastructure for nutritious foods and expansion of food at work actions.*⁶⁶⁶

*This would require innovation in access to finance and insurance for farmers with only small plots of land or those who do not own any land, as well as access to technology and investment in bringing the technology to farmers.*⁶⁶⁷

*Given Egypt's diverse agricultural ecologies, including the Nile Delta, the New Lands, the old lands, upstream and downstream areas, more targeted agricultural water use investments were recommended. Based on more targeted interventions, these can be scaled up and further promoted, such as the value chain approach used in Nubaria's new lands which has been sustained for more than 10 year. The participants agreed that more effort is needed to invest in water-saving technologies and support farmers in the application of such technologies.*⁶⁶⁸

*Advocacy by RECs for gender-responsive products and investments at member states is also crucial while at the same time, RECs to leverage their position as regional coordinators to mobilize support for gender-response policies in member states.*⁶⁶⁹

*Investments towards building sustainable systems that guarantees safe and nutritious food right from farm to fork.*⁶⁷⁰

*Youth at the dialogue therefore, strongly implored stakeholders to increase investments towards building sustainable systems that guarantees safe and nutritious food right from farm to fork.*⁶⁷¹

In this sector, competition between MSP partners may hamper data sharing and co-creation of digital solutions, and limit cooperation to foster the interoperability of

⁶⁶³ 121:4 p 6 in 121_Apr_28_21_Doumeizel V

⁶⁶⁴ 129:76 p 17 in 159_Apr_21_21_Hafeez M

⁶⁶⁵ 130:14 p 7 in 164_Apr_15_21_Anarbekov_Akramov

⁶⁶⁶ 134:25 p 10 in 190_Apr_16_21_Cullen N

⁶⁶⁷ 135:1 p 6 in 193_Apr_19_21_Ringler_Kassim

⁶⁶⁸ 135:9 p 6 in 193_Apr_19_21_Ringler_Kassim

⁶⁶⁹ 140:7 p 6 in 212_May_04_21_Akinbamiyo Y

⁶⁷⁰ 142:3 p 6 in 216_May_06_21_Ben_Aniabi

⁶⁷¹ 142:11 p 7 in 216_May_06_21_Ben_Aniabi

*systems. Open source for example is seen as a dilemma: it may contribute to the adoption of innovations at scale, but it can also limit the financial sustainability for the creators. The latter is a challenge in this sector: much of the infrastructure for digital solutions still needs to be built up, so large investments by (big) players are necessary, with the resulting need to earn back the cost.*⁶⁷²

*Financing and investment for nutrition needs to be enhanced.*⁶⁷³

*...invest in research that improves the economics of sustainable / nutritious food, and support international agreements to measure gender data in farming.*⁶⁷⁴

*Policy ideas included shifting government policy away from solely increasing production towards better natural resource management and a more nutritious and sustainable system of production, reducing the energy costs for small farmers (electricity costs are too high for cooking and they contribute to deforestation), addressing monopolies by fast food companies and investing in research that improves the economics of sustainable nutritious food.*⁶⁷⁵

*To achieve this vision, the group discussed solutions that seek to empower communities in tangible ways by investing in them and not imposing solutions imported from the global North.*⁶⁷⁶

*Policies and national investments in line with the commitments of the Malabo declaration, in order to make technology affordable and available.*⁶⁷⁷

*Investments in roads that can ensure the transportation of food to cities in a regular basis are critical.*⁶⁷⁸

*Increase investments to ecosystems restoration recognising its importance in building sustainable food systems among local communities particularly of indigenous communities and pastoralists.*⁶⁷⁹

*Invest on mobility as a strategy for maintaining a healthy pastoralists system and to use rangelands in a sustainable way, to preserve natural resources. Investments must be done as a way to improve the environmental friendly productions.*⁶⁸⁰

Investments in value added and domestic food production. Strong value added and local and regional food systems are needed to increase consumer choice/availability of

⁶⁷² 144:23 p 12 in 229_May_18_21_NFP_Rabobank_Multi

⁶⁷³ 144:29 p 13 in 229_May_18_21_NFP_Rabobank_Multi

⁶⁷⁴ 146:6 p 6 in 231_May_19_21_MCD

⁶⁷⁵ 146:28 p 9 in 231_May_19_21_MCD

⁶⁷⁶ 146:29 p 10 in 231_May_19_21_MCD

⁶⁷⁷ 153:22 p 7 in 253_Apr_29_21_AFD Multi

⁶⁷⁸ 154:38 p 9 in 261_May_03_21_Carrara_Le More

⁶⁷⁹ 155:20 p 6 in 262_May_04_21_ILC_Multi

⁶⁸⁰ 155:38 p 8 in 262_May_04_21_ILC_Multi

*domestic food supplies and diversify market risk. Increased investment, innovation, and productivity can overcome existing barriers.*⁶⁸¹

*Policy levers, investment strategies and approaches should reflect Canada's geographical size and terrain, climate, and population diversity.*⁶⁸²

*A key part of driving this impact will be providing dairy farmers with the tools and increasing financial support through corporate and institutional investment, government incentives to farmers for sustainable practice, better technology to drive a circular economy and reduce packaging waste, and models of consumption that push consumers to pay for more sustainable products.*⁶⁸³

*Greater investment in small-scale farming, and encouragement of farmer and food cooperatives would help dairy industries grow local communities.*⁶⁸⁴

*More investment from corporates and big dairy farms into sustainable outcomes.*⁶⁸⁵

*Investments on key public good are necessary to ensure that science and technology and education and extension converge towards the shared purpose of securing adequate, accessible and quality food for all.*⁶⁸⁶

*Investing in key public interest and making sure that RDE go forward together to address gaps in the food systems, generating support, and making sure that policies on food systems should be for all.*⁶⁸⁷

*Investing on sustainable family farming production, processing, and marketing.*⁶⁸⁸

*Facilitate the engagement of private sector for investment into production, processing and marketing of forgotten foods...*⁶⁸⁹

*Participants recommended several actions for schools: investments in gardens, actions for improved school attendance, the addition of climate change topics to the curriculum, and the development of safe and engaging youth platforms (I.e. youth clubs and social media).*⁶⁹⁰

Financial incentives are required where capital investment in hardware is required. There is an opportunity for the agricultural investment scheme, which is operated by the

⁶⁸¹ 156:5 p 6 in 263_May_06_21_CCGA

⁶⁸² 156:25 p 9 in 263_May_06_21_CCGA

⁶⁸³ 159:20 p 6 in 275_May_13_21_Dornom H

⁶⁸⁴ 159:23 p 6 in 275_May_13_21_Dornom H

⁶⁸⁵ 159:31 p 8 in 275_May_13_21_Dornom H

⁶⁸⁶ 160:23 p 6 in 278_May_18_21_Gregorio B

⁶⁸⁷ 160:31 p 6 in 278_May_18_21_Gregorio B

⁶⁸⁸ 160:50 p 9 in 278_May_18_21_Gregorio B

⁶⁸⁹ 162:4 p 6 in 287_May_20_21_Akinbamijo_Y

⁶⁹⁰ 170:25 p 7 in 311_June_14_21_NCD Child

*Department of Agriculture Food and the Marine, to be expanded to support investments in digital at a farm level.*⁶⁹¹

*In horticulture, in particular, the production nodes are characterized by lack of investment in irrigation and protected agriculture initiatives.*⁶⁹²

*Higher investment in nature based solutions are needed transform agriculture and food systems.*⁶⁹³

*Invest in science, technology and innovation.*⁶⁹⁴

*...increase in funding and investment opportunities to support the uptake of precision agriculture.*⁶⁹⁵

*Investments on laboratories and genome editing tools which are currently very costly in the market.*⁶⁹⁶

*Investment: Agriculture is the backbone of the country's economy, therefore, the government must prioritize investing in the sector.*⁶⁹⁷

*The proposed Agriculture Investment Fund should be approved and stakeholders invited to invest in this fund to support farmers and the growth and development of the sector.*⁶⁹⁸

*Additionally, participants identified a need for investments that facilitate access to inputs for producers at better prices.*⁶⁹⁹

*Investment in international research and development is required in order to strengthen global foods systems by reinforcing partnerships for advanced research capacity; international development, supporting partnerships to build capacity and advance global science, greater student exchange and globally connected campuses.*⁷⁰⁰

*Increase in public investment is required for research if significant progress is to be made.*⁷⁰¹

*Increased investment in the school feeding programme by federal and state governments.*⁷⁰²

⁶⁹¹ 173:57 p 12 in 328_May_19_21_Lalor_Teagasc

⁶⁹² 176:16 p 8 in 331_May_24_21_LNFU

⁶⁹³ 177:26 p 6 in 332_May_24_21_FAO_UNDP

⁶⁹⁴ 183:32 p 10 in 338_May_27_21_UNHCR

⁶⁹⁵ 184:16 p 6 in 339_May_27_21_Sayoc_Multi

⁶⁹⁶ 184:33 p 9 in 339_May_27_21_Sayoc_Multi

⁶⁹⁷ 185:41 p 9 in 340_May_27_21_Mamba_L

⁶⁹⁸ 185:87 p 14 in 340_May_27_21_Mamba_L

⁶⁹⁹ 187:37 p 8 in 342_May_28_21_Peralta T

⁷⁰⁰ 194:10 p 6 in 349_June_02_21_Ekwamu A

⁷⁰¹ 194:27 p 7 in 349_June_02_21_Ekwamu A

⁷⁰² 196:20 p 8 in 351_June_03_21_CIF_Multi

The private sector, civil society organizations, and development partners to invest and build the capacities of individuals and institutions to adopt food and nutrition practices that promote good health and nutrition (skills).⁷⁰³

Invest strongly in the education value chain, from universities to vocational colleges, to leveraging on secondary and primary education to upgrade the skill levels of young people entering the labour force.⁷⁰⁴

He called for renewed political action to affirm access to food as a fundamental human right, and heightened investment into the development and empowerment of local communities affected by food conflicts.⁷⁰⁵

inclusive and resilient food systems and addressing the UN's Sustainable Development Goals (SDGs).

...invest funds to support farmers produce agricultural products that meet VietGAP, GlobalGAP standards and traceability, invest in building large-scale animal feed material areas to reduce import dependence, build policies and mechanisms related to population planning, production areas, develop agricultural insurance system.⁷⁰⁶

Need to strengthen investments in the entire educational value chain to increase the numbers of Young people entering into the labor force.⁷⁰⁷

in archives. We need greater investment on bridging institutions that can connect research with industry to facilitate their conversion into practical solutions for producers.

Investments shall be made along the whole food value chain, strengthening linkages and increasing standards. For example, investments shall support transition towards more efficient landscape planning, diversification of crops, switch to organic farming, integration of precision farming, valorisation of biomass, sustainable aquaculture; resource efficiency should be the core of investments in agroindustry, consolidating processes, taking advantage of economies of scale to facilitate modernization through innovation. Among others, investments shall target foods that have competitive edge for export, where they can be leveraged by promoting capacity building and skills development, fostering a more agile system and shifting the subsidies regime.⁷⁰⁸

Finance and investments are necessary to build stakeholders' capacities to advance sustainability in their practices, fully understanding its potential and not considering it only as an administrative burden.⁷⁰⁹

⁷⁰³ 196:60 p 11 in 351_June_03_21_CIF_Multi

⁷⁰⁴ 209:7 p 7 in 365_May_27_21_Ekwamu A

⁷⁰⁵ 213:6 p 6 in 369_May_31_21_Holy See

⁷⁰⁶ 220:14 p 7 in 378_June_07_21_My Mai Bac

⁷⁰⁷ 226:10 p 6 in 384_June_09_21_Ekwamu A

⁷⁰⁸ 247:28 p 10 in 480_June_21_21_CiHEAM_Multi

⁷⁰⁹ 247:32 p 10 in 480_June_21_21_CiHEAM_Multi

*Identified priority areas include: developing well planned local food production systems, improving fintech and investments in agriculture-adjacent sectors to sustain the growing interest in agripreneurship, and—from a regional cooperation perspective—striking a balance between trade priorities and food security.*⁷¹⁰

*... a more transformative approach that incentivizes investments with long-term sustainability impact despite little immediate benefit. These include nature-based solutions and natural resource management, and ensuring the equitable participation of underserved sectors in the agri-food system.*⁷¹¹

*Another investment area considered was communication, in terms of infrastructure and as an extension service/activity, as a means to bridge the digital and information gap and enable grassroots end-users to make informed choices about investments or access resources for their livelihoods.*⁷¹²

*The participants also agreed on the following solutions: 1. Promotion of sustainable education is needed in low-resource areas - perhaps through the incentive of free school meals. 2. Start working at the local level. There could be a global agenda, but initiatives should start at the local level. 3. Financial investments and monitoring from richer countries to shifting to sustainable agriculture.*⁷¹³

*The adoption of best practices in sustainability requires investment.*⁷¹⁴

*There is the need to increase investment in research and development for the transformation of food systems in Africa.*⁷¹⁵

*Increase financial investment in sustainable and inclusive aquatic value chains.*⁷¹⁶

*Invest in better marketing sustainably sourced foods.*⁷¹⁷

*Enhancing investment and public-private partnerships (PPP) in holistic food systems approaches contributing to resilient communities.*⁷¹⁸

*...invest in better data, policy implementation capacities, and technical and vocational training of Africa's growing youth population.*⁷¹⁹

Investing in young people is key for rejuvenating and improving the performance of the agri-food sector. Therefore, it is important, also in the further process of the UNFSS, to

⁷¹⁰ 257:7 p 6 in 490_June_22_21_Yasmi Y

⁷¹¹ 257:23 p 10 in 490_June_22_21_Yasmi Y

⁷¹² 257:24 p 10 in 490_June_22_21_Yasmi Y

⁷¹³ 259:35 p 12 in 492_June_23_21_Liu JA

⁷¹⁴ 264:20 p 6 in 497_June_24_21_Fontes_Multi

⁷¹⁵ 265:5 p 6 in 498_June_24_21_Danquah E

⁷¹⁶ 266:22 p 7 in 499_June_25_21_GANSF

⁷¹⁷ 270:25 p 7 in 503_June_29_21_Schnyder_Boura

⁷¹⁸ 271:11 p 7 in 504_June_30_21_Susumu_Leiva

⁷¹⁹ 274:11 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

*further consolidate the game changers and solution clusters and strike out the focus on youth – not only as a crosscutting issue but as a key line of intervention.*⁷²⁰

*Public authorities could create an investment fund for communication and awareness-raising.*⁷²¹

*For Africa to realize its full agricultural potential to bolster its food systems, there is need for significant investments in key productivity enhancing innovations to harness science-based solutions for growth.*⁷²²

*A key challenge today is not just to do better external intervention, but more so to move some of the aid infrastructure to national public investment. The main aspect of this is to make sure that such national investment is shaped in a way that it addresses fragility.*⁷²³

*In terms of solutions, it was proposed that there is need to invest in regenerative agriculture concerning organic farming to cushion farmers in relation to unhealthy food production, there is need for proper dissemination of research data and statistics, it is important to involve young farmers in feasibility studies and the need for reliable and accurate information regarding weather patterns among others.*⁷²⁴

*Panelists called for national governments to fulfill current commitments to investments in agriculture and specifically agricultural research and development. One example cited is the Maputo Declaration, in which African governments agreed to allocate 10% of government spending to agriculture, with targets for agricultural R&D. However, many are only at 2-3%.*⁷²⁵

*Increase investments in locally relevant, adaptive national-level agricultural research and development, including the investments in improved institutional and absorptive capacity and ownership at National Agricultural Research Systems (NARS) and improved education for innovation actors, including on-farm actors.*⁷²⁶

*Mobilizing funding for landscape organization and investment: Funds for informal platforms or loose multi-stakeholder planning can be linked to more formal planning/decision-making structures. Landscapes and long-term resilience need links between local private sector and local SMEs that work beyond industrialized food system. Outside funding (e.g., GEF) can be useful but building bridges with other resources should be a priority.*⁷²⁷

...what innovations are needed for smallholder farmers and small and medium enterprises to sustainably nourish Rwanda now and in the future? Aggregation is the

⁷²⁰ 275:7 p 6 in 508_June_30_21_GDPRD

⁷²¹ 276:23 p 6 in 509_June_30_21_FFA_Nestlé

⁷²² 279:6 p 6 in 512_July_01_21_Malawi President_Ekwamu

⁷²³ 281:23 p 8 in 514_July_01_21_Bolling_Multi

⁷²⁴ 282:16 p 9 in 515_July_01_21_EastAfricanFarmers

⁷²⁵ 301:6 p 7 in 534_July_07_21_WBADB_ADI_Multi

⁷²⁶ 301:11 p 6 in 534_July_07_21_WBADB_ADI_Multi

⁷²⁷ 302:51 p 10 in 535_July_08_UNESCO Chair on Food

*answer identified for small-scale farmers and SMEs. Individual small food system actors confront far too many challenges, such as financial access and insurance. These issues can be mitigated when individual SMEs or farmers are brought together. Indeed, policymakers will be more aware of cooperation, and banks will be more willing to invest in innovative ventures.*⁷²⁸

*Invest in skills to increase financial literacy in small/family farms (particularly among women)*⁷²⁹

*Improve farmers' resilience by investing in adaptive and mitigation needs to climate change.*⁷³⁰

*There should be more investments in irrigation systems and purification of water sources.*⁷³¹

*For the countries included in this dialogue, rural and agricultural investment priorities include the development and dissemination of climate-smart crop varieties and technologies, pivoting to more resilient farming systems, nutrition-sensitive cropping systems, crop insurance, digitalisation of agriculture and real-time access to weather data, among others.*⁷³²

*Establishing the supply chain system suitable for fresh agricultural products could further improve the efficiency of agricultural products circulation and reduce food loss and waste. Based on digitalization, investment in the construction of cold storage, fresh cold chain logistics system and other related infrastructure nationwide will promote the development of transformative food system.*⁷³³

*Throughout the discussion, participants shared their own solutions to the food system's challenges while noting that there isn't just one solution needed. Participants agreed that many of the necessary solutions do already exist, but investors are needed. There is an opportunity to bring more investors that value the planet as highly as profit into this space.*⁷³⁴

*Improving land tenure systems and ensuring the possession of land over the years for small holder farmers to stimulate long-term investments and perspective is also important.*⁷³⁵

Investment change is happening at pace and at scale, with almost daily announcements of global investors developing products and funds for natural capital investment. The focus on climate and climate risk has grown significantly in the last 12 to 18 months, and there

⁷²⁸ 303:12 p 6 in 536_July_08_21_Musabyimana JC

⁷²⁹ 313:15 p 7 in 546_July_13_21_INDEP

⁷³⁰ 313:16 p 7 in 546_July_13_21_INDEP

⁷³¹ 313:24 p 7 in 546_July_13_21_INDEP

⁷³² 316:6 p 6 in 549_July_14_21_Meah N

⁷³³ 318:12 p 6 in 551_July_15_21_FAO_ESCAP_Multi

⁷³⁴ 319:21 p 8 in 553_July_15_21_Food Tank_Oatly

⁷³⁵ 327:13 p 7 in 561_July_19_21_OCCAM

is a rapid shift amongst leaders to focus on nature and nature-risk, meaning attention is turning to how nature is measured, valued, accounted for and disclosed.⁷³⁶

Investing in smallholder producers to empower them and create opportunities for them to access to benefits and incentives. Frequently, the results of economic policies or subsidies in the food sector do not reach small holder farmers, who are often in need of dependable streams of finance/investment as well as technical support. Women and youth should be a major priority for such investments given their critical role in food systems globally.⁷³⁷

Increase public investment in infrastructure to enable distributional changes.⁷³⁸

Living wage

City Corporations and Directorate of National Consumers Right Protection should work together to protect both the rights of food sector workers and consumers. Regulations should be developed to set and enforce a minimum wage rate for the food sector workers.⁷³⁹

We also need to continue to focus on fair pay for all individuals working within the food system as well ensuring all nutritious food is affordable for all.⁷⁴⁰

Reaching a liveable wage is also critical, and we need policy change and urban agriculture land use regulations that can support economic opportunities for fresh food production within city limits.⁷⁴¹

Improving the living wage standards of farmers and food service workers, acknowledging the ripple effect of investing and empowering our entry level workforce as a lever to increase sustainability practices and advance equitable livelihoods, while security the future of food production.⁷⁴²

Measures of success of these efforts evaluated by: an increase in number of farmers per capita, an increase in farmers with a livable wage, an increase of schools using farm direct sourcing, and an increase in number of farmers markets across neighborhoods (ie 1 market per neighborhood to increase food access).⁷⁴³

...A living wage's impact could be evaluated by wage rates and employment of the bottom of the income distribution, and particularly for those who work in the food value chain. Demand for benefits like SNAP and WIC would assess how food insecurity has changed as

⁷³⁶ 329:9 p 6 in 563_July_20_21_ClimateWorksAustralia

⁷³⁷ 330:6 p 6 in 564_July_20_21_Bakarr_MI

⁷³⁸ 343:12 p 9 in 406a_June_10_21_COPROFAM_CLOC_Eng

⁷³⁹ 418:36 p 9 in 459_June_01_21_Rashid Md J

⁷⁴⁰ 487:48 p 12 in 293_May_22_21_City of San Antonio

⁷⁴¹ 51:7 p 9 in 086_Mar_20_21_Rosatan B

⁷⁴² 51:41 p 6 in 086_Mar_20_21_Rosatan B

⁷⁴³ 51:42 p 7 in 086_Mar_20_21_Rosatan B

a result. We recognize the significant implementation challenges. Definition of a living wage is perhaps the most fundamental of these challenges. Others include how to address regional differences in the cost of living and impacts of inflation. Efforts to increase the minimum wage through legislation will face strong political resistance due to claims of harm to businesses and increased unemployment. However, the work of addressing these concerns has already occurred in many localities and the lessons learned in these contexts should inform future action and advocacy. A living wage will break down economic barriers to food insecurity. It is important to enact more targeted changes in the food system, however, this is a starting point to ensure that low-income households are not food insecure simply because they do not have the money to purchase nutritious food.⁷⁴⁴

A raised minimum wage will combat food insecurity among low-income individuals and families and recognize the value of workers within our food system.⁷⁴⁵

Encourage basic living wage.⁷⁴⁶

Government income transfer programs: perennial minimum income (bolsa família) and minimum wage hike to reactivate the economy.⁷⁴⁷

Fair compensation, living wages for farmers and food system workers, and land access for farmers are also necessary for a just food system, and can be made more attainable with a democratic system.⁷⁴⁸

It is imperative that youth are compensated fairly for their hard work so that they are able to take part in the food system.⁷⁴⁹

Partnerships

Linking grassroots organizations with donors or financial institutions that work in sustainable finance could be a solution.⁷⁵⁰

Indigenous people are closer to nature and the importance of indigenous knowledge cannot be overemphasized because traditional farming practices are more ecologically sensitive, nature friendly and sustainable. We suggested linking grassroots organizations in need of funding with financial/donor institutions that are looking to finance green initiatives to consolidate more on the diversification of our biodiversity and enhance sustainable food systems.⁷⁵¹

Improve regional coordination through partnership.⁷⁵²

⁷⁴⁴ 88:17 p 9 in 162_Apr_16_21_Fountain G

⁷⁴⁵ 88:31 p 6 in 162_Apr_16_21_Fountain G

⁷⁴⁶ 201:41 p 6 in 357_Apr_14_21_Harfouche S

⁷⁴⁷ 231:51 p 16 in 222_May_11_21_FTI_ZHI_English

⁷⁴⁸ 310:23 p 7 in 543_July_13_21_ORYFC

⁷⁴⁹ 310:33 p 8 in 543_July_13_21_ORYFC

⁷⁵⁰ 29:25 p 6 in 044_Feb_18_21_Bharat K S

⁷⁵¹ 12:4 p 7 in 192_Apr_19_21_Okafor_A

⁷⁵² 19:26 p 10 in 109_Apr_13_21_Jacobs-Mata I

*Banks and NBFs should also be incentivized to provide credit to small farmers, for use in nature-positive production. • Need for continuous engagement - The engagement of relevant stakeholders on food systems issues should not be limited to the Dialogues or end with the Food Systems Summit but continue as an essential part of food systems transformation.*⁷⁵³

*Promote partnerships: 1. Among members in the value chain to reduce the cost of food related to transportation, food waste, and pest reduction. A close network of communication from a coalition/connection between farmer, supplier, wholesaler, etc.*⁷⁵⁴

*Partnerships support for women in agriculture Improving partnership with financial institutions to enhance women access to funds Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women) Connect grass root women to multistakeholder platforms to share their experiences and challenges Link research organizations and various ministries with grass root women to create awareness on new technologies Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women Partnership with national and county government to implement policies that are gender mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.*⁷⁵⁵

*A crucial question was how these schemes would be funded. Participants suggested linking grassroots organisations in need of funding with financial/donor institutions that are looking to finance green initiatives. An example was Microsoft, which recently gave 1 billion US dollars to companies that were showing long-term carbon sequestration, to help them achieve their net zero carbon goals.*⁷⁵⁶

*Sustainable streams of financing need to be made available to support demonstratable high impact agroecological and other forms of climate smart and resilient agriculture to take programmes to scale in mitigation and adapting to climate change. Financing regimes must be flexible and agile to enable efficient access and effective utilization by small and medium enterprises, small holder farmers and community-oriented organizations. Financing regimes should include ongoing coaching, mentorship and advisory support to help de-risk projects and encourage strong partnerships in design, execution, monitoring and improvement of science based, data inclusive, high impact mitigation, adaptation and resilience projects.*⁷⁵⁷

*Increase collaboration between Arab countries especially those with common issues and establish mechanism between countries that aid in establishing a food security fund that supports food baskets.*⁷⁵⁸

⁷⁵³ 29:4 p 6 in 044_Feb_18_21_Bharat K S

⁷⁵⁴ 429:224 p 15 in 470_June_17_21_Burian_Multi

⁷⁵⁵ 433:15 p 7 in 474_June_18_21_Matu_Opiyo

⁷⁵⁶ 29:44 p 10 in 044_Feb_18_21_Bharat K S

⁷⁵⁷ 37:43 p 7 in 095_Mar_27_21_Chinapoo C_Multi

⁷⁵⁸ 38:17 p 7 in 096_Mar_29_21_ESCWA

Creation of an index of financial institutions that contribute to funding for smallholder farmers to stimulate healthy competition amongst financial institutions and impact investors.⁷⁵⁹

Governments, financial institutions, research centers and investors as a whole need to partner to accelerate growth in the nutritious food production sector by facilitating access to funding. Banks typically must operate with a financial regulatory framework which, effectively, prevents banks from engaging in business activities that may have significant risk.⁷⁶⁰

To overcome regulatory hurdles to supporting early-stage companies and start-ups banks sometimes participate in higher risk financings by forming arms-length investment arms or by attracting other financial institutions to provide financing. Creating a financial structuring vehicle through partnerships which are geared at establishing a pool of individual loans can de-risk them and will attract investment.⁷⁶¹

Work more closely with financial institutions for a closer link between various financial structures and agriculture.⁷⁶²

The dialogue culminated with the announcement of a coalition of multilateral development banks and development partners to pledge over US\$17 billion in the financing, in a bold bid to address rising hunger on the African continent and to improve food security.⁷⁶³

maximization of available resources, systems, and partnerships including the existing breeding institutions, the functional biotechnology regulatory system for genome editing and precision agriculture, and the inter-regional collaborations that respond to the high cost of laboratories, genome editing tools, and licensing.⁷⁶⁴

Farming support enterprises: Farmer groups should take business opportunities of the nonfarming enterprises that bring solutions to farmers such as farming input trading, produce transport services, warehousing, abattoirs, and cold storages. Through These enterprises, farmer groups have the opportunity of reducing farmers' production costs and increasing dividends for shareholding farmers.⁷⁶⁵

Participants also identified a need for the participation of financial institutions in forming and sustaining close partnerships with producers, recognizing that larger institutions and corporations are better able to adapt to external pressures and stressors than small-holder producers.⁷⁶⁶

⁷⁵⁹ 46:28 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

⁷⁶⁰ 61:11 p 5 in 020_Jan_26_21_IFAN

⁷⁶¹ 61:24 p 6 in 020_Jan_26_21_IFAN

⁷⁶² 135:63 p 13 in 193_Apr_19_21_Ringler_Kassim

⁷⁶³ 153:6 p 6 in 253_Apr_29_21_AFDB_Multi

⁷⁶⁴ 184:17 p 6 in 339_May_27_21_Sayoc_Multi

⁷⁶⁵ 185:38 p 9 in 340_May_27_21_Mamba_L

⁷⁶⁶ 187:12 p 6 in 342_May_28_21_Peralta T

*Participants identified an opportunity for increased partnerships for financial companies and small producers (as well as other links in the value chain) to accompany processes of capacity-building for producers, accompanied with confidence of the business sector.*⁷⁶⁷

*...coordinate between Farmers' Union and enterprises, banks to help farmers access loans to expand productions, extend loan term and reduce the interest rate.*⁷⁶⁸

*Maintaining a setting up additional N-S-S partnerships.*⁷⁶⁹

*Mobilizing funding for landscape organization and investment: Funds for informal platforms or loose multi-stakeholder planning can be linked to more formal planning/decision-making structures. Landscapes and long-term resilience need links between local private sector and local SMEs that work beyond industrialized food system. Outside funding (e.g., GEF) can be useful but building bridges with other resources should be a priority.*⁷⁷⁰

*Creating nutrition-sensitive food systems in Southeast Asia is an all-of society movement, involving dialogues, actions and cooperation between different stakeholders, from government to civil society. More research and data analysis will be important to define policies and ways forward.*⁷⁷¹

Private sector

*Massive stimulus for private sector engagement through creating enabling business environment, trade policies based on best practices, science, innovation, incentives including tax holidays for more fresh foods.*⁷⁷²

*We need to learn how to incentivize the local private sector and include it in the process.*⁷⁷³

*Providing incentives towards sustainable food systems...Investments & incentives by public and private sector are needed: encouraging responsible food supply and consumption with neutral or positive environmental impact (tax incentives, procurement), responsible businesses, labelling, and work on legislative measures.*⁷⁷⁴

*Engage private sector: to increase the uptake of plant-based foods by consumers, incentivise food brands to advertise healthy and sustainable products.*⁷⁷⁵

⁷⁶⁷ 187:33 p 8 in 342_May_28_21_Peralta T

⁷⁶⁸ 220:5 p 6 in 378_June_07_21_My Mai Bac

⁷⁶⁹ 281:51 p 11 in 514_July_01_21_Bolling_Multi

⁷⁷⁰ 302:51 p 10 in 535_July_08_UNESCO Chair on Food

⁷⁷¹ 322:4 p 6 in 556_July_15_21_Von Goh_GenTan

⁷⁷² 64:5 p 5 in 035_Feb_9_21_Hussein AO

⁷⁷³ 66:33 p 8 in 041_Feb_17_21_Adler D

⁷⁷⁴ 68:64 p 12 in 052_Feb_25_21_EUFIC

⁷⁷⁵ 68:71 p 13 in 052_Feb_25_21_EUFIC

*Governments should give incentives to promote food donation when possible and foster the link between wholesalers and associations.*⁷⁷⁶

*Multinational enterprises could have a role in solving the problem. Funding was proposed to enable spontaneous cooperation aiming at product development necessary for a stronger market position, and to contribute to the long-term development process of smallholders.*⁷⁷⁷

*Several participants stated that the whole financial system is taking responsibility in a positive shift. But, they think the trend of standard and opportunity assets is coming to all industries, including food. The finance industry can be a key leader in driving transformations to restore the oceans and co-collaborate to be a strong voice together. If the financial sector signals that it wants changes, the private sector can move forward at a rapid pace.*⁷⁷⁸

*...forging a stronger enforcement of agreed upon targets as well as providing incentives for private sector to invest in AR4D were further recommended during the discussion.*⁷⁷⁹

*While the private sector is active in Egypt's water and food sectors, it was noted that regulations and incentive structures affecting the private sector would benefit from further review.*⁷⁸⁰

*Pakistan Credit Guarantee Company should incentivize such schemes for the commercial banks.*⁷⁸¹

*Monitoring of federal, municipal, and state budgets, having as a guiding principle the transfers to policies focused on Food and Nutritional Security. In this context, one can think of institutional purchases, credit, and incentives for family farming, rural-city dialogue, in addition to instruments to promote food banks for price regulation, and public procurement mechanisms that are more efficient. It is worth remembering that, in the not-so-distant past, Brazil was already a world reference in this matter.*⁷⁸²

*Labels should have procurement incentives (e.g. concrete plans towards net zero goals) for well-established businesses.*⁷⁸³

*Lack of market mechanisms linking clients and suppliers: companies and banks can play an important role in building such connections, also important to make incentives reach the right end where the difference can be made (production).*⁷⁸⁴

⁷⁷⁶ 78:24 p 10 in 103_Apr_8_21_Carrara E_Multi

⁷⁷⁷ 81:47 p 10 in 118_Apr_21_21_Huvio T

⁷⁷⁸ 87:11 p 10 in 160_20_Apr_21_GSI

⁷⁷⁹ 113:41 p 7 in 070_Mar_09_21_Akinbamijo,O

⁷⁸⁰ 135:8 p 6 in 193_Apr_19_21_Ringler_Kassim

⁷⁸¹ 193:14 p 7 in 348_June_02_21_ASF Pakistan

⁷⁸² 231:57 p 16 in 222_May_11_21_FTI_ZHI_English

⁷⁸³ 259:14 p 6 in 492_June_23_21_Liu JA

⁷⁸⁴ 264:17 p 6 in 497_June_24_21_Fontes_Multi

Regarding payments for environmental services was argued that receiving money for x or y would increase the level of external requirements/interference in the business thus it would be better not to monetize over those services.⁷⁸⁵

Seek best practices with incentives, avoiding dichotomies “certifications that includes and other that excludes”, for instance, carbon bank is beneficial to both the grower and to the society.⁷⁸⁶

Need for effective public-private-partnership.⁷⁸⁷

Financial resource mobilization, including disbursements to communities to support needs, guarantees provided for financial flows, and increased engagement of financial actors. Design public and private finance so it can be contextualized at a local level to support farmer and community transition to agroecology, processing and infrastructure with a wide variety of instruments and mechanisms: nature-positive subsidies, carbon credits/payments for ecosystem services, agricultural/forestry insurance products, grants for development processes, technical assistance, longer-term tenure loans, etc.⁷⁸⁸

Working more effectively with the private sector: As most funding is in the private sector including them in multistakeholder platforms could be critical.⁷⁸⁹

Design public and private finance contextualized at a local level to support farmer and community transition to agroecology, processing and infrastructure with a wide variety of instruments and mechanisms: nature-positive subsidies, carbon credits/payments for ecosystem services, agricultural/forestry insurance products, grants for development processes, technical assistance, equipment, longer-term tenure loans, etc.⁷⁹⁰

Furthermore, private-public partnership (PPPs) was pointed to an important role in increasing demand for healthy and nutritious foods. The government should take the lead in this process and give incentives for the private sector to participate.⁷⁹¹

In order for Kosovo’s food system to be more inclusive, sustainable and healthy, further efforts are needed to 1) create the right mix of incentives for businesses and producers to shift their behaviours and patterns, 2) review the institutional, legislative and regulatory framework to better integrate environmental protection and climate concepts 3) reduce risks (access, affordability, income) for those most marginalized within the system, and 4) support income-earning opportunities across food value chains.⁷⁹²

Climate volatility and high on-farm costs mean Australian farmers need to have either high levels of equity or off-farm income in order to survive, or to support their transition to more sustainable practices. This need for diversification and financial backing should

⁷⁸⁵ 264:64 p 10 in 497_June_24_21_Fontes_Multi

⁷⁸⁶ 264:92 p 12 in 497_June_24_21_Fontes_Multi

⁷⁸⁷ 265:13 p 6 in 498_June_24_21_Danquah E

⁷⁸⁸ 302:23 p 6 in 535_July_08_UNESCO Chair on Food

⁷⁸⁹ 302:56 p 10 in 535_July_08_UNESCO Chair on Food

⁷⁹⁰ 302:65 p 11 in 535_July_08_UNESCO Chair on Food

⁷⁹¹ 303:19 p 6 in 536_July_08_21_Musabyimana JC

⁷⁹² 313:10 p 6 in 546_July_13_21_INDEP

*be supported by both the public and private sectors. For instance, natural capital is becoming a highly valuable and sought-after asset class in its own right, and new opportunities for farmers to create revenue streams through both nature protection and restoration is critical in supporting a future sustainable system.*⁷⁹³

*Mitigation comes at a cost and policy can address consumer needs in a way that makes mitigation economically feasible. All the while we need to be in dialogue with farmers and ranchers, sharing information, as well as getting their input. What a policy might incentivize might not be what the farmer or rancher needs, and therefore not be helpful. Market incentives like grants and credit markets for greenhouse gas reductions are critical to successful adoption of mitigation measures.*⁷⁹⁴

*Promote territorial identity through the encouragement of labeling of local products which were...processed and organic certification which will enable producers and processors to build awareness and quality of the products to be placed on the market; in this context, promote the local private sector incentivizing it to invest in the territory of origin; this requires the revision of investments in order to make them more favorable to small investors...*⁷⁹⁵

*Implement systems that make it possible to take advantage of food in an adequate state of preservation and with an expiration date that operators decide not to offer to consumers (for commercial reasons), through donations from private agents (wholesalers and/or retailers and/or industrialists) before they must be thrown away (not placed on the market), and count them as part of the payment of taxes at a lower value than the replacement value of the merchandise in order to promote it. The purpose of this measure is to direct these donations in favor of vulnerable populations with difficulties in accessing to food.*⁷⁹⁶

Producers income

*Also, it is necessary to ensure that farmers' interests are represented and to support the extension and transfer of knowledge necessary to guarantee that new plant varieties are produced appropriately and take advantage of all new technologies, while securing sustainable farm incomes, because without sustainable profitability at farm level, the system collapses...*⁷⁹⁷

*Bioproducts that do not generate employment and income in the Amazon will not solve the problem, it is of no use extracting a bioactive from the Amazon that does not directly benefit the local population. So the issue of making the standing forest viable as an income alternative for these populations is very important.*⁷⁹⁸

⁷⁹³ 329:8 p 6 in 563_July_20_21_ClimateWorksAustralia

⁷⁹⁴ 331:3 p 7 in 565_July_20_21_Mitloehner_Kebreab

⁷⁹⁵ 341:24 p 9 in 392a_June_01_21_Sidibe_Remy_Eng

⁷⁹⁶ 343:21 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

⁷⁹⁷ 369:33 p 8 in 413_June_15_21_WFO_ISF

⁷⁹⁸ 389:72 p 12 in 431_June_22_21_CEBOS_EMBRAPA

Ensure that digital tools are co-created and farmer-centric to address their issues, including lowering production costs and improving incomes.⁷⁹⁹

Recommendation 1: prices faced by farmers should adjust to reach a fair level and truly reflect the value farmers bring to society and the environment. Farmers' remuneration needs to improve and there should be equal participation and integration of all stakeholders in decision-making on food markets Who: local governments/governors, farmers' organisations. How: this can be achieved through dialogue between food systems stakeholders with the setup of inclusive platforms, allowing for open, transparent, and evidence-based discussion and negotiation on food costing/pricing, and valorisation of food production as an activity. The platforms support the build-up of effective networks, enable everyone to be informed and understand 'fair business'. Ultimately, the platform would contribute towards fair prices, and a more level playing field on food markets and a well-functioning food system. Food system stakeholders will trust each other, and farmers will have their voices heard.⁸⁰⁰

Recommendation 4: farmers' productivity and profitability need to increase, allowing to boost investment as well as quality and safety of food, improving market conditions, farmers' livelihoods, and involvement in decision-making processes Who: government authorities in partnership with farmers' organizations, the private sector (input suppliers, water and electricity providers, tech companies) and other relevant stakeholders. How: higher levels of productivity and profitability for farmers will be achieved by establishing an enabling context (water, electricity, infrastructure including innovative technology), expanding contract farming, supporting trade fairs and marketing to advertise local foods, leveraging the potential of new tech to communicate on innovative farming techniques, and capacity building for youth wanting to start agribusinesses. Governments should help set up and/or strengthen the functioning of traditional (so-called informal) markets, short marketing circuits or EcoFairs in different places in peri-urban and urban cities on a massive scale (without many restrictions on agro-ecological products).⁸⁰¹

Recommendation 5: A food system can only be sustainable if producers receive adequate income. This requires ensuring access to healthy food to groups/communities with limited means without limiting free market and additional controls of food prices by the government. Governments need to instead adopt social measures to facilitate access to healthy food for poor groups/communities. Who: governments, international organizations (for example, this approach is already active in a number of WFP operations). How: this can be achieved by ensuring use of healthy food as part of school meals, and issuance of vouchers for food at responsible distributors/ (re)sellers.⁸⁰²

Another suggestion in improving farmer income would be to link them with bigger companies through their corporate social responsibility (CSR) to improve market and logistics access. NGOs and microfinance institutions (MFIs) providing loan products to

⁷⁹⁹ 429:118 p 7 in 470_June_17_21_Burian_Multi

⁸⁰⁰ 458:51 p 10 in 123_May_04_21_Mauderli U

⁸⁰¹ 458:54 p 10 in 123_May_04_21_Mauderli U

⁸⁰² 458:55 p 10 in 123_May_04_21_Mauderli U

*farmers should also work with relevant government agencies like PhilGuarantee, which could provide assistance should farmers become delinquent with their loan payments.*⁸⁰³

*Elimination of poverty and food insecurity More affordable housing and higher wages can lead to elimination of poverty and food insecurity; fair wages for fair work; move away from food banks and charities; encourage more local food consumption at home and in institutions, eg. Hospitals.*⁸⁰⁴

*Guaranteeing safe and healthy working conditions, better incomes, and greater protection for agri-food workers is critical, if we are to build food systems that can withstand current and future crises.*⁸⁰⁵

*Participants noted the tremendous impact of the food and ag supply chain on livelihoods in the United States and the critical importance of sustaining full and productive employment and decent work for all actors along the food value chain.*⁸⁰⁶

*Increase in income and improved livelihoods of indigenous people, smallholder farmers and fishermen households.*⁸⁰⁷

*At the same time, farmers' incomes needed to be remunerative.*⁸⁰⁸

*Having to compete with imports prices A farmer or company that has decided to export its product or service to a new market or to buy from a new supplier in a different country cannot take for granted that the transactions will be expensive, and competitive. An exporter must ensure acceptable and timely returns on their financial investment in proportion to the associated costs and risks.*⁸⁰⁹

*We can advance equitable livelihoods in the food system by supporting local markets for local farmers to earn quality incomes; by marketing agriculture and creating more enticing jobs within the agriculture industry, and; utilizing more homemade products to support Caribbean food sustainability rather than depending on imported food.*⁸¹⁰

Improving the living wage standards of farmers and food service workers, acknowledging the ripple effect of investing and empowering our entry level workforce as a lever to increase sustainability practices and advance equitable livelihoods, while security the future of food production. 3a. Political restructuring, more collaborative structures that support and increase value of food and farm worker jobs, which creates a sustainable

⁸⁰³ 460:118 p 18 in 131_May_25_21_IISLA Ventures

⁸⁰⁴ 476:11 p 7 in 264_May_06_21_Arrell Food_Multi

⁸⁰⁵ 501:24 p 6 in 397_June_04_21_WHO_Multi

⁸⁰⁶ 4:24 p 11 in 104_Apr_8_21_Animal Agriculture Alliance

⁸⁰⁷ 12:10 p 8 in 192_Apr_19_21_Okafor_A

⁸⁰⁸ 28:31 p 9 in 023_Jan_29_21_Bharat K S

⁸⁰⁹ 37:82 p 11 in 095_Mar_27_21_Chinapoo C_Multi

⁸¹⁰ 37:85 p 11 in 095_Mar_27_21_Chinapoo C_Multi

ripple effect in our economy. 3b. Reimagine grocery stores that shorten supply chains and put more money directly into the hands of the producer/farmer.⁸¹¹

Actions: Assist smallholder farmers—provide access to technology and seeds to improve productivity and diversify income streams.⁸¹²

...raise incomes across food value chains...⁸¹³

Producers need to be paid and supported in such a way that they can have a higher financial gain for their labor and work. This will also give them more autonomy in selling their products to a greater majority of people at an affordable price.⁸¹⁴

...legumes grown in the EU are not price competitive and would lead to an ultimate loss for the farmer; in a fair food system, growing food should allow one to be self-sufficient and should not require subsidies.⁸¹⁵

Pricing: the environmental costs are insufficiently reflected in food prices; - food price should ensure that the producer gets a fair value; - poverty is not to be overlooked, however, as higher prices might increase inequity, as people of a low socioeconomic status cannot necessarily afford choices better for health and planet.⁸¹⁶

Youth's engagement in agriculture should be promoted via a decent income and increased access to technology, digital tools and mechanization to ensure decent income.⁸¹⁷

Money is important. Farmers need an income, food businesses need to make a profit, and consumers need affordable food. No farmer has a problem with having fewer cattle if he/she has the same income, but they also need legal clarity and stability. Farmers will also be more willing to grow a wider variety of crops – if the market is there.⁸¹⁸

We need to fundamentally alter the policy system to deliver better outcomes for farmers & society. In addition, farmers need to be paid more for both food and ecosystem services.⁸¹⁹

Paying for a fair price helps everyone. By giving farmers a decent income, we encourage them to plant better and ensure everyone is fed. By ensuring that food isn't dirt cheap we as consumers can also put more value into the food that we eat.⁸²⁰

Small farmers experience low, inadequate and fluctuating incomes and face barriers such as high production costs and an unequal access to input and output markets. The Plant

⁸¹¹ 51:20 p 6 in 086_Mar_20_21_Rosatan B

⁸¹² 56:32 p 8 in 002_Nov_19_20_CGIAR

⁸¹³ 58:7 p 6 in 006_Dec_16_20_UNDESA

⁸¹⁴ 62:22 p 8 in 021_Jan_27_21_Donati L

⁸¹⁵ 68:53 p 11 in 052_Feb_25_21_EUFIC

⁸¹⁶ 68:81 p 14 in 052_Feb_25_21_EUFIC

⁸¹⁷ 81:12 p 6 in 118_Apr_21_21_Huvio T

⁸¹⁸ 101:7 p 6 in 285_May_20_21_TFFF_Multi

⁸¹⁹ 114:59 p 10 in 074_May_18_21_O'Mara_Teagasc

⁸²⁰ 138:3 p 6 in 202_Apr_24_21_Hao_H

Clinics and Group Federation of Small Farmers Initiatives from India demonstrate the positive impact of collective action on the livelihoods and incomes of small farmers.⁸²¹

Wide-spread adoption of regenerative agriculture practices and soil carbon farming, backed by farmers being paid income for the carbon stored in their soils.⁸²²

Decent and reliable income is a necessity, through long term contracts to create stability and resilience.⁸²³

In order to ensure adequate remuneration for agricultural workers and combat exploitation in food systems, states and public institutions need to assume heightened regulatory responsibilities, through stronger and more targeted policies, to regulate market competition and ensure equitable prices of final food products.⁸²⁴

There is a need for a stable and profitable market to pay farmers and investors that are valuing these contributions.⁸²⁵

Look beyond the product level, considering how innovations sit within and affect the bigger picture of what's needed. This includes: - Creating genuinely equitable business models, whether from the ground up or by transforming what we already have (e.g., looking beyond the usual funders/investors to new partners with an interest in similar outcomes); and, especially important, ensuring food workers earn enough to afford good food.⁸²⁶

Decentralising the practice, providing income, and increasing income for smallholder farmers rather than leaving them behind in the move to more sustainable ocean farming after unsustainable practices or market competition puts smallholder farmers out of business, threatening coastal community livelihoods.⁸²⁷

Putting more programmatic attention to improving conditions of waged youth workers in agri-food systems.⁸²⁸

Attention to decent wage employment is important, focus on entrepreneurship is crucial to generate sufficient jobs to accommodate the scale of young people entering the market.⁸²⁹

Provision by governments of credit and guarantee funds to support the development of small agricultural enterprises among women and young people, combined to capacity building would create favorable conditions for agricultural development.⁸³⁰

⁸²¹ 146:53 p 15 in 231_May_19_21_MCD

⁸²² 159:25 p 8 in 275_May_13_21_Dornom H

⁸²³ 205:4 p 6 in 361_May_19_21_Cadogan_Hincks

⁸²⁴ 208:4 p 6 in 364_May_26_21_DPIHD

⁸²⁵ 252:9 p 7 in 485_June_22_21_Levesque_SD

⁸²⁶ 262:13 p 8 in 495_June_23_21_Forum for the Future

⁸²⁷ 270:11 p 6 in 503_June_29_21_Schnyder_Boura

⁸²⁸ 275:29 p 10 in 508_June_30_21_GDPRD

⁸²⁹ 275:31 p 10 in 508_June_30_21_GDPRD

⁸³⁰ 305:22 p 9 in 538_July_09_21_IDS_Multi

In order for Kosovo's food system to be more inclusive, sustainable and healthy, further efforts are needed to 1) create the right mix of incentives for businesses and producers to shift their behaviours and patterns, 2) review the institutional, legislative and regulatory framework to better integrate environmental protection and climate concepts 3) reduce risks (access, affordability, income) for those most marginalized within the system, and 4) support income-earning opportunities across food value chains. Additionally, there must be special attention paid to enhancing gender equality in Kosovo's food system, including the need to provide more opportunities for women in agricultural value chains, such as access to land, jobs, finance and decision-making.⁸³¹

A parallel solution was also proposed: to further broaden market access, perhaps to capitalize on the new markets reached during the pandemic, through digital platforms. Market analysis and consumer research, along with stakeholder linkages, could help make production more profitable by focusing on demand-driven products that meet market needs and preferences.

Well-being of people living in cities improved by permaculture and regenerative approaches to produce food. Expansion of awareness and education about the origin and means of production of food. Gardening as a 'perfect melting pot for communities' to learn together and lead more healthy lives. This is possible through:

- Peer-to-peer marketing that helps to reconnect people with food through showcase by growers in local areas.*
- Emphasis on local production reduces CO2 for food transport.*
- Farming and taking time to prepare the soil derives in mental health benefits.*
- Besides growing own food, surplus and replication of urban farming model can become profitable activities in a small scale.⁸³²*

Food production is about transforming the society, beyond feeding the society: Throughout the discussion, food production cannot be just about producing enough food for the population. Instead, food production is intricately interlinked with incomes, livelihoods and nutrition provided to the society. Food producers come from many different communities, some coming from vulnerable and poor groups such as indigenous communities in rural area. Thus, ways to improve incomes for these food producers much be in consideration, including the provision of high quality seeds and training farmers. On the consumer end, especially with the COVID-19 impact, many households have reduced incomes, and thus may not be able to afford food. This is especially so for urban poor and refugee communities who do not have access to land to produce their own food. Urban farming can be a way forward to secure their food availability.⁸³³

Climate volatility and high on-farm costs mean Australian farmers need to have either high levels of equity or off-farm income in order to survive, or to support their transition to more sustainable practices. This need for diversification and financial backing should be supported by both the public and private sectors. For instance, natural capital is becoming a highly valuable and sought-after asset class in its own right, and new

⁸³¹ 313:10 p 6 in 546_July_13_21_INDEP

⁸³² 320:14 p 8 in 554_July_15_21_Lopez DE

⁸³³ 322:5 p 6 in 556_July_15_21_Von Goh_GenTan

opportunities for farmers to create revenue streams through both nature protection and restoration is critical in supporting a future sustainable system.⁸³⁴

Promotion of family agriculture within this context; family agriculture (rather than other forms of agriculture such as industrial) is considered to be more sensitive to the practice of less demanding agriculture (in water and inputs) and to the raising of animals adapted to local climatic conditions; as well as the application of organic agriculture which is less demanding of chemical inputs and therefore less dangerous for the ecosystem and less costly for the farmer, or of the circular economy which permits a more economical management of resources.⁸³⁵

Risk management

Insurance services could help farmers and businesses manage risks, especially those associated with weather conditions, crop diseases, and the other unpredictable factors in agriculture. There are synergies between insurance and credit. With insurance, farmers may be more willing to take out bank loans, and banks may be more willing to provide loans. Pilot projects could be implemented to test insurance services and access mechanisms tailored to the needs of African farmers and rural businesses.⁸³⁶

Creation of agricultural insurance for innovative projects to encourage investment with less risk.⁸³⁷

During the Dialogue as well as the breakout sessions the following findings emerged: Blended financing mechanisms could enhance small projects/initiatives locally owned by women and youth Systematic approaches need to be utilised for effective risk analysis Innovations could help to ensure food security including community gardens utilising vertical farming tools Enacting food as a public good could help to ensure universal food access Implementing climate risk profiling, using AI to tailor local weather patterns with soil/agricultural practices.⁸³⁸

Should adapt weather-related risk management systems to conflict and have financial services that can work where there is a lot of uncertainty. Need early warning systems for other types of uncertainty than famine and some weather challenges.⁸³⁹

Work with the private sector to get insurance to small and medium farms. The group discussed a current example in Latin America.⁸⁴⁰

⁸³⁴ 329:8 p 6 in 563_July_20_21_ClimateWorksAustralia

⁸³⁵ 341:17 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

⁸³⁶ 510:28 p 12 in 079a_May_27_21_NGA_Soung_Eng

⁸³⁷ 520:33 p 10 in 107a_June_22_21_Trimarchi_A_Eng

⁸³⁸ 419:2 p 6 in 460_June_03_21_Ekanayake S

⁸³⁹ 424:39 p 10 in 465_June_16_21_Congressional Hunger

⁸⁴⁰ 429:144 p 9 in 470_June_17_21_Burian_Multi

*Provide farmers with access to crop insurance, the best seeds, and technology so they can make a profit and feed their families.*⁸⁴¹

*Need for more agricultural insurance institutions.*⁸⁴²

*Resolve the underlying causes of vulnerability to risks and drivers of crises 5. Provide social safety nets and risk prevention mechanisms 6. Adopt emergency policies, plans, and programs 7. Enhance risk-based decision making among populations.*⁸⁴³

*Also, a need for enhancing national reserves as they should be distributed across the country and are not supposed to be stored only in one area to reduce risks.*⁸⁴⁴

*Develop an improved risk management regime for farmers that include but not limited to crop insurance regimes; regimes that transfer impacts from polluters and carbon intensive industries to farmers and process that offset, especially if done at scale and in keeping with equity There should be benefits and incentives tied to organic/regenerative agriculture practices in the crop insurance regime and other risk management services Regimes should develop in such a way that allows for the cost of production, cost of certification to standards and the cost to bring safe and healthy food to market can be fairly prices and not become disadvantageous to farmers.*⁸⁴⁵

*Integrate disaster risk reduction considerations into sustainable development strategies and policies to mitigate losses.*⁸⁴⁶

*Development of traditional and innovative sources of finance, (such as, crowdfunding, diaspora investment, franchising, fintech, etc) and tailored risk-management products such as farmer-centric insurance products for each value chain.*⁸⁴⁷

*More flexible innovative financing systems with modified systems of risk management, coaching and technical support is needed 3. There is need to examine the processes/bureaucracy involved in climate smart financing and develop investment regimes more aligned to SDGs that do not simply copy and paste traditional risk models and regimes of the banking sector 4. There is need to position financing regimes to better align and accelerate action on global goals and to better account for the risk in not taking action on climate risk. Reparation should also be aligned to discussion and need to develop sustainable and resilient food systems.*⁸⁴⁸

*Formal collaborative mechanisms that improve analytic capabilities, risk management and mitigation across the supply chain and food systems will make a difference.*⁸⁴⁹

⁸⁴¹ 429:215 p 15 in 470_June_17_21_Burian_Multi

⁸⁴² 32:36 p 6 in 071_Mar_11_21_ESCWA_FAO

⁸⁴³ 32:38 p 6 in 071_Mar_11_21_ESCWA_FAO

⁸⁴⁴ 32:53 p 7 in 071_Mar_11_21_ESCWA_FAO

⁸⁴⁵ 37:59 p 9 in 095_Mar_27_21_Chinapoo C_Multi

⁸⁴⁶ 38:47 p 10 in 096_Mar_29_21_ESCWA

⁸⁴⁷ 46:27 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

⁸⁴⁸ 52:3 p 6 in 087_Mar_20_21_Chinapoo C_Multi

⁸⁴⁹ 52:16 p 9 in 087_Mar_20_21_Chinapoo C_Multi

*Challenge: De-risking farmer livelihoods.*⁸⁵⁰

*...reduce risks for those most marginalized within the system.*⁸⁵¹

*One or more large-scale regional risk reduction facilities (e.g. risk capital pools plus technical assistance) to mobilize regional commercial capital, including long-term, patient investors' capital, for regional (local currency) investments for agri-SMEs (particular focus on Africa).*⁸⁵²

*A strong political signal/leadership is needed to draw attention to opportunities in the middle of the value chain that can help to link changing consumer demand with the need for market-based incentives for farmers to take on risk and adopt new practices, inputs, food products, and processes. The environment farmers work in is full of risk and high borrowing rates compound the risks to farmers, and lenders in any case are unwilling to take on risk and prefer highly liquid or marketable collateral. There are various sources of risk in the natural as well as institutional environments and these need to be addressed. Technology can play an important role by providing specialized instruments that redistribute risk or directly cover against important specific sources of risk.*⁸⁵³

*To get private sector engaged Government can and needs to play the role of catalyst and specifically focused on risk reduction, not just investment risk but also government stability within and across regions as the agriculture sector is highly fragmented, with diverse and context specific production, financial and investment costs.*⁸⁵⁴

*We need to appreciate the various sources of risk in the natural as well as institutional environments and address these as well. Similarly, shocks to the market from both domestic and international sources can result in price volatility. This directly affects the economic returns from agriculture, the livelihood of farmers, and in the long run, the capacity of farmers to invest and innovate.*⁸⁵⁵

*Creating networks to link SMEs to investors, including pathways for NGOs to support for-profit solutions, mitigate risk and develop effective proof of concepts.*⁸⁵⁶

*Similarly, Congress should improve finance opportunities and risk management, especially for farmers of color. This could include debt relief, grants, training, education, and other forms of assistance to secure land tenure. This could build resilience through education and training to support farm stability and diversification of food production and consumption through sustainably healthy diets. Improved minority access to credit could be measured by a quantifiable increase in the number of farmers of color in the U.S. These actions need to recognize budgetary challenges.*⁸⁵⁷

⁸⁵⁰ 56:33 p 8 in 002_Nov_19_20_CGIAR

⁸⁵¹ 58:9 p 6 in 006_Dec_16_20_UNDESA

⁸⁵² 60:7 p 5 in 011_Jan_11_21_SAFIN

⁸⁵³ 61:13 p 5 in 020_Jan_26_21_IFAN

⁸⁵⁴ 61:22 p 6 in 020_Jan_26_21_IFAN

⁸⁵⁵ 61:42 p 4 in 020_Jan_26_21_IFAN

⁸⁵⁶ 65:15 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

⁸⁵⁷ 88:23 p 10 in 162_Apr_16_21_Fountain G

The pandemic and its after-effects underscore the need for a cultural shift in which both private and public sectors recognize the importance of food safety systems for future risk avoidance in our new normal world.⁸⁵⁸

Support agrobiodiversity to reduce risk and maintain genetic diversity at field level; income diversified livelihoods through off-farm activities, agrotourism, heritage-based artisanal products, and non-agricultural products at the farm level; recognition of and payment for ecosystems services at landscape level.⁸⁵⁹

Risk is high in a competitive world: There is fear of unknown actors misinterpreting or misusing data. Trust is a necessary foundation with the public, with the system, and between parties.⁸⁶⁰

Research on higher welfare and performance is needed, in addition to risk assessments along the food chain.⁸⁶¹

Also, there is a need to harmonize the risk approval process at national, regional and even global levels in order to speed up dissemination of information and not reinvent the regulatory approval wheel each time. Different regulatory bodies must build a level of trust with each other.⁸⁶²

Plan strategies for better disaster resilience and risk management, provide crop insurance and other financial instruments.⁸⁶³

There is already an overwhelming narrative about the health risks of reusing excreta for agriculture, and it's the dominant argument used by those who oppose the idea. To encourage and improve the uptake of this very practice it needs to be framed in a more positive light rather than constantly discussing the health risks. There are known risks which need to be mitigated against, but industrial agriculture comes with its own health and environmental risks too. There was a feeling that the risks of excreta shouldn't be blown out of proportion, and should be compared against the risk of continuing with "business as usual" and to degrade our soil resources and wider environment from industrial farming practices.⁸⁶⁴

Risk management, risk transfer, social protection, and focus on resilience building factors are important.⁸⁶⁵

⁸⁵⁸ 96:12 p 7 in 228_May_18_21_Kovnat K

⁸⁵⁹ 100:26 p 9 in 282_May_18_21_Romeo R

⁸⁶⁰ 106:20 p 1 in 051a_Feb_24_21_Google

⁸⁶¹ 114:68 p 12 in 074_May_18_21_O'Mara_Teagasc

⁸⁶² 115:36 p 10 in 075_Mar_10_21_IFAN

⁸⁶³ 124:39 p 8 in 135_June_08_21_Calub_Gregorio

⁸⁶⁴ 126:27 p 10 in 142_May_11_21_Carter L_Dennis S

⁸⁶⁵ 141:17 p 9 in 214_May_05_21_50by40

Concern with growing protectionism was noted, as was modernization of the World Trade Organizations and global food safety standards to provide predictability and mitigate risk (from external shocks and stresses).⁸⁶⁶

Informed risk taking needs to be encouraged. For example farmers or contractors may have to invest in new/different equipment. This requires support for this type of investment, in addition to research.⁸⁶⁷

The dialogue proposed for a system of risk and insurance sharing which might mitigate the consequences of adverse outcomes or might even allow traders to pursue higher returns but more risky activities. In the absence of formal institutions, proposing that social capital might play this role.⁸⁶⁸

There is a need to establish a system of risk and insurance sharing to mitigate the consequences of adverse outcomes and to allow traders to pursue higher returns. Insurance companies should provide comprehensive and affordable insurance packages to farmers.⁸⁶⁹

Outcomes identified within the discussion of practical steps to help strengthen the resilience of smallholders include increased training and risk management for small producers.⁸⁷⁰

Promote community and ecosystem-based disaster risk management and climate change mitigation and adaptation.⁸⁷¹

The whole food chain needs to take responsibility for the risks. At the moment only the farmers hold the risk.⁸⁷²

The focus of this new facility will include: (i) leveraging private sector participation for enhanced ecosystem services; (ii) linking investments to agricultural insurance products to help farmers manage risks; and (iii) using the platform to help minimize food losses and food waste.⁸⁷³

Managing risk and security at all levels – individual, community, government, and systems.⁸⁷⁴

⁸⁶⁶ 156:33 p 7 in 263_May_06_21_CCGA

⁸⁶⁷ 173:73 p 14 in 328_May_19_21_Lalor_Teagasc

⁸⁶⁸ 185:10 p 7 in 340_May_27_21_Mamba_L

⁸⁶⁹ 185:33 p 9 in 340_May_27_21_Mamba_L

⁸⁷⁰ 187:35 p 8 in 342_May_28_21_Peralta T

⁸⁷¹ 199:40 p 7 in 354_June_07_21_NAMAC

⁸⁷² 205:1 p 6 in 361_May_19_21_Cadogan_Hincks

⁸⁷³ 269:21 p 6 in 502_June_28_21_Zhang_Basher

⁸⁷⁴ 271:33 p 10 in 504_June_30_21_Susumu_Leiva

However, the participants were of the opinion that these agricultural finance challenges can be resolved by providing low interest rate products for farmers, sensitising borrowers to be faithful to the banks, FOs promoting saving and Sacco schemes for their members.⁸⁷⁵

...putting in place agricultural insurance schemes and enacting favourable policies for financial accessibility by farmers among others.⁸⁷⁶

Also, there is need to make risk assessment tools and methodologies for farmers to adopt to help them better manage their finance.⁸⁷⁷

...the team identified several valuable tools to help farmers become more aware and correctly assess risks and opportunities.⁸⁷⁸

Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.⁸⁷⁹

Under the uncertainties of climate in dryland regions, we should incorporate crop insurance. Only 6% of the cropped area in India is insured. Farmer friendly crop insurance products may be offered by the Government and private insurance companies to cover the risk of crop in dryland regions.⁸⁸⁰

Increased international scrutiny of ‘clean and green’ credentials in commodity markets must be a priority focus for Australia, alongside the financial sector’s moves to increasingly assess nature-related risks as well as climate-related risks.⁸⁸¹

E. Investors and businesses often put a premium on risk management versus risk mitigation. Financial markets need to better value risk mitigation and reward pre-emptive efforts made to avoid and/or mitigate risk, rather than simply “managing” it once a crisis occurs.⁸⁸²

Sustainable financing

Sustainable financing regimes need to consider supporting and scaling circular economy projects...⁸⁸³

⁸⁷⁵ 273:18 p 11 in 506_June_29_21_EAFF

⁸⁷⁶ 273:20 p 11 in 506_June_29_21_EAFF

⁸⁷⁷ 273:21 p 11 in 506_June_29_21_EAFF

⁸⁷⁸ 276:39 p 9 in 509_June_30_21_FFA_Nestlé

⁸⁷⁹ 305:7 p 7 in 538_July_09_21_IDS_Multi

⁸⁸⁰ 324:24 p 15 in 558_July_16_21_RICH_ICRISAT

⁸⁸¹ 329:6 p 6 in 563_July_20_21_ClimateWorksAustralia

⁸⁸² 334:3 p 2 in 139a_May_27_21_WBCSD

⁸⁸³ 37:26 p 6 in 095_Mar_27_21_Chinapoo C_Multi

*Provide financing to private institutions on projects that adopt sustainable production systems and establish new consumption behaviors that take into account the requirements of sustainability and waste reduction.*⁸⁸⁴

*Linking grassroots organizations with donors or financial institutions that work in sustainable finance could be a solution.*⁸⁸⁵

*Long-term commitment to invest in a regions capacity to develop local ability to work with an evidence-based approach i.e., making the process sustainable.*⁸⁸⁶

*Sustainable streams of financing needs to be made available to support demonstratable high impact agroecological and other forms of climate smart and resilient agriculture to take programmes to scale in mitigation and adapting to climate change. Financing regimes must be flexible and agile to enable efficient access and effective utilization by small and medium enterprises, small holder farmers and community-oriented organizations. Financing regimes should include ongoing coaching, mentorship and advisory support to help de-risk projects and encourage strong partnerships in design, execution, monitoring and improvement of science based, data inclusive, high impact mitigation, adaptation and resilience projects.*⁸⁸⁷

*Another key theme was that food security equates to national security. Private sector must ensure that nutrient-dense, responsibly produced food is accessible, particularly in the most vulnerable communities. There was clear recognition that private sector efforts must go beyond food security and environmental sustainability, and support livelihoods and social equity... Ultimately, private sector must drive major shifts in mindsets, rules of operation and business models to create equitable, sustainable and healthy food systems. Given that the private sector is often at the forefront of change to keep a competitive edge, participants saw an opportunity to better harness this angle. Through activities such as certification or sustainable investment, there is opportunity to motivate and mobilize further transformation.*⁸⁸⁸

*Sustainable financing regimes need to consider supporting and scaling circular economy projects. There should be increased investment and support in the design, development and sustaining of national and regional quality infrastructure and architecture that embeds the circular economy into the regional food system, biodiversity and ecosystem management framework. Greater investment is needed to support taking the circular economy projects to scale.*⁸⁸⁹

Several participants stated that the whole financial system is taking responsibility in a positive shift. But they think the trend of standard and opportunity assets is coming to all industries, including food. The finance industry can be a key leader in driving transformations to restore the oceans and co-collaborate to be a strong voice together. If

⁸⁸⁴ 38:31 p 8 in 096_Mar_29_21_ESCWA

⁸⁸⁵ 29:25 p 6 in 044_Feb_18_21_Bharat K S

⁸⁸⁶ 281:24 p 9 in 514_July_01_21_Bolling_Multi

⁸⁸⁷ 37:43 p 7 in 095_Mar_27_21_Chinapoo C_Multi

⁸⁸⁸ 87:6 p 6 in 160_20_Apr_21_GSI

⁸⁸⁹ 37:47 p 7 in 095_Mar_27_21_Chinapoo C_Multi

the financial sector signals that it wants changes, the private sector can move forward at a rapid pace...Participants agreed that there are more and more investors looking at how to integrate environmental, social and corporate governance (ESG) across their sector. To really drive systemic change in the food and agriculture sector, more research is needed alongside a bigger regulatory push globally like the EU Taxonomy initiative. Participants encouraged quality regulation to support best practices from the private sector and reflect trade-offs that are required. Regulatory frameworks are important to keep sustainable finance at the helm of change, and the EU Taxonomy initiative is a clear example of this.⁸⁹⁰

The speakers also highlighted some of the elements needed to enable food systems transformation. These include the need to: foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion; mobilize resources to implement actions at scale, through sustainable investments (public, private, blended) and other instruments such as public incentives (subsidies, taxes); harness the potential of innovation and technology, making them accessible to farmers/fishers/foresters; identify trade-offs between actions/sectors and strategies to minimize them; foster behavioural change across food systems actors through education and awareness building.⁸⁹¹

Water markets may incentivize lower water use amongst users and distinguish between water prices for irrigation use versus household use. Employing incentive mechanisms embedded in water markets can encourage sustainable investor and consumer behavior leading to reallocation of water sources across different sectors (e.g., agriculture, manufacturing, and public water supply). Also, strengthening regulations to reduce wasteful water use and to boost water-saving technologies.⁸⁹²

Crowd funding Innovative sustainable financing.⁸⁹³

Incentivize farmers. Who: Businesses, government agencies, and schools? Assess: Data and evidence, evaluating trade-offs. Challenge: Scaling solutions. Outcome: USD 320 billion annually from public and private finance is unlocked to create business opportunities for sustainable finance.⁸⁹⁴

Tax exemption for foreign investments and capital investments on Education for SMEs on policies and how to deal with government bureaucracies. There is a need to build good credible investment pipelines: establishing and funding of independent platforms with the required industry-specific know-how, finance, legal, investment, and policy-specific expertise along the entire value chain of investing in the nutritional food asset class to identify, structure, and match attractive sustainable and scalable investment opportunities with potential investors. There is also a need for: • Bundling finance with inputs, knowledge, marketing partnerships • Better

⁸⁹⁰ 87:11 p 10 in 160_Apr_21_GSI

⁸⁹¹ 247:16 p 8 in 480_June_21_CiHEAM_Multi

⁸⁹² 135:18 p 8 in 193_Apr_19_21_Ringler_Kassim

⁸⁹³ 54:22 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

⁸⁹⁴ 56:30 p 7 in 002_Nov_19_20_CGIAR

*define the benefits across all outcomes of investments in nutrition-sensitive agriculture – also environment, social, etc.*⁸⁹⁵

*Their impact can be maximized by being targeted about the way in which these tools are deployed (e.g. to crowd-in private sector financing, not crowd it out), by intervening in the segments of the economy where they have the greatest comparative advantage (e.g. in de-risking private capital, in serving bankable clientele, etc.), and by ensuring their own robust governance... There is significant scope for PDBs to mobilize additional finance to invest in agriculture and food economies, to channel it in ways that incentivize sustainable practices, and to invest in and promote innovations that accelerate sustainable practices and help more efficiently reach 'last mile' rural clients. There is a particular opportunity to better mobilize private finance.*⁸⁹⁶

*...through issuance of green bonds, but also concessional finance (e.g., climate finance), and to channel it to fund and incentivize sustainable practices across food systems... Lastly, support (both financial and skills-based) for farmers to implement sustainable development goals was a crucial part of the solution.*⁸⁹⁷

*Sustainable funding sources for dynamic policy development.*⁸⁹⁸

*Sustainable streams of financing need to be made available to support demonstratable high impact agroecological and other forms of climate smart and resilient agriculture to take programmes to scale in mitigation and adapting to climate change. Financing regimes must be flexible and agile to enable efficient access and effective utilization by small and medium enterprises, small holder farmers and community-oriented organizations. Financing regimes should include ongoing coaching, mentorship and advisory support to help de-risk projects and encourage strong partnerships in design, execution, monitoring and improvement of science based, data inclusive, high impact mitigation, adaptation and resilience projects.*⁸⁹⁹

Women and finance

*Investing in smallholder producers to empower them and create opportunities for them to access to benefits and incentives. Frequently, the results of economic policies or subsidies in the food sector do not reach small holder farmers, who are often in need of dependable streams of finance/investment as well as technical support. Women and youth should be a major priority for such investments given their critical role in food systems globally.*⁹⁰⁰

⁸⁹⁵ 65:8 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

⁸⁹⁶ 117:3 p 6 in 085_Mar_17_21_IFAD_FSFS

⁸⁹⁷ 159:17 p 6 in 275_May_13_21_Dornom H

⁸⁹⁸ 265:28 p 6 in 498_June_24_21_Danquah E

⁸⁹⁹ 37:43 p 7 in 095_Mar_27_21_Chinapoo C_Multi

⁹⁰⁰ 330:6 p 6 in 564_July_20_21_Bakarr_MI

*Facilitate access to agricultural lands for young women • Promote and support women and youth participation in value chains by providing capital and financing mechanisms to invest in agriculture, as well as creating job opportunities and developing needed skills such as negotiation and project management.*⁹⁰¹

*Close(r) interaction between financial institutions and women clients • Training and capacity building in financial and investment literacy for women • Ensuring that women know what data to collect and how to present it to financial institutions, and that financial institutions have a good understanding of women's constraints and possibilities in relation to data collection and tracking.*⁹⁰²

*The Dialogue called for concerted efforts by the Government and other stakeholders to catalyze agro-zones, reactivate localized investments and upgrade smallholder farmers (especially women, youth, the disabled) to become investable through adequate training and support, advisory services and access to research opportunities.*⁹⁰³

*Participants reflected on the proposal and validated in particular the idea of establishing a sizeable pool of highly patient capital, while recommending considering non-grant options. They further recommended giving adequate attention to strengthening the capacity of recipient financial intermediaries (funds, banks, non-bank financial institutions) to invest in start-ups and in women-led businesses. For the technical assistance component of the facility (which also targets financial intermediaries and investors), participants recommended including training modules that intermediaries can then use to facilitate capacity building for women entrepreneurs, including in some areas – like financial literacy – where some types of financial intermediaries may be well placed to contribute.*⁹⁰⁴

*The proposed global matching fund for investments by agri-SMEs can be more relevant to or focused on women entrepreneurs' needs if it provides not only for grants or soft loans but also for in-kind finance (especially via equipment) and technically assistance around its use... The proposed rolling out of digital solutions among rural financial intermediaries and FSPs can be made more relevant to women by also including revolving funds and local savings and credit associations among the types of institutions that can benefit from automation and/or use of digital data and systems.*⁹⁰⁵

*Provision by governments of credit and guarantee funds to support the development of small agricultural enterprises among women and young people, combined to capacity building would create favorable conditions for agricultural development.*⁹⁰⁶

Increase efforts in breaking down the barriers that discourage women into agriculture. Barriers such as access to farm inputs, credit, market know-how, and land ownership –

⁹⁰¹ 38:51 p 10 in 096_Mar_29_21_ESCWA

⁹⁰² 44:16 p 9 in 178_Apr_8_21_AGRA_Multi

⁹⁰³ 35:25 p 10 in 084_Mar_17_21_UnyimeAbasi B

⁹⁰⁴ 44:11 p 8 in 178_Apr_8_21_AGRA_Multi

⁹⁰⁵ 44:27 p 10 in 178_Apr_8_21_AGRA_Multi

⁹⁰⁶ 305:22 p 9 in 538_July_09_21_IDS_Multi

*must be entirely eliminated, and create better and incentivizing farming conditions for the Filipinas.*⁹⁰⁷

*Implement financial assistance program that can further narrow the gender disparity in agriculture...Facilitate access to agricultural lands for young women • Promote and support women and youth participation in value chains by providing capital and financing mechanisms to invest in agriculture, as well as creating job opportunities and developing needed skills such as negotiation and project management.*⁹⁰⁸

*In order for Kosovo's food system to be more inclusive, sustainable and healthy, further efforts are needed to 1) create the right mix of incentives for businesses and producers to shift their behaviours and patterns, 2) review the institutional, legislative and regulatory framework to better integrate environmental protection and climate concepts 3) reduce risks (access, affordability, income) for those most marginalized within the system, and 4) support income-earning opportunities across food value chains. Additionally, there must be special attention paid to enhancing gender equality in Kosovo's food system, including the need to provide more opportunities for women in agricultural value chains, such as access to land, jobs, finance and decision-making.*⁹⁰⁹

*Participants reflected on the proposal and validated in particular the idea of establishing a sizeable pool of highly patient capital, while recommending considering non-grant options. They further recommended giving adequate attention to strengthening the capacity of recipient financial intermediaries (funds, banks, non-bank financial institutions) to invest in start-ups and in women-led businesses. For the technical assistance component of the facility (which also targets financial intermediaries and investors), participants recommended including training modules that intermediaries can then use to facilitate capacity building for women entrepreneurs, including in some areas – like financial literacy – where some types of financial intermediaries may be well placed to contribute.*⁹¹⁰

*Invest in skills to increase financial literacy in small/family farms (particularly among women).*⁹¹¹

Participants also pointed to the importance of recognizing the extractive nature of many food supply chains. A more restorative system would invest in women and the BIPOC communities that are on the front lines of many of the issues that sustainable food businesses are striving to solve. Participants agreed that we must bring in the people and communities that are closest in proximity to these issues. Moving forward, different voices including historically forgotten and underrepresented communities need to be in

⁹⁰⁷ 9:4 p 6 in 171_Mar_31_21_Atilano C

⁹⁰⁸ 38:51 p 10 in 096_Mar_29_21_ESCWA

¹⁴⁰:24 p 8 in 212_May_04_21_Akinbamiyo Y

⁹⁰⁹ 313:10 p 6 in 546_July_13_21_INDEP

⁹¹⁰ 44:11 p 8 in 178_Apr_8_21_AGRA_Multi

⁹¹¹ 313:15 p 7 in 546_July_13_21_INDEP

conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.⁹¹²

Investing in smallholder producers to empower them and create opportunities for them to access to benefits and incentives. Frequently, the results of economic policies or subsidies in the food sector do not reach small holder farmers, who are often in need of dependable streams of finance/investment as well as technical support. Women and youth should be a major priority for such investments given their critical role in food systems globally.⁹¹³

In order for Kosovo's food system to be more inclusive, sustainable and healthy, further efforts are needed to 1) create the right mix of incentives for businesses and producers to shift their behaviours and patterns, 2) review the institutional, legislative and regulatory framework to better integrate environmental protection and climate concepts 3) reduce risks (access, affordability, income) for those most marginalized within the system, and 4) support income-earning opportunities across food value chains. Additionally, there must be special attention paid to enhancing gender equality in Kosovo's food system, including the need to provide more opportunities for women in agricultural value chains, such as access to land, jobs, finance and decision-making.⁹¹⁴

Define "incentivize", does this refer to financing? The prime rate is an incentive. Consider the participation of other sectors. Take into account vulnerable women groups, they have little access to these incentives and financing possibilities. Observe existing incentive programs and strengthen women's participation in them. The credit conditions of the banks do not allow the participation of small-scale producers. Government intervention should be considered to facilitate access to these programs by small-scale producers.⁹¹⁵

Access to financial mechanisms and other necessary resources was particularly limited for women and youth, as well as those living in remote, less developed communities.⁹¹⁶

Development of locally food-based businesses owned by indigenous women to reduce migration. The innovation is social and consists in development projects, researchers, private sector and others working together with indigenous women to create financially viable local businesses that at the same time value and recognize the women's knowledge and expertise of particular herbs and other food...Not dependent on external funding or donations but rather financially self-sustainable via selling of tea products, consultancies and capacity development.⁹¹⁷

Subsidize healthy FF production (prioritizing youth and women).⁹¹⁸

⁹¹² 319:25 p 9 in 553_July_15_21_Food Tank_Oatly

⁹¹³ 330:6 p 6 in 564_July_20_21_Bakarr_MI

⁹¹⁴ 313:10 p 6 in 546_July_13_21_INDEP

⁹¹⁵ 353:6 p 6 in 424a_June_28_21_PROLIDER_Eng

⁹¹⁶ 316:16 p 7 in 549_July_14_21_Meah N

⁹¹⁷ 320:18 p 10 in 554_July_15_21_Lopez DE

⁹¹⁸ 343:3 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

*It was broadly agreed that the key factors that impede women agripreneurs' access to finance and capital are lack of collateral, high interest rates and poor collaboration between stakeholders, therefore developing gender responsive financial and business support services coupled with diverse financial schemes, interest free loans and grant to small enterprises, incentives to financial institutions to accept alternative forms of collateral.*⁹¹⁹

*There is also a need to increase access to sustainable finance to support scaling indigenous approaches and practices.*⁹²⁰

*Introduce clear measures so that women have better access to financing, technology, information, and training.*⁹²¹

*Ensure equitable access for women to credit and insurance.*⁹²²

*Increase efforts in breaking down the barriers that discourage women into agriculture. Barriers such as access to farm inputs, credit, market know-how, and land ownership – must be entirely eliminated, and create better and incentivizing farming conditions for the Filipinas.*⁹²³

*Participants noted a profound lack of understanding on the part of some investors and regulators about the challenges of operating a farm. One example cited was of an investor wanting a 100-year lease on land to fund some research. Some of the regulations on investment from large-scale credit needs to be revised. These illustrate the importance of farmers having a place at the table for discussions of the politics and finance of agriculture.*⁹²⁴

*Extend loan repayment periods for young farmers who may not own land.*⁹²⁵

*Managing the root causes of vulnerabilities and investing in stopping conflicts and wars based on human rights are primordial. Humanitarian aid needs to be focused and promote local food systems and that governments are required to make sure that the aid received considers national priorities that protect the most vulnerable people.*⁹²⁶

*It was strongly recommended creating access to finance and insurance for smallholder farmers, SMEs and agricultural value chain clusters/cooperatives (e.g. Nigerian Stock Exchange growth board) as a means to spur rural transformation and investment in food systems.*⁹²⁷

⁹¹⁹ 258:4 p 6 in 491_June_23_21_Dido_Otieno

⁹²⁰ 37:69 p 10 in 095_Mar_27_21_Chinapoo C_Multi

⁹²¹ 3:12 p 9 in 099_Mar_31_21_FAO_IFPRI

⁹²² 3:14 p 10 in 099_Mar_31_21_FAO_IFPRI

⁹²³ 9:4 p 6 in 171_Mar_31_21_Atilano C

⁹²⁴ 8:27 p 10 in 169_Apr_6_21_Shea E

⁹²⁵ 16:13 p 8 in 251_Jan_25_21_World Vegetable Center

⁹²⁶ 32:46 p 7 in 071_Mar_11_21_ESCWA_FAO

⁹²⁷ 35:28 p 11 in 084_Mar_17_21_UnyimeAbasi B

*Focus on vulnerable groups, especially small farmers through providing support and financing and introducing modern technologies that increase productivity and production and improve their income.*⁹²⁸

*Facilitate access to agricultural lands for young women • Promote and support women and youth participation in value chains by providing capital and financing mechanisms to invest in agriculture, as well as creating job opportunities and developing needed skills such as negotiation and project management.*⁹²⁹

*For proposals that have financing components, ensuring close integration between access to finance, training and/or mentoring, and adequate focus on the provision of seed capital - For those components, consider also encouraging financial institutions to pay successful women entrepreneurs to support in assessing women's loan requests and in mentoring - Integrating support to the formation of women entrepreneurs' groups into the "match-making" function of the proposed SME platform.*⁹³⁰

*a hub of information and knowledge resources that helps financiers understand women's entrepreneurship and the business of agriculture.*⁹³¹

*Several panelists noted that skill development, including digital skills related to drones and satellite data, as well as access to finance, are important enablers for transforming farmers into competitive entrepreneurs. This would ensure better economic empowerment of women and attract more younger workers.*⁹³²

*Ensure inclusion of women and youth specifically by addressing the problem of capacity building, especially for youth and start-up companies and ensure that the voices of the youth are heard. This also includes the access to financing for women, improve their ability to start business and capacity to prepare a business plan etc; need for education for women; access to technology for women in rural areas; legislation to ensure that women can access the finance...*⁹³³

*Government should make deliberate efforts to incentivize women and youth to participate in the food system. This can be done in various way: - Legal frameworks should have a special focus on women and youth smallholder farmers for example in Malawi this can mean enforcement of the Cooperative Act to ensure the effective engagement of women and youth - Government should set up institutions to govern the marketing of agricultural products - Ensure the financial inclusion of women and youth.*⁹³⁴

*Financing: Investment from both the public and private sector is required to ensure gender programs and initiatives are implemented at scale to reach more women.*⁹³⁵

⁹²⁸ 38:46 p 10 in 096_Mar_29_21_ESCWA

⁹²⁹ 38:51 p 10 in 096_Mar_29_21_ESCWA

⁹³⁰ 44:10 p 7 in 178_Apr_8_21_AGRA_Multi

⁹³¹ 44:23 p 9 in 178_Apr_8_21_AGRA_Multi

⁹³² 58:21 p 8 in 006_Dec_16_20_UNDESA

⁹³³ 61:16 p 5 in 020_Jan_26_21_IFAN

⁹³⁴ 70:17 p 7 in 057_Feb_26_21_YES

⁹³⁵ 122:6 p 5 in 127_May_13_21_IJAFN_CWFS

*These should range from assigning loans quotas for women, providing financial education to both recipients and providers of financial services providers, as well as providing the tools and infrastructure to make financial services accessible to women.*⁹³⁶

*Mainstream women participation in financial institutions and facilitate women's access to the finance by communicating gaps and opportunities.*⁹³⁷

*Thus, to ensure the success of such a project on a larger scale, an expansion in credit facilities for women and other minority groups and implementation of policies that promote the adoption of innovative technologies among the marginalized groups are needed.*⁹³⁸

*Defining vulnerable groups, including women, through vulnerability assessments and offering financial support and access to investment as well as information.*⁹³⁹

*Empowering women through access to finance and markets while accelerating job creation for women through skills enhancement and increase in women's access to social services through infrastructural development.*⁹⁴⁰

*Take all possible measures to guarantee equal land ownership between women and men - Make policy decisions enabling women, men, youth, indigenous peoples, local communities and other groups with formal or customary ownership of land to access bank loans, credit, seeds, markets, technical assistance, social welfare and other relevant government services.*⁹⁴¹

*Make policy decision for both land-owners and women and youth farmers to have access to bank loans, credit, seeds, markets, technical assistance, social welfare and other relevant government services.*⁹⁴²

*It was broadly agreed that the key factors that impede women agripreneurs' access to finance and capital are lack of collateral, high interest rates and poor collaboration between stakeholders, therefore developing gender responsive financial and business support services coupled with diverse financial schemes, interest free loans and grant to small enterprises, incentives to financial institutions to accept alternative forms of collateral. Finally, it was concluded that there is need to support innovation and research addressing gender and business success.*⁹⁴³

Participants broadly agreed that the key factors that impede women agripreneurs' access to finance and capital are lack of collateral, high interest rates and poor collaboration between stakeholders. They suggested developing diverse financial schemes for different agricultural products like different schemes for seasonal crops,

⁹³⁶ 122:21 p 7 in 127_May_13_21_JAFN_CWFS

⁹³⁷ 122:55 p 19 in 127_May_13_21_JAFN_CWFS

⁹³⁸ 129:62 p 16 in 159_Apr_21_21_Hafeez M

⁹³⁹ 135:37 p 10 in 193_Apr_19_21_Ringler_Kassim

⁹⁴⁰ 140:24 p 8 in 212_May_04_21_Akinbamijo Y

⁹⁴¹ 155:19 p 6 in 262_May_04_21_ILC_Multi

⁹⁴² 155:29 p 7 in 262_May_04_21_ILC_Multi

⁹⁴³ 258:4 p 6 in 491_June_23_21_Dido_Otieno

annual, and perennial crops, providing interest free loans and grants to micro and small enterprises.⁹⁴⁴

However, the members suggested that this can be remedied by proper policies that make access to land, credit facilities and training opportunities possible for women and youth, making it possible for smallholder farmers to have access to agricultural land through favourable concessions, and reducing or eliminating prohibitive cultural practices that discriminate against women and youth regarding land matters.⁹⁴⁵

Making food systems more inclusive means that all actors—even vulnerable and underserved sectors—have equitable income earning potential. Social safety nets and incentives that allow access to financing, capacity building, and appropriate varieties, technologies and other resources are necessary to ensure that women and youth are able to meaningfully participate in the food system. Organizing and mobilizing constituencies play a key role in providing access.⁹⁴⁶

The proposed de-risking facility is more likely to be relevant to women entrepreneurs if it supports financial institutions both to design more products with women in mind and to communicate about them in ways that are clearly intelligible for women without formal finance or business training.⁹⁴⁷

Government should make deliberate efforts to incentivize women and youth to participate in the food system. This can be done in various way: - Legal frameworks should have a special focus on women and youth smallholder farmers for example in Malawi this can mean enforcement of the Cooperative Act to ensure the effective engagement of women and youth - Government should set up institutions to govern the marketing of agricultural products - Ensure the financial inclusion of women and youth.⁹⁴⁸

Guiding Theme 17. Align and Integrate Coalitions and Solutions

Complement work of others

To enhance resilience, there is also need of policy reforms and harmonization, coordinated investment, leverage resources to support ongoing efforts, improve governance, use of traditional and scientific knowledge to trigger innovation, generate sufficient data for evidence based recommendations and actions, and need to empower women and youth.⁹⁴⁹

⁹⁴⁴ 258:9 p 7 in 491_June_23_21_Dido_Otieno

⁹⁴⁵ 278:14 p 11 in 511_June_30_21_EastAfricaFF

⁹⁴⁶ 316:9 p 6 in 549_July_14_21_Meah N

⁹⁴⁷ 44:26 p 10 in 178_Apr_8_21_AGRA_Multi

⁹⁴⁸ 70:17 p 7 in 057_Feb_26_21_YES

⁹⁴⁹ 357:41 p 7 in 401_June_10_21_Ekwamu_A

*Create harmonization that can enable ease of movement of goods and services across regions.*⁹⁵⁰

*The transfer of knowledge “from grandmothers” should be improved and adapted to the current social context.*⁹⁵¹

*As a last point, the importance of joint efforts was highlighted. First, reference was made to the positive impact that the sharing of different experiences in the region would have.*⁹⁵²

*Disseminate and make examples visible of associative businesses that have succeeded in consolidating, promote development with a focus on success factors to foster learning and trust in the potential of coops.*⁹⁵³

*Create more mechanisms for exchange (products and skills) among community members.*⁹⁵⁴

*Create more mechanisms for exchange (products and capabilities) among community members.*⁹⁵⁵

*Support the formation of an environment for creative, proactive and innovative development of young scientists, postgraduates and students; 47. Develop academic mobility of teachers and students of agricultural institutions, including holding summer schools, internships, guest lectures, etc.; 48. Support the participation of scientists in international symposia, conferences, and workshops; 49. Enhance the liaison of universities with potential employers, farmers, international organizations and projects; 50. Introduce specialties at universities, related to the training of experts in the field of food safety, adaptation to climate change in agriculture, etc...*⁹⁵⁶

*Support the establishment of contemporary training laboratories with innovative technologies and capabilities for modeling and analysis of potentially adverse scenarios resulted from climate change, degradation processes, emergencies and other phenomena and their impact and consequences on agro-business; 52. Provide comprehensive support to farmers in terms of capacity building, support of agricultural production, and consulting.*⁹⁵⁷

*Encourage linkage with academia, universities and local educational centers, fostering connections with the environment and local contributions, promote the training of professionals and create awareness that contributes to the world of coops and associations, as well as their visibility.*⁹⁵⁸

⁹⁵⁰ 358:28 p 7 in 402_June_10_21_Ekwamu_EI Dukheri

⁹⁵¹ 507:2 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

⁹⁵² 516:3 ¶ 285 in 098a_June_10_21_Caballeros C_Eng

⁹⁵³ 525:13 p 10 in 122a_July_13_21_RIMISP_Eng

⁹⁵⁴ 526:1 p 6 in 124a_July_18_21_FEA Hatillo_Eng

⁹⁵⁵ 526:9 p 7 in 124a_July_18_21_FEA Hatillo_Eng

⁹⁵⁶ 519:26 p 7 in 106a_June_18_21_Nurgaziev R_Eng

⁹⁵⁷ 519:27 p 8 in 106a_June_18_21_Nurgaziev R_Eng

⁹⁵⁸ 525:8 p 10 in 122a_July_13_21_RIMISP_Eng

*Involve the educational sector to promote cooperative values, trust and collective action in search of the common good from education.*⁹⁵⁹

*Regional cooperation and national transformation are the cross-cutting actions that can make communities and collections of stakeholders work together with national governments and local authorities to transform food systems and achieve the SDGs.*⁹⁶⁰

*...promoting family farming a viable livelihood within the UN Decade of Family farming; pioneering actions to enhance consumers experience of food access and safety; reimagining global agriculture and increasing sustainability through value chains; coordinating to ensure and champion environmental sustainability at the food systems summit and beyond; improving rural development and food systems, with operational focus on climate change.*⁹⁶¹

*Simulated modelling for implementing research informed climate smart agricultural techniques, new technologies for data collection and increased crop production are instrumental to feed the growing population with the same amount of arable land. Public research agencies should adopt these new technologies but need political will and commitment. Regional cooperation is needed for technology transfers.*⁹⁶²

*Transforming food systems is a challenge but comes with opportunities and success stories. It is important that there is a joint effort towards better cooperation and coordination at the global level.*⁹⁶³

*Have a global coordination and accountability mechanism to tackle this issue (similar to tobacco) including an article about industry interference for food policy (as it is the case of the FCTC).*⁹⁶⁴

*Empowerment of local communities are needed to build resilience from the ground up and multi-stakeholder cooperation needed to ensure the resilience of a food system.*⁹⁶⁵

*Scaling up transformative solutions related to sustainable food production, distribution and consumption, will demand coordinated action from the public and private sectors throughout the food systems.*⁹⁶⁶

*They agreed that gender mainstreaming needs to be a part of discussions about sustainability. All highlighted the need for international cooperation on food systems sustainability.*⁹⁶⁷

⁹⁵⁹ 525:12 p 10 in 122a_July_13_21_RIMISP_Eng

⁹⁶⁰ 359:9 p 6 in 403_June_10_21_ESCAP_Multi

⁹⁶¹ 359:18 p 6 in 403_June_10_21_ESCAP_Multi

⁹⁶² 359:32 p 8 in 403_June_10_21_ESCAP_Multi

⁹⁶³ 361:13 p 6 in 405_June_10_21_NCD Alliance

⁹⁶⁴ 361:68 p 10 in 405_June_10_21_NCD Alliance

⁹⁶⁵ 385:6 p 6 in 428_July_14_21_Sadira C

⁹⁶⁶ 389:79 p 7 in 431_June_22_21_CEBOS_EMBRAPA

⁹⁶⁷ 410:21 p 8 in 451_Apr_06_21_IFAD_Multi

*Overall, it was agreed that there is a need for greater coordination among stakeholders (such as Department of Agricultural Marketing, Local Government Engineering Department, Ministry of Food, Ministry of Disaster Management) to work alongside the city corporation, to ensure food safety, nutrition, and equitable access to nutritious food, especially for the urban poor and marginalised communities.*⁹⁶⁸

*Coordinated efforts and solutions are needed to find solutions that are tailored to address African problems.*⁹⁶⁹

*Within a systems approach, communication was considered important both internally and externally. Internal communication entails coordinating activities within the approach, collaborating with multiple stakeholders.*⁹⁷⁰

*Under the coordination of local governments, it is crucial to establish a joint construction mechanism involving schools, parents, farmers, cooperatives, companies, and social organizations. From the perspective of ensuring the quality of school meals for their children, parents should be important supervisors and beneficiaries at the same time.*⁹⁷¹

*Close coordination of different govt. agencies at Upazila level like central or district level.*⁹⁷²

*There is a simultaneous need in urban communities for healthy food and often an abundance of it for farmers at harvest, so what is necessary is to bring these folks together.*⁹⁷³

*Organize intersectoral coordination, so that policies are more permanent.*⁹⁷⁴

*We urge the FAO, IFAD, WFP and other relevant Organizations based in Rome to organize an annual meeting with Indigenous Peoples from all seven socio-cultural regions in order to have a systematic dialogue with Rome based agencies to ensure coordination and coherence on the UN Declaration on the Rights of Indigenous Peoples in relation to our food systems.*⁹⁷⁵

*Skills in interdisciplinary work and transdisciplinary (working with all stakeholders), graduates should be able to have meaningful conversations with all.*⁹⁷⁶

⁹⁶⁸ 418:10 p 6 in 459_June_01_21_Rashid Md J

⁹⁶⁹ 425:15 p 6 in 466_June_17_21_Ekwamu A

⁹⁷⁰ 426:48 p 12 in 467_June_17_21_NWGN_Multi

⁹⁷¹ 444:24 p 10 in 027_Feb_02_21_CBCGDF_UNFSS

⁹⁷² 450:49 p 11 in 391_May_31_21_FAO_Multi

⁹⁷³ 464:22 p 11 in 185_Apr_14_21_Local Farm_Multi

⁹⁷⁴ 474:42 p 16 in 246_June_09_21_Boza_Kanter

⁹⁷⁵ 500:32 p 8 in 396_June_01_21_Arttjeff_Multi

⁹⁷⁶ 1:41 p 12 in 072_Mar_09_21_Sibanda L

*There is immense opportunity for collaboration locally, regionally and internationally to advance understanding, strategize, build capacity and harness opportunities.*⁹⁷⁷

*The 'Agtech' industry was identified as an entirely separate but complimentary industry to agrifood. The discussion 'Hunting Unicorns in a Burgeoning Australian Agtech Industry' explored how the production challenges of the future (e.g. feeding a global population of 10 billion people by 2050) would need to be met by technology. Therefore, agtech investment and adoption needed to be rapidly scaled up to meet these global challenges.*⁹⁷⁸

*Good communication is the cornerstone of effective collaborative relationships, we might not have the same motivations or objectives to participate, but we need to ensure we openly communicate the various perspectives coming into a project so that we can ensure everyone's expectations are acknowledged. The Australian Government highly values industry-research collaboration and has launched a range of initiatives including CRCs, AIA and drought innovation funding to foster and promote industry-research collaboration.*⁹⁷⁹

*Implement initiatives that fosters partnerships, brings together stakeholders from all sectors, and puts women at the center. Increase efforts in breaking down the barriers that discourage women into agriculture. Barriers such as access to farm inputs, credit, market know-how, and land ownership...*⁹⁸⁰

*Collaborate with different agencies – national, local, municipal, NGOs and the private sector. Successful projects cannot be implemented without collaborative effort.*⁹⁸¹

*There is strong necessity to develop cooperation between national and regional research and academic institutions in the field of climate change.*⁹⁸²

*Develop joint research programs on intensive technologies, the creation of drought-resistant crops, agricultural diversification, rotational water use and other innovative approaches for the rational use of water and land resources; It is necessary to create a unified database platform (DB) and develop an information system.*⁹⁸³

*Thinking and working together All the groups had ideas that require the co-operation of various elements of the food and farming systems. Perhaps the call for a National Food Strategy sums this up best. Within the agri-food system, it is felt that agricultural policy stops at the farm gate and farmers are not encouraged to think beyond it: a greater level of co-operation is needed.*⁹⁸⁴

⁹⁷⁷ 1:47 p 8 in 072_Mar_09_21_Sibanda L

⁹⁷⁸ 2:19 p 6 in 081_Mar_15_21_CRC

⁹⁷⁹ 2:20 p 8 in 081_Mar_15_21_CRC

⁹⁸⁰ 9:26 p 6 in 171_Mar_31_21_Atilano C

⁹⁸¹ 9:28 p 8 in 171_Mar_31_21_Atilano C

⁹⁸² 17:40 p 8 in 164_Apr_15_21_Anarbekov_Akramov

⁹⁸³ 17:45 p 8 in 164_Apr_15_21_Anarbekov_Akramov

⁹⁸⁴ 20:32 p 10 in 116_Apr_21_21_Hein JR

The approach needs to be multidisciplinary and multisectoral involving private sector, civil society academia, state solid waste management authorities, the Basel Convention Regional Centre for the Caribbean (BCRCC), Caribbean Farmers Associations, FAO, Inter-America Institute for Cooperation on Agriculture (IICA), and other entities affected by the impacts of e waste on their sectors UWI; International- International partnerships with amongst others ISO Committees, UN Organizations, WTO, United Nations University Step Initiative, UN GEF From a sustainability perspective, small islands should consider moving away from a linear to a circular economy that will limit waste generation as well as reliance on the supply of virgin materials from outside.⁹⁸⁵

Academia and Ministries of food production need to work closer together to provide additional research and technical assistance in the communities and in putting research and development into action.⁹⁸⁶

Call for all stakeholders to work together for implementing game changers. They all share the responsibility to shift food systems and change the rules of the game to achieve sustainable food security and nutrition for all.⁹⁸⁷

It finally stressed the necessity of taking actions in a collective and holistic manner and not only individually.⁹⁸⁸

Additionally, especially the link and partnership between science, the public- and the private sector should be prioritized, as well as the link between producers and consumers.⁹⁸⁹

Academia and food producers must collaborate to reflect the realities at different scales for better policy and impactful finance.⁹⁹⁰

A need for cross-departmental cooperation has also been identified as important in creating holistic and meaningful policies.⁹⁹¹

The Dialogue was a starting point from which to gather proposals for strengthening the Mérida food system. But it also made evident the importance of creating community and the need to identify, acknowledge, and take advantage of the knowledge and contributions of all food-system shareholders. Dialogue participants expressed their interest in continuing to support and carry out dialogues continually. They also recognized the importance of developing collaboration mechanisms or platforms that involve the various food-system shareholders and different levels of government.⁹⁹²

⁹⁸⁵ 35:11 p 8 in 095_Mar_27_21_Chinapoo C_Multi

⁹⁸⁶ 35:12 p 9 in 095_Mar_27_21_Chinapoo C_Multi

⁹⁸⁷ 36:1 p 6 in 096_Mar_29_21_ESCWA

⁹⁸⁸ 39:6 p 9 in 175_Mar_16_21_Donati L

⁹⁸⁹ 53:7 p 8 in 001_Nov_5_20_CGIAR

⁹⁹⁰ 59:9 p 5 in 020_Jan_26_21_IFAN

⁹⁹¹ 65:4 p 6 in 050_Feb_23_21_World Vision Ireland

⁹⁹² 75:49 p 44 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

A great emphasis was put on the wholesale markets ability to ensure resilient, sustainable, healthy and affordable food system in Latin America, articulate private and public sectors and accompany involved actors in sharing experience and knowledge.⁹⁹³

We cannot unlock the full potential of our food system without collaboration. The food system is highly fragmented one where solutions are provided in silos. Collaboration is imperative in order for us to end the cycle where the same solutions are constantly provided. Cross-sector solutions should become the norm where government, ICT, financiers, universities, entrepreneurs, etc. are working together at solving systematic issues.⁹⁹⁴

Participants shared that the private and public sectors must collaborate and design science-based messages based on best practices and existing technologies, which will feed into transparency.⁹⁹⁵

The importance of collaboration: Collaboration was identified as key to achieving environmental outcomes. Collaboration includes between industries, between academia and producers, different stakeholders and across supply-chains.⁹⁹⁶

Need to create platforms to develop collaborations and important bridges between scientists, producers and consumers.⁹⁹⁷

Multilevel governance and coordination across departments, civil society actors, private sector actors, researchers. Importantly partner with researchers, innovators and Implement innovation informed by research.⁹⁹⁸

Other outcomes included the need for institutional coordination, specifically reconciling donor interests with nation state and regional/local institutional interests.⁹⁹⁹

Water, energy, and food security is necessarily cross-cutting, and requires an integrated, systems approach to navigate through trade-offs and competing industries that exist, and to leverage positive interlinkages and ways to make the WEF nexus more functional. Still, this may not be sufficient to overcome supra-institutional issues, such as budget allocations, which are typically allocated by departmental needs and priorities, and not shared strategic visions. This can slow effective cooperation.¹⁰⁰⁰

Lots of overlapping and competing policies and strategies, lack of balance on the different policies What does it mean to make Southern Africa climate resilient?¹⁰⁰¹

⁹⁹³ 76:29 p 7 in 103_Apr_8_21_Carrara E_Multi

⁹⁹⁴ 83:7 p 6 in 152_Apr_29_21_Kubheka M

⁹⁹⁵ 85:22 p 8 in 160_20_Apr_21_GSI

⁹⁹⁶ 90:25 p 6 in 206_Apr_27_21_CCANCC

⁹⁹⁷ 100:14 p 6 in 324_May_14_21_Guzanic J

⁹⁹⁸ 101:39 p 9 in 325_May_19_21_ICLEI Africa_Multi

⁹⁹⁹ 117:84 p 7 in 109_Apr_13_21_Jacobs-Mata I

¹⁰⁰⁰ 117:87 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁰⁰¹ 117:95 p 17 in 109_Apr_13_21_Jacobs-Mata I

Lack of coordination at regional level that need proper communication channels Lack of donor funding or financing-driving to more relevant actions that will promote funding Lack of political will and interest at national and regional level Competing and Mismatch of policies that can be addressed through synergies.

Partnerships and collaborations between companies and trusted local NGOs should be stimulated to work on programs related to the theme of adolescent nutrition and nutrition for the first 1000 days, while acknowledging the sensitivities around the topic related to marketing of infant food.¹⁰⁰²

Multi-stakeholder networking platforms should be established to facilitate the sharing of experiences and knowledge. Other actors (e.g., private sector/business) should be included as an opportunity for mentorship and promoting shared experiences/ career knowledge.¹⁰⁰³

ACTION POINT: Establish a global, national and regional network of public health institutions committed to developing guidance on the use of “produce prescription” as a non-pharmacological and community-based intervention that is universally available to communities at risk for NCDs.¹⁰⁰⁴

It is important that research and industry work together in partnership with regulators to collaborate and address these issues. This needs to be supported by appropriate funding required for a sustainable future -is this funding coming from the consumer or cross sector funding primarily supported by waste and agriculture sectors?¹⁰⁰⁵

The discussants suggested that the focus in the coming years should be on tying research organizations together to reach across silos in research as well as government organizations. For example, IFPRI and IWMI collaboration in partnership with local/national partners can help to foster the collaboration of departments of agriculture and irrigation. The discussants raised this point because WEF is a nexus approach, whereas most organizations in Pakistan are working in silos that are often built around individual disciplines. International research institutions can organize dialogues across all stakeholders, arrange awareness campaigns on WEF models, and organize training sessions to showcase the importance of working in an integrated way.¹⁰⁰⁶

Investment in Agriculture Sector: Pakistan’s investment in the agriculture sector is the lowest in this region. R&D can focus on energy efficient crop varieties and the use of renewable energy. Institutions working in silos is one major barrier in addressing above mentioned challenges effectively through research. For research to bear fruits practically institutions need to effectively cooperate and collaborate.¹⁰⁰⁷

¹⁰⁰² 120:65 p 12 in 127_May_13_21_IAFN_CWFS

¹⁰⁰³ 120:67 p 14 in 127_May_13_21_IAFN_CWFS

¹⁰⁰⁴ 121:56 p 8 in 130_May_22_21_Foronda R_Gloria C

¹⁰⁰⁵ 124:33 p 8 in 142_May_11_21_Carter L_Dennis S

¹⁰⁰⁶ 127:93 p 14 in 159_Apr_21_21_Hafeez M

¹⁰⁰⁷ 127:97 p 17 in 159_Apr_21_21_Hafeez M

Networks and Connections: It's critical to connect the dots: Intergovernmental processes need to be better connected, such as COP and FSS Building bridges between stakeholders/ different actors working in silos, i.e. food systems on the environment etc.; networks cross-cutting expertise/actors; national dialogues or committees; Enhancing coordination across sectors at the national level For sub-national governments to be fully included in advancing solution sets that emerge from the Summit, a bridge must be built into the formal National FS Dialogues and the commitments being made at national levels.¹⁰⁰⁸

There is a disconnect among different key players in the food system, such as among HEI researchers and extension agents to the actual needs of farmers. These gaps need to be addressed by involving all the key players in the food system (i.e., consider farmers as partners and key players, not beneficiaries; bring together the problem and provide solutions to fill the gap between farmers and educators).¹⁰⁰⁹

People can resist new technology and so we must strengthen social science in order to help farmers and people on the ground better understand the benefits of digital technology.¹⁰¹⁰

Working together and breaking barriers in making policies.¹⁰¹¹

Private and public sector should work together/collaborate.¹⁰¹²

Partnership: Game-changing Solutions for transforming Food Systems Actions urgently needed: Increase coordination efforts – necessary to partner and scale up the action Avoid duplication of work: let others know what each organization is good at, and let other actors do their part.¹⁰¹³

Networking: The need to establish relationships between a variety of stakeholders; including scientists, researchers, and economists together with farmers, civil society, government agencies, corporates, academia. These groups play a significant role in establishing circular food systems, evaluating trade-offs and measuring results.¹⁰¹⁴

Engagement of multiple stakeholders. Not limiting it to producer-actors but manufacturers, retailers, market traders, informal traders, media outlets, food certification agencies, among others. Effective stakeholder consultation, collaboration and raising awareness.¹⁰¹⁵

Work collaboratively with African universities and other actors in and outside Africa to marshal the needed response to strengthen Africa's food systems and for scaling out best practices. There is need to bridge the disconnect between academia and government and

¹⁰⁰⁸ 138:37 p 7 in 214_May_05_21_50by40

¹⁰⁰⁹ 157:4 p 6 in 278_May_18_21_Gregorio B

¹⁰¹⁰ 157:7 p 12 in 278_May_18_21_Gregorio B

¹⁰¹¹ 157:9 p 12 in 278_May_18_21_Gregorio B

¹⁰¹² 158:7 p 8 in 279_May_18_21_Yoovatana M_Multi

¹⁰¹³ 163:18 p 15 in 300_May_27_21_Alesso_Pommeret

¹⁰¹⁴ 183:3 p 7 in 341_May_28_21_Sewraj_KS

¹⁰¹⁵ 201:25 p 7 in 360_May_18_21_ICLEI Africa_Multi

*between technocrats and politicians who allocate resources to support food systems enhancement.*¹⁰¹⁶

*There is a lack of coordination between key parties across the global food system around food safety...*¹⁰¹⁷

*How the gap between science, academia and the consumer is best bridged and how the sciences is made understandable...*¹⁰¹⁸

*The UNDRF proposes a set of coherent, inter-connected policies and actions to address the environmental, economic and social dimensions of rural development and provide a bridge between emergency relief, recovery, and development contexts while placing family farmers at the center.*¹⁰¹⁹

*Complementing the work of our partners in the regional member countries, ICIMOD had a discussion with key resource persons on possible discussion ideas for the dialogue.*¹⁰²⁰

*Researchers should be aware of which key areas are policy priorities, the types of evidence policymakers need and how these should be presented, while policymakers should be aware of the research process, the appropriate timeframes and success indicators, and how these can feed into the development of realistic outcomes that policy changes can help address.*¹⁰²¹

*Multi-stakeholder engagement was underscored throughout the discussion: as a top-down approach with government-industry-academe partnerships;*¹⁰²²

*Science-policy co-creation sessions: Workshops and dialogues between policymakers and scientists...*¹⁰²³

*Advocating for policies, subsidies, regulation etc that recognise the connections between health, nutrition, food and the environment.*¹⁰²⁴

*Bringing different actors together (private sector, NGOs, UN, governments, higher education and research (ideally in co-ordinated N-S-S partnerships). Building a platform of agencies that work on FSR. Mainstreaming approaches and sharing of best practices (preventing that the wheel is reinvented).*¹⁰²⁵

¹⁰¹⁶ 206:22 p 7 in 365_May_27_21_Ekwamu A

¹⁰¹⁷ 207:21 p 7 in 366_May_27_21_Cumbers S

¹⁰¹⁸ 207:25 p 13 in 366_May_27_21_Cumbers S

¹⁰¹⁹ 214:14 p 6 in 374_June_03_21_DG INTPA

¹⁰²⁰ 219:32 p 3 in 380_June_08_21_Shakya_Chettri

¹⁰²¹ 254:34 p 9 in 490_June_22_21_Yasmi Y

¹⁰²² 254:36 p 10 in 490_June_22_21_Yasmi Y

¹⁰²³ 256:45 p 8 in 492_June_23_21_Liu JA

¹⁰²⁴ 259:29 p 9 in 495_June_23_21_Forum for the Future

¹⁰²⁵ 278:6 p 11 in 514_July_01_21_Bolling_Multi

Even within the same government it can be difficult to create coherence. For instance foreign policy and military strategy of one donor government may not be aligned with humanitarian, development, peace interventions implemented by its aid arm.¹⁰²⁶

As long as this coherence is not addressed in case of conflicts the hard security approach undermines development efforts

The onus on agriculture sector, finance sector and government to collaborate in exploring partnerships towards promoting such agricultural methods was underscored.¹⁰²⁷

We need to strengthen the integration between climate, biodiversity, food, and socioeconomic components.¹⁰²⁸

To support interdisciplinary research in tackling food systems challenges, we need to support the building of a resilient research & innovation community of early career researchers, including more opportunities for staff mobility between institutes and disciplines, and training for systems thinking & approaches.¹⁰²⁹

The proposed solutions are interdisciplinary and complementary, and urgent and directed action along these lines, achieved through clear roles and responsibilities and partnerships, could change the trajectory of our food system.¹⁰³⁰

Identify synergies among data used for monitoring and evaluation in different components of the food system.¹⁰³¹

Strengthen ties between academia and industry: establish a food center in academia in cooperation with the industry, to advance students' education and applied economic development in the field, with the aim of promoting responsible production and consumption, and providing nutritional security and optimal health.¹⁰³²

Broad professional cooperation and dialog between industry, academia, health services, retailers, government ministries, and the regulator for the advancement of public health. Industry is a partner to the solution.¹⁰³³

Strengthening ties between academia and industry to build a plan to promote communication and explanation of the importance of food processing and food processing technologies for a sustainable food environment. Harmonization with European standards with regard to pesticides and food supplements (exists) as well as

¹⁰²⁶ 278:9 p 14 in 514_July_01_21_Bolling_Multi

¹⁰²⁷ 281:1 p 8 in 517_July_03_21_Perera A

¹⁰²⁸ 283:3 p 8 in 519_July_05_21_FABLE_Multi

¹⁰²⁹ 285:2 p 7 in 521_July_05_21_BBSRC-UKRI

¹⁰³⁰ 290:3 p 7 in 526_July_06_21_VWWF-Brazil

¹⁰³¹ 296:1 p 6 in 532_July_07_21_ACFST_Multi

¹⁰³² 297:1 p 7 in 533_July_07_21_Gazit GS

¹⁰³³ 297:3 p 8 in 533_July_07_21_Gazit GS

*attribution of healing properties to various food products. In the aim of promoting public health.*¹⁰³⁴

*Greater coordination between governments and civil society responses should be established to ensure that policies better reflect differentiated needs, and those most impacted can access relief and recovery programs.*¹⁰³⁵

*Enhancing coordination among food chain actors. In inner areas, property is fragmented and soils unproductive; actor-to-actor coordination along the food chain helps achieve scale and upgrading to higher-value activities. The cases showed that, alongside traditional cooperatives, new contracts forms can respond to diverse needs (like the “network contract”). However, farmers lack the knowledge and experience to design and select the most appropriate coordination form.*¹⁰³⁶

Partnerships, networks, and alliances

*To overcome all these challenges we need to work as a team with other stakeholders such as the public sector, consumers, academia and civil society as a whole.*¹⁰³⁷

*Promote public-private partnerships to encourage women's access to land and financing.*¹⁰³⁸

*Strengthen public-private partnerships, particularly in industrial agriculture, and promote value chains.*¹⁰³⁹

*Participants in the dialogue expressed the view of an urgent need for a broad-based partnership between the major stakeholders and players across the entire agricultural and food system and innovation systems. This collaboration needs to provide strategic platform that fosters continental and global collective actions including networking to strengthen the innovation to impact pathways of Africa’s agricultural research and food systems.*¹⁰⁴⁰

*Strategic Partnerships: Learn and collaborate with existing right-based across the globe. Fostering north-south and south-south cooperation that enables free technology transfer for agro-food development.*¹⁰⁴¹

As a next point, emphasis was placed on the need to research and focus on development in order to adapt new techniques to the reality of each country. In turn, great emphasis was placed on the importance of intersectoral support. It is important to have sectoral

¹⁰³⁴ 297:6 p 8 in 533_July_07_21_Gazit GS

¹⁰³⁵ 302:3 p 8 in 538_July_09_21_IDS_Multi

¹⁰³⁶ 306:2 p 6 in 542_July_12_21_Prota_L

¹⁰³⁷ 511:5 ¶ 219 in 083a_May_27_21_Leiva M_Eng

¹⁰³⁸ 520:12 p 8 in 107a_June_22_21_Trimarchi A_Eng

¹⁰³⁹ 520:22 p 9 in 107a_June_22_21_Trimarchi A_Eng

¹⁰⁴⁰ 505:5 p 7 in 062_Feb_16_21_FARA-CAADP

¹⁰⁴¹ 512:10 p 7 in 088_May_28_21_Divine NTF

*approaches where knowledge can be shared and to also be able to evaluate the economic benefits of reuse.*¹⁰⁴²

*1. Resilience is as much about the mindset as the actions: Consistently, each speaker had a clear sense of purpose, the drive to pursue their mission and belief in themselves. Leaders also need support and care in return.*¹⁰⁴³

*The countries shared many lessons and interesting experiences that deserve to be exchanged and propagated in the region. Thus, the organizing of farmers through an aggregation mechanism adopted in Morocco is an interesting way to solve the fragmentation issue and improve access to financing. Similarly, Tunisia has put in place a regulatory framework for the social and solidarity economy that provides incentives and adapted financing mechanisms to promote the emergence of solidarity-based enterprises. This in turn allows farmers to benefit from technical and marketing support, and better distribution of value. The involvement of public authorities in the development of agricultural areas and financing of campaigns in Mauritania also represents an interesting mechanism.*¹⁰⁴⁴

*Build national and international partnerships to fund rural women's projects.*¹⁰⁴⁵

*Grouping into cooperatives.*¹⁰⁴⁶

*For the purpose of comprehensive use of the agro-business potential in the international arena, including the contribution to enhancing the international food safety, it is essential to boost the coordinated efforts of all stakeholders, including national and international authorities, manufacturers, and consumers. It is vital to ensure effective alignment of interests with partners and promote them on all key multilateral international platforms, while countering the initiatives that have an adverse impact on international food safety, and fostering the exchange of technologies to improve the food safety.*¹⁰⁴⁷

*It is essential to develop international cooperation in the field of veterinary medicine and sanitation, promoting an effective balanced prompt response to transborder epizootics and plant diseases. It is advisable to promote formation of systemic mechanisms for the rapid recognition of regionalization and market access to maintain the stability and continuity of value chains in the agro-business. At the same time, it is necessary to develop cooperation in the field of standardization and correct reflection of the agro-business contribution to climate change, with the integrated participation and the right to vote of the national business in decision-making.*¹⁰⁴⁸

¹⁰⁴² 516:6 ¶ 328 in 098a_June_10_21_Caballeros C_Eng

¹⁰⁴³ 518:3 p 6 in 102_June_16_21_Namjildorj_Multi

¹⁰⁴⁴ 520:2 p 6 in 107a_June_22_21_Trimarchi A_Eng

¹⁰⁴⁵ 520:16 p 8 in 107a_June_22_21_Trimarchi A_Eng

¹⁰⁴⁶ 524:12 p 7 in 119a_July_08_21_Moussavou B_Eng

¹⁰⁴⁷ 507:2 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

¹⁰⁴⁸ 507:9 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

1. Sustainable food education is important to promote public understanding and practice of sustainable food behaviors.¹⁰⁴⁹

Strengthening the links between production units and farmer organizations would therefore improve the organization of these sectors and markets.¹⁰⁵⁰

Strengthen the process of articulation of initiatives between the State, NGOs, unions and other organizations. There are multiple efforts that do not mutually support each other, so the process of strengthening and articulation will allow to improve the incidence and to face possible sanitary-food emergency.¹⁰⁵¹

Decentralize the support to coops and associations and create spaces for their participation in decision-making, specifically in regional and community development plans.¹⁰⁵²

In its most limited definition, producer cooperatives and associations have the potential to improve the participation of small-scale producers in the food system by creating better marketing opportunities. The decrease in individual costs related to economies of scale, stability of production at the collective level and greater negotiating ability which derives from a greater business volume are just some elements to the credit of cooperatives, making their insertion into more dynamic markets possible and establishment of better marketing channels that generate a fairer remuneration for the producers. Beyond marketing, coops can improve access to new technologies and create resilience in the face of crises, such as the impact of the pandemic. In the case of consumer associations, these come about as tools that contribute to fewer intermediaries and give better access to members for food at affordable prices.¹⁰⁵³

B) Lack of information, cooperative culture and trust The lack of cooperative culture, especially in an environment in which competition and individualism are promoted, comes from not knowing about the functioning and potential of associativity across all sectors and among all stakeholders. This is reflected in: 1. General and historic distrust by citizens regarding associativity due to the fostering of individualism from education, the disconnection of traditional collective action initiatives and negative experiences around the establishment and subsequent break up of coops that haven't materialized the benefits initially hoped for due to the obstacle.¹⁰⁵⁴

As part of a systems approach, establishing public-private partnerships was described as a challenging aspect of a systems approach.¹⁰⁵⁵

¹⁰⁴⁹ 508:1 p 6 in 069_May_16_21_SFAN_Multi

¹⁰⁵⁰ 517:5 p 6 in 100a_June_10_21_Hainikoye IM_Eng

¹⁰⁵¹ 523:7 p 7 in 113a_July_06_21_Fernandez I_Eng

¹⁰⁵² 525:11 p 10 in 122a_July_13_21_RIMISP_Eng

¹⁰⁵³ 525:1 p 6 in 122a_July_13_21_RIMISP_Eng

¹⁰⁵⁴ 525:3 p 8 in 122a_July_13_21_RIMISP_Eng

¹⁰⁵⁵ 426:16 p 7 in 467_June_17_21_NWGN_Multi

*Market and infrastructure. Need for digitalization and ensuring women are aware of inclusion in digital market access Developing strategies for women to be able to access funds especially in the case that loans require physical collateral and have high interest rates which women are not able to pay back Need for partnerships that engage women in policy making on various food systems and agricultural activities Support women businesses and allow them to be part of the partnerships Bank customer segmentation to address the financial needs of women.*¹⁰⁵⁶

*Participants outlined how hard it is sometimes to partner with big companies because of branding and food manipulation guidelines. Companies don't want to be liable.*¹⁰⁵⁷

*Also the connection between companies and farmers is not well established.*¹⁰⁵⁸

*There is no real discussion and connection between the producers of food with the end consumer.*¹⁰⁵⁹

*Partnerships support for women in agriculture Improving partnership with financial institutions to enhance women access to funds Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women) Connect grass root women to multistakeholder platforms to share their experiences and challenges Link research organizations and various ministries with grass root women to create awareness on new technologies Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women Partnership with national and county government to implement policies that are gender mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.*¹⁰⁶⁰

*Establishing connections between agricultural scientists/researchers and smallholder farmers so they could share knowledge and data on how to deliver sustainable agricultural practices through optimal resource use with smallholder farmers through training and workshops.*¹⁰⁶¹

*The connections between research institutions and agribusinesses should be strengthened with a focus on Circular Economy opportunities, such as reducing the use of plastic in packaging.*¹⁰⁶²

*Development of enterprises that partner with universities in vocational training of graduates.*¹⁰⁶³

¹⁰⁵⁶ 433:12 p 7 in 474_June_18_21_Matu_Opiyo

¹⁰⁵⁷ 504:42 p 9 in 400_June_09_21_Viera_Pollmeier

¹⁰⁵⁸ 504:44 p 9 in 400_June_09_21_Viera_Pollmeier

¹⁰⁵⁹ 504:46 p 9 in 400_June_09_21_Viera_Pollmeier

¹⁰⁶⁰ 433:15 p 7 in 474_June_18_21_Matu_Opiyo

¹⁰⁶¹ 166:7 p 6 in 355_June_14_21_FAO

¹⁰⁶² 389:156 p 11 in 431_June_22_21_CEBOS_EMBRAPA

¹⁰⁶³ 414:29 p 6 in 455_May_14_21_Ekwamu_A

*A high dose of agricultural sciences is needed in the production systems because without science, Africa remains the science-deficient continent in the world.*¹⁰⁶⁴

*PARTNERSHIPS Promote partnerships: 1. Among members in the value chain to reduce the cost of food related to transportation, food waste, and pest reduction. A close network of communication from a coalition/connection between farmer, supplier, wholesaler, etc.*¹⁰⁶⁵

*PARTNERSHIPS 1. With organizations that work in the larger context of sustainable development, beyond the usual stakeholders who are involved in the food supply chain, for a more holistic approach for interventions, innovation, and solutions.*¹⁰⁶⁶

*Make sure that farming and nature come together. In Belgium, there are internships for policymakers and conservationists to spend time on farms; farmers, policymakers, and conservationists begin to align their understanding of the interrelationship between farming and nature.*¹⁰⁶⁷

*...create a coalition of local farmers, create a stall to offer their products and meet the farmers.*¹⁰⁶⁸

*Public-private partnerships should get implemented to create a pre-competitive level playing field. True price should be a key discussion topic in board rooms and by company stakeholders. Partnerships with governments or interest organisations could work to set ambitious, science-based targets and goals together. It shouldn't just be company goals, but joint goals that consider different stakeholders' views. It's not very original, but public-private partnerships are needed to create a pre-competitive level playing field.*¹⁰⁶⁹

*Partnership between the private and public sector is crucial to ensure development and access to innovation;*¹⁰⁷⁰

*Last but not least, the collaboration between the public institution and the private company is a very important process, which can speed up the diffusion of innovation. Such partnerships rely on regulatory systems that enable the public sector, private sector and farmers to meet their objectives.*¹⁰⁷¹

Business leadership toward the food systems' transformation was mentioned as a means to strengthen public-private partnerships linked to the adoption of technologies by producers and industries, the role of retailers in consumer education, and the potential of

¹⁰⁶⁴ 425:4 p 6 in 466_June_17_21_Ekwamu A

¹⁰⁶⁵ 429:71 p 15 in 470_June_17_21_Burian_Multi

¹⁰⁶⁶ 429:128 p 7 in 470_June_17_21_Burian_Multi

¹⁰⁶⁷ 429:284 p 20 in 470_June_17_21_Burian_Multi

¹⁰⁶⁸ 504:73 p 11 in 400_June_09_21_Viera_Pollmeier

¹⁰⁶⁹ 364:21 p 8 in 415_June_16_21_van Schoonhoven M

¹⁰⁷⁰ 369:22 p 6 in 413_June_15_21_WFO_ISF

¹⁰⁷¹ 369:37 p 9 in 413_June_15_21_WFO_ISF

*joint initiatives involving distinct stakeholders aimed at mitigating food loss and food waste, and increasing access to healthy foods.*¹⁰⁷²

*Uniting public and private sectors to delineate solutions to improve food access. The trade-off between developing value-added food products and improving the access of foods to low and lower-middle income consumers demands attention, and the focus should be on increasing the access to healthy foods since the per capita consumption of fruits and vegetables in Brazil is less than half of the amounts suggested by the World Health Organization. The legislative dimension was highlighted, and private and public sectors should discuss food donations bills and new legislation opportunities to strengthen, for instance, the role of food banks in food redistribution and/or the opportunities to foster new business models.*¹⁰⁷³

*Business leadership toward the food systems' transformation was mentioned as a means to strengthen public-private partnerships.*¹⁰⁷⁴

*Establishing of Public-Private Partnerships to use market mechanisms to respond to shocks and emergencies while through pre-arrangements reducing the volatility of food markets post-disaster, also combining the strengths of government and private sector logistics and infrastructure capacity for the public interest.*¹⁰⁷⁵

*Public-Private Partnership in rendering Agricultural services.*¹⁰⁷⁶

*Panelists believe there can be a mutually beneficial relationship between the public and private sector if collaboration is effective.*¹⁰⁷⁷

*To address the fragmentation and fractured landscape as there is a need to be more interconnected and need to create an ecosystem landscape. There is a need to understand how private and public come together particularly for the repurposing of public support and how those financial offerings come together and are mutually supportive of one another.*¹⁰⁷⁸

*The discussion presented connections between food systems, diet, the pandemic, and national security, among other concerns, indicating a need for a systems perspective when creating solutions. Panelists explained the need to incorporate gender and local culture in decision making and to seek opportunities for collaboration between the public and private sectors. Most importantly, all three panelists agreed that food is a human right and that it needs to be made affordable, accessible, and appropriate to local cultural and environmental context.*¹⁰⁷⁹

¹⁰⁷² 389:22 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹⁰⁷³ 389:24 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹⁰⁷⁴ 389:88 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹⁰⁷⁵ 392:18 p 10 in 434_June_02_21_Hanan_KA

¹⁰⁷⁶ 397:18 p 6 in 439_June_17_21_INAI

¹⁰⁷⁷ 411:19 p 6 in 452_Apr_27_21_IFAD_Multi

¹⁰⁷⁸ 411:26 p 7 in 452_Apr_27_21_IFAD_Multi

¹⁰⁷⁹ 423:10 p 5 in 464_June_10_21_IFAD_UNFSS_Multi

Serious private sector engagement is needed as well as advancing Public private sector relationships.¹⁰⁸⁰

It was stated that meaningful public-private partnership especially requires a common goal to be established. A steering committee was discussed to be beneficial as it involves people at different levels in a multidisciplinary manner.¹⁰⁸¹

Additionally, an important consideration mentioned was that local governments and institutions need to be strong to be able to drive a common agenda and create adequate public-private partnerships.¹⁰⁸²

With the private sector, to bring innovation, digital technology, finance, and insurance products to farmers, especially smallholder farmers.¹⁰⁸³

Recognize that seed banks can be a spot where there are uncomfortable partnerships. Can we work with farmers to get those local varieties into the public-private partnership collaborations that are creating new varieties? Lean on the companies, governments, and organizations to share scientific knowledge.¹⁰⁸⁴

It is critical that the international community invests in building public-private-partnerships (governments, civil society, and private sector) to foster policy-engagement and mobilize the marginalized voices. The private sector presented with the right set of incentives can create an interface between informal and formal economies.¹⁰⁸⁵

Recommendation 2: build public-private-partnerships to foster policy-engagement and mobilize the marginalized voices Who: policy makers, civil society, private sector How: include civil society and private sector in order to widen policy-engagement on particular inefficiencies. This will make food systems more inclusive and relevant.¹⁰⁸⁶

Second, we must steer public investment towards smallholder farmers and agriculture, and foster public-private partnerships to pull in private sector investment with a focus on evidence-based approaches.¹⁰⁸⁷

Solutions to these problems were also discussed. These included fostering public-private partnerships in innovation, reducing food loss and waste, as well as building the production capacity of smallholder farmers – not by introducing high technological advancement, but rather by catering technologies to specific site problems (for example, by packaging technologies for specific agroecological natural systems).¹⁰⁸⁸

¹⁰⁸⁰ 425:29 p 7 in 466_June_17_21_Ekwamu_A

¹⁰⁸¹ 426:41 p 10 in 467_June_17_21_NWGN_Multi

¹⁰⁸² 426:42 p 10 in 467_June_17_21_NWGN_Multi

¹⁰⁸³ 429:130 p 7 in 470_June_17_21_Burian_Multi

¹⁰⁸⁴ 429:235 p 16 in 470_June_17_21_Burian_Multi

¹⁰⁸⁵ 457:52 p 8 in 120_Apr_27_21_Mauderil_U

¹⁰⁸⁶ 457:110 p 22 in 120_Apr_27_21_Mauderil_U

¹⁰⁸⁷ 463:36 p 7 in 155_Apr_27_21_FCDO_Multi

¹⁰⁸⁸ 463:69 p 13 in 155_Apr_27_21_FCDO_Multi

The organic sector acknowledges there is a need to grow and improve the public/private partnership that defines the U.S. organic system.¹⁰⁸⁹

Invite all sectors to think short and long term goals.¹⁰⁹⁰

The most effective programs adopt a multi-strategy, multi-sector approach that includes both securing and sustaining the supply of local healthy foods and access to safe drinking water.¹⁰⁹¹

It is important to promote a MULTI-SECTORAL APPROACH to the food system so all agencies can work together including governments, the private sector, civil society and academia. Some governments in the regions — adopted an approach which ensures inclusive value change development and cooperation between the government and private sector. The efforts also need to enable people engagement and empowerment. People, including smallholders, food business operators, and consumers, should be empowered to innovate, empowered to contribute to healthier diets, green solutions.¹⁰⁹²

Panelists argued that stakeholders must break down silos and promote greater collaboration, between all sectors on the local, state and federal levels.¹⁰⁹³

Partnership among various actors through multi-stakeholder platform for synergistic action.¹⁰⁹⁴

With and among various government agencies and ministries, including agriculture, environment, education, etc., to provide education, technical assistance and outreach, data collection, financial assistance, and financial investment to smallholder farmers in remote rural areas. Everyone in food systems can benefit from these partnerships including many other food system actors.¹⁰⁹⁵

Multi-sectoral policies and partnerships that bring key sectors together.¹⁰⁹⁶

Partnerships support for women in agriculture Improving partnership with financial institutions to enhance women access to funds Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women) Connect grass root women to multistakeholder platforms to share their experiences and challenges Link research organizations and various ministries with grass root women to create awareness on new technologies Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women Partnership with national and county government to implement policies that are gender

¹⁰⁸⁹ 468:70 p 14 in 219_May_10_21_OTA

¹⁰⁹⁰ 361:62 p 10 in 405_June_10_21_NCD Alliance

¹⁰⁹¹ 402:32 p 9 in 443_May_09_21_GIGH

¹⁰⁹² 403:19 p 7 in 444_May_25_21_FAO_UNICEF_Multi

¹⁰⁹³ 411:18 p 6 in 452_Apr_27_21_IFAD_Multi

¹⁰⁹⁴ 414:10 p 6 in 455_May_14_21_Ekwamu_A

¹⁰⁹⁵ 429:129 p 7 in 470_June_17_21_Burian_Multi

¹⁰⁹⁶ 430:40 p 11 in 471_June_08_21_van Liere M

*mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.*¹⁰⁹⁷

*...we recognized that the food systems are complex, thus, to tackle existing issues requires holistic approaches, cross-sectorial efforts, both when it comes to policy making and actions.*¹⁰⁹⁸

*Include multi-sectorial efforts (e.g. social, economic and environmental) to promote inclusiveness (e.g. the poor and marginalised, women and youth) and strengthen the circularity of agri-food systems.*¹⁰⁹⁹

*More discussions and exploration of all sectors of the food chain are needed to include more voices at the discussion table.*¹¹⁰⁰

*Thailand has adopted a One Health approach by supporting multi-sectoral, multi-disciplinary coalitions to manage zoonotic diseases and antimicrobial resistance in food production systems. Following the 2004 avian influenza, Thailand established the National Executive Committee on Preparedness, Prevention and Response to Emerging Infectious Diseases chaired by the Deputy Prime Minister. The secretariat is composed of relevant departments from the Ministries of Public Health, Interior, Agriculture, and the Department of National Park and Wildlife Conservation. The Office of the Food and Drug Administration established the Thailand National Strategy on AMR to regulate human food and animal feed and coordinate all concerned sectors including public health and all food animal health.*¹¹⁰¹

*Adopt multi-sectoral policies jointly created by the ministries of environment, agriculture, health, rural development, and other relevant areas to address human, animal and planetary health as one challenge.*¹¹⁰²

*...increase access to land and capital, connect younger farmers to the land, address their property issues making sure that land is deeded to someone, build strong partnerships with 1890 Land grant Institutions and community NGO organizations.*¹¹⁰³

*Create and strengthen partnerships in the food systems.*¹¹⁰⁴

*Promote linkages between producers, transporters and markets and increase participation of the youth to agriculture.*¹¹⁰⁵

¹⁰⁹⁷ 433:15 p 7 in 474_June_18_21_Matu_Opiyo

¹⁰⁹⁸ 485:17 p 6 in 288_May_20_21_GAN_Multi

¹⁰⁹⁹ 485:53 p 10 in 288_May_20_21_GAN_Multi

¹¹⁰⁰ 487:11 p 6 in 293_May_22_21_City of San Antonio

¹¹⁰¹ 501:48 p 10 in 397_June_04_21_WHO_Multi

¹¹⁰² 501:67 p 12 in 397_June_04_21_WHO_Multi

¹¹⁰³ 356:41 p 6 in 409_June_13_21_Mone S

¹¹⁰⁴ 357:19 p 6 in 401_June_10_21_Ekwamu_A

¹¹⁰⁵ 357:25 p 7 in 401_June_10_21_Ekwamu_A

Transformation is a shared responsibility that involves partnerships among all sectors of society and transparency is a prerequisite for the success of those partnerships.¹¹⁰⁶

Promote partnerships including reverse linkages across countries within financial institutions to promote engagement operations.¹¹⁰⁷

Mobilize new allies (those who are not the regular groups involved in diet-related NCD prevention): This could include recruiting more economists into public health and partner with anti-corruption organizations to address conflicts of interest.¹¹⁰⁸

Another solution is to work on public-private partnerships to create a pre-competitive level playing field. True price should be a key discussion topic in board rooms and by company stakeholders. Partnerships with governments or interest organisations could work to set ambitious, science-based targets and goals together. It shouldn't just be company goals, but joint goals that take into account different stakeholders' views.¹¹⁰⁹

A need to create a coalition for market owner and researchers in related fields.¹¹¹⁰

In the summary on the dialogue "GOOD! The Good of the Mediterranean diet and Italian agri-food towards the Food System Summit ", the centrality of Italian agri-food enterprises in the transformation of food systems was highlighted. It was presented briefly the sharing path with them that gave life to the jointly document " United in Food " in which are identified 10 commitments of the Italian agri-food sector: i) sustainable production processes; ii) diets and healthy lifestyles, based on the principles of MD; iii) good corporate citizenship; iv) sustainable supply chains; v) corporate strategies and policies and profitability; vi) technological, organizational and social innovation; vii) evaluation mechanisms; viii) training and updating; ix) networks and alliances; x) alignment with international objectives.¹¹¹¹

It is essential to work in networks and train communicators and public managers on food system issues, in addition to establishing validated indicators to measure the impacts of promoting healthy and sustainable diets.¹¹¹²

Investment, strengthening the linkages between potential investors, food producers, RD&I intensive organizations and startups should be prioritized. Agri-food entrepreneurs are seen as an important stakeholder since they have the ability to prospect investments, and they could work more closely with farmers and researchers.¹¹¹³

Bridge to corporations and build up trust in order to form alliances.¹¹¹⁴

¹¹⁰⁶ 358:17 p 6 in 402_June_10_21_Ekwamu_EI Dukheri

¹¹⁰⁷ 358:20 p 7 in 402_June_10_21_Ekwamu_EI Dukheri

¹¹⁰⁸ 361:63 p 10 in 405_June_10_21_NCD Alliance

¹¹⁰⁹ 364:16 p 6 in 415_June_16_21_van Schoonhoven M

¹¹¹⁰ 368:15 p 12 in 412_June_15_21_CBCGDF_Multi

¹¹¹¹ 386:28 p 8 in 429_July_05_21-CIHEAM Bari

¹¹¹² 389:66 p 11 in 431_June_22_21_CEBOS_EMBRAPA

¹¹¹³ 389:80 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹¹¹⁴ 393:34 p 10 in 435_June_08_21_FAO_ICC_UNFSS

*Increase market competition by working with NGOs or International organizations that promote public good. It will be a great strategy to highlight works done by SMEs while attracting potential customers.*¹¹¹⁵

*UNPFII has repeatedly called on States, UN agencies and funds to enhance participation of Indigenous youth, build capacity and advocacy skills of Indigenous Youth Recognize youth as equal partners in developing lasting partnerships at local, regional and international levels In consultations leading up to the UNFSS, Indigenous youth have shared how they'd like to see the maintenance of Traditional Knowledge related to food systems and environment. They are concerned with adverse effects of climate change, and loss of lands and traditional livelihoods.*¹¹¹⁶

*There is a movement toward connecting these programs and developing overarching food systems visions and goals across local government departments and with local stakeholders. To start creating holistic food systems improvements, leadership must come together with the community to develop an overarching vision, develop a structure, and connect programs and people.*¹¹¹⁷

*Community-led processes: Food systems outcomes are most successful when community led. Cities contribute to this success by facilitating community conversation, building networks and relationships, funding pilot projects, providing information, and codifying conclusions in plans and legislation.*¹¹¹⁸

*Multi-stakeholder partnerships support sustainability and food systems transformation. Many global organizations face difficulties that multinational private sector actors can help solve, including sharing best-in-class models, facilitating better governance, reducing waste at multiple areas of the food supply chain, ensuring adherence to hygiene and other health-related factors, and helping prevent negative externalities. There are asymmetric challenges that exist and many stakeholders feel like they are pulled in different ways. Especially with more controversial food systems actors, having a seat at the table (through investing or other financial commitments) is important to ensure that the conversation is open instead of behind closed doors.*¹¹¹⁹

*Creating strategic alliances and networks will be critical to bridge the gap between different actors and research bodies involved in food systems, and connecting producers to consumers. This is necessary for better integration of research and food systems transformation.*¹¹²⁰

*...building partnerships that are equitable and fair and transparent;*¹¹²¹

¹¹¹⁵ 393:39 p 10 in 435_June_08_21_FAO_ICC_UNFSS

¹¹¹⁶ 394:24 p 8 in 436_June_16_21_GIYC_Multi

¹¹¹⁷ 404:11 p 6 in 445_May_26_21_ICLEI_USA

¹¹¹⁸ 404:20 p 7 in 445_May_26_21_ICLEI_USA

¹¹¹⁹ 405:9 p 6 in 446_May_27_21_Lyons_Gould

¹¹²⁰ 407:16 p 6 in 448_Feb_25_21_IFAD_Multi

¹¹²¹ 415:24 p 6 in 456_May_17_21_Ekwamu_A

*The research-extension-farmer-nexus needs to be strengthened for high technology adoption; build and strengthen solidarity and collective actions through partnerships that mobilize research and innovation expertise; co-create technologies and innovations with farmers, to address farmer's challenges while providing local solutions; and, enhancing the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation and implementation.*¹¹²²

*There is need for collaboration, partnerships and reducing post-harvest losses.*¹¹²³

*The findings from the research in the Dutch context suggested that a steering committee should be setup to guide and govern a multistakeholder partnership...*¹¹²⁴

*...collaborations entail building networks and engaging with all stakeholders involved. Collaboration with civil society, academia, and private parties was especially highlighted for a systems approach.*¹¹²⁵

*Successful political leadership was described as one that invested in creating a wide partnership network with a range of stakeholders, such as academia, grassroots organizations and services.*¹¹²⁶

*Fostering the concept of 'food citizenship' requires creating networks across spheres of government, as well as civil society associations, indigenous communities, farmers, and relevant stakeholders.*¹¹²⁷

*Including more stakeholders in policy-making decisions through knowledge sharing and project partnerships with NGOs/CSOs/research institutions.*¹¹²⁸

*Between research institutions, farmers, and consumers to support the development, deployment and scaling of evidence-based scientific innovations.*¹¹²⁹

*Among youth to form support in farming to advance new technologies and better wages for farmers. Such a coalition will encourage people to stay in farming.*¹¹³⁰

*Create coalitions that share these practices among NGOs, extension services, etc., that provide services to farmers so information can be disseminated widely.*¹¹³¹

*Within regional and context-specific coalitions that include technology providers, farmers, NGOs and INGOs, and businesses.*¹¹³²

¹¹²² 425:6 p 6 in 466_June_17_21_Ekwamu A

¹¹²³ 425:25 p 6 in 466_June_17_21_Ekwamu A

¹¹²⁴ 426:6 p 6 in 467_June_17_21_NWGN_Multi

¹¹²⁵ 426:25 p 8 in 467_June_17_21_NWGN_Multi

¹¹²⁶ 426:32 p 9 in 467_June_17_21_NWGN_Multi

¹¹²⁷ 426:39 p 10 in 467_June_17_21_NWGN_Multi

¹¹²⁸ 428:45 p 7 in 469_June_17_21_de Silva R

¹¹²⁹ 429:16 p 7 in 470_June_17_21_Burian_Multi

¹¹³⁰ 429:72 p 15 in 470_June_17_21_Burian_Multi

¹¹³¹ 429:124 p 7 in 470_June_17_21_Burian_Multi

¹¹³² 429:134 p 7 in 470_June_17_21_Burian_Multi

*PARTNERSHIPS Foster partnerships with: 1. Organizations working in the broader context of sustainable development, beyond the usual stakeholders who are involved in the food supply chain. 2. Organizations that are addressing hunger and poverty. This is what food banks do, by adopting a holistic approach that includes technology, investment, new practices, and innovation, while trying to address human behaviors that cause food waste. 3. Private sector. This includes helping to create innovative insurance products to address the needs of smallholder farmers. 4. Government agencies, like the ministries of agriculture, environment, and social protection, who play an important role in providing technical assistance. Via partnerships with governments, there can be more effective outreach, financial support, and assistance to bring useful innovations to smallholder farmers in remote rural areas.*¹¹³³

*Foster partnerships: 1. Among players involved in the larger context of sustainable development, such as health and environment, for a more holistic approach for interventions, innovation, and solutions. 2. Between smaller, newer producers and those with more experience, as well as multi-generational farmers. 3. Between countries – both developing and developed. 4. With the financial sector, through blended finance mechanisms and tailored financial instruments. 5. Between retailers, public sector, farmers, and farmer associations. 6. Researchers and scientists who can disseminate information to farmers and consumers. 7. With animal agriculture alliances, USFRA, WFO, etc. and other rancher/farmer groups. 8. Tech experts who have monitoring methodologies, including those for carbon sequestration. 9. With schools, by providing locally grown sustainable food, especially in countries greatly relying on smallholder farmers.*¹¹³⁴

*PARTNERSHIPS Foster partnerships: 1. Between public and private actors to produce blended finance streams. 2. Between farmers and the private sector, including farmers who are often excluded because they don't fit as easily within company sustainability paradigms. 3. Between the private sector and development banks for systemic approaches to leverage funding and expertise, while gathering real-time insights. 4. With consumers, to engage them in finding solutions. For example, farmer earnings are not keeping pace with consumer prices. 5. Among private sector companies to advance solutions. 6. With telecom and mobile banking providers to return more market value back to producers. 7. With research and development to inform private sector investment.*¹¹³⁵

*Establish partnerships and coalitions including: 1. Regional and context-specific coalitions that include technology providers, farmers, and brands that sell products on the market (as livestock is very heterogeneous and very regional).*¹¹³⁶

Farmer organizations, public sector (especially inter-ministerial cooperation for a more comprehensive data collection for decision-making), agriculture, health, and education

¹¹³³ 429:146 p 9 in 470_June_17_21_Burian_Multi

¹¹³⁴ 429:158 p 10 in 470_June_17_21_Burian_Multi

¹¹³⁵ 429:186 p 12 in 470_June_17_21_Burian_Multi

¹¹³⁶ 429:262 p 18 in 470_June_17_21_Burian_Multi

areas of government, private sector (including farmers), and academia (especially interdisciplinary). 2. Consumers and farmers.¹¹³⁷

*Social norms - influence food allocation and access to assets.*¹¹³⁸

*Moving away from mono cropping and industrial agriculture into more of that. Revival level and regenerative when we see the power of co OPS, or people working together to eliminate food waste or coming into a piece of the supply chain. And filling a niche so that others can really play their part, well, instead of having all of this hyper competition in ways that's not really spreading best practices.*¹¹³⁹

*Under the coordination of local governments, it is crucial to establish a joint construction mechanism involving schools, parents, farmers, cooperatives, companies, and social organizations. From the perspective of ensuring the quality of school meals for their children, parents should be important supervisors and beneficiaries at the same time.*¹¹⁴⁰

*However, they also observed that this required different sectors to be working hand in hand to make sure that the insects are available in all seasons.*¹¹⁴¹

*They further realized that if an agriculture and food system is to meet different objectives by different stakeholders a lot of trade-offs have to be minimized. It would also require stakeholders working together to make decision together.*¹¹⁴²

*A multi-faceted approach is required to advance equitable livelihoods for North American Indigenous Peoples. We need to focus on creating opportunities for strong partnerships and alliances, such examples include in the carbon exchange and land/water/natural resource management. Existing programs and tools with organizations and governments can be improved with direct feedback from Indigenous Peoples/practitioners.*¹¹⁴³

*Stop ignoring us, instead build respectful, reciprocal collaborations and partnerships. - Understand our systems of management and see our Indigenous knowledge is the basis for many current practices, value our ways and technologies, respectfully employ them.*¹¹⁴⁴

Recommendation 3: research partnerships need to rethink the role of donors Who: governments in the North and international institutions How: dependence on funding from the North is problematic for a number of research partnerships. Rather than define research priorities, governments in the North and international institutions should act as

¹¹³⁷ 429:272 p 19 in 470_June_17_21_Burian_Multi

¹¹³⁸ 430:49 p 12 in 471_June_08_21_van Lier M

¹¹³⁹ 432:16 p 7 in 473_June_18_21_Sheridan S

¹¹⁴⁰ 444:24 p 10 in 027_Feb_02_21_CBCGDF_UNFSS

¹¹⁴¹ 448:20 p 6 in 388_May_03_21_Kambewa_D

¹¹⁴² 448:27 p 9 in 388_May_03_21_Kambewa_D

¹¹⁴³ 449:16 p 6 in 390_May_28_21_UNPFII_FAO

¹¹⁴⁴ 449:20 p 8 in 390_May_28_21_UNPFII_FAO

*facilitators accompanying local processes. Donors should increase support for agricultural research that takes into account the priorities of the Global South.*¹¹⁴⁵

*Strong social movements and networks between households at national and community level will allow equal opportunities for men and women. Recommendation 1: There is need to promote participatory approaches in design of technologies and to enhance access and openness Who: Farmers' organisations, governments, UN, civil society, private sector. How: By incorporating farmers in the design of technologies and promoting use of available toolboxes (sets of technologies and innovations) and platforms that integrate communications and empower the target groups to benefit economically. Creating partnerships with the governments; linking in with the private sector and academia. Measuring success: Availability of decentralized and localized technology toolkits of best practices for wider use, and adaptation.*¹¹⁴⁶

*Recommendation 4: Promote greater agro-ecological production in adequate quantities without polluting the environment, without degrading nature, incorporating local practices (a recommendation specific to Spanish-language dialogues) Who: Government, UN, Farmer organizations, civil society How: this can be achieved by incorporating local seeds in the value chain, focusing on territorialisation of agri-food systems, and recognising local capacities and territorial complementarities between primary producers and processing (such as conditions and facilities for post-harvest processing and storage). Additionally, this can be achieved through strategic alliances for the exchange of knowledge and technology, which allow for developments that are more nature-positive and build on local capacities.*¹¹⁴⁷

*Recommendation 4: the need for shorter supply chains requires global market regulations, as the current free trade systems favour big corporations. It also requires a shift towards higher demand for local products and investment in local market infrastructure to meet the demand. Who: national governments, municipal governments, private sector, large corporations and civil society. How: national governments need to develop public policies focused on small enterprises, with public funds and provide access to smart credit. Municipal governments could also form alliances with neighbourhood councils and territorial or indigenous farmers' organisations. The private sector should provide efficient digitally supported logistics systems, large corporations need to adopt a higher degree of global responsibility (this can be influenced by shareholders, investors, and customers).*¹¹⁴⁸

In particular, cooperation between countries and initiatives, even at different stages of development, is appropriate to share experiences and best practices, create synergies and develop joint promotion on GI products. This network of initiatives would contribute to sustainable food systems at the global level, and could enhance linkages between urban centers and GI territories, so to better promote local and global consumption of

¹¹⁴⁵ 457:121 p 25 in 120_Apr_27_21_Mauderli_U

¹¹⁴⁶ 458:56 p 12 in 123_May_04_21_Mauderli_U

¹¹⁴⁷ 458:59 p 12 in 123_May_04_21_Mauderli_U

¹¹⁴⁸ 458:63 p 14 in 123_May_04_21_Mauderli_U

GIs. In this context, the need for technical assistance has also been noted, while benefitting from synergies with projects and concepts on agro-ecology.¹¹⁴⁹

The crucial role of collective action from local actors of GI values chains was discussed as a way to ensure successful bottom-up approaches, including in countries where the State has a strong role. In this specific context, the role of NGOs could be key to stimulate the discussion and find compromises, especially in the product specification design.¹¹⁵⁰

Fourth, there is a strong call for new forms of finance, new partnerships, and new business models. Some of these have already been initiated: for example, new forms of finance have been developed to support food systems in rapidly emerging economies, and new partnerships are emerging between the public and private sectors. At the same time, the private sector is increasingly looking at how to best serve farmers. As a summary of this discussion, the closing speaker reminded the need to support civil society organizations and farmers – who are key stakeholders driving change – as well as the need to unlock capacity and finance to scale up new innovation business models.¹¹⁵¹

This group started off by looking at resilience as a historical system built over time, but also shared different views of what resilience can look and feel like. Two important questions came up: 1. Do we need new systems or do we need to work with what we already have today? 2. How can we do both? The group agreed that our current agricultural system has made us less resilient, and that there is a great need for education about all of this, as well as a need to organize together.¹¹⁵²

Group 4: Climate Change, Urban Agriculture, and Infrastructure This group talked about problems with zoning, red tape, and bureaucracy when dealing with accessing growing space in the city. They also talked about ongoing actions to mitigate the impacts of climate change on our communities, such as St. James Town Community Co-op's OASIS Food Hub. Another possible solution discussed was to partner with existing institutions who already have access to space, such as schools, businesses, or faith buildings.¹¹⁵³

5. Strengthening the organizations of FFPOs and Indigenous Peoples territories from local groups, through regional associations to national and international federations constitutes a much neglected but efficient route towards climate risk reduction and management.¹¹⁵⁴

The group exploring partnerships emphasized the importance of going local: “The ecology of the future will be place-based with energy and action resting with local authorities. This will lead to better governance, and engagement with people and

¹¹⁴⁹ 462:10 p 6 in 133_May_27_21_CIRAD_Multi

¹¹⁵⁰ 462:39 p 11 in 133_May_27_21_CIRAD_Multi

¹¹⁵¹ 463:5 p 6 in 155_Apr_27_21_FCDO_Multi

¹¹⁵² 464:24 p 12 in 185_Apr_14_21_Local Farm_Multi

¹¹⁵³ 464:28 p 15 in 185_Apr_14_21_Local Farm_Multi

¹¹⁵⁴ 473:21 p 7 in 244_June_09_21_Macqueen_Multi

authorities.” “Any platform through which people can communicate, must bring voices from the ground to obviate restrictive hierarchies.¹¹⁵⁵

*Cooperation, empathy, trust and communication establish the foundations for partnerships that enable food systems to provide nutritious foods and social, cultural and economic opportunities for all.*¹¹⁵⁶

*A sustainable food system of partnerships will be a movement at the local level, and that of the town, city, public institutions.*¹¹⁵⁷

The ecology of the future will be place-based with energy and action resting with local authorities. This in turn will lead to better governance, and engagement with people and authorities.

*The predicate for all those working in the food system must be one of empathy, in which nonconventional partnerships are allowed to emerge, inc National representatives from the local farmers.*¹¹⁵⁸

*Building a network of community partners should be a top priority during times when our food system is disrupted*¹¹⁵⁹

*It will be important that we find ways to connect the community to local growers and native foods within community to build support for these changes.*¹¹⁶⁰

*To accomplish this, an inclusive partnership among all of those involved in the food system needs to be convened.*¹¹⁶¹

*Creating an inclusive network of farmers, local food vendors, community health workers, community/faith-based organizations, city departments and academic institutions to response to a crisis is key to ensuring food is distributed to those in need.*¹¹⁶²

*More promotions and work between manufacturers and retailers needed to increase promotion in store and TV advertising. Manufacturers can’t control placement in store and amount of promotions – this is all led by retailers. Manufacturers need to work more closely with retailers.*¹¹⁶³

Developing opportunities for collaborative efforts, either between SMEs (e.g. co-manufacturing), between SMEs and larger corporations (e.g. sharing lessons learned

¹¹⁵⁵ 486:37 p 8 in 291_May_21_21_Polman_Prabha

¹¹⁵⁶ 486:70 p 13 in 291_May_21_21_Polman_Prabha

¹¹⁵⁷ 486:72 p 13 in 291_May_21_21_Polman_Prabha

¹¹⁵⁸ 486:78 p 13 in 291_May_21_21_Polman_Prabha

¹¹⁵⁹ 487:16 p 6 in 293_May_22_21_City of San Antonio

¹¹⁶⁰ 487:23 p 7 in 293_May_22_21_City of San Antonio

¹¹⁶¹ 487:28 p 7 in 293_May_22_21_City of San Antonio

¹¹⁶² 487:36 p 9 in 293_May_22_21_City of San Antonio

¹¹⁶³ 488:43 p 10 in 295_May_25_21_Wheeler A

and technology), or between SMEs, financial service providers, insurance providers and the government (i.e. public-private partnerships).¹¹⁶⁴

Create local contact networks that can strengthen food chains, specialized people united, coordinating role of external or international organizations to create contact networks of entrepreneurs and suppliers.¹¹⁶⁵

Changes in consumption and habits driven from the local, local consumer education. Form work networks so that they can have representation in politics, specific networks to promote from the local.¹¹⁶⁶

Alliances and Enhanced Participation of Indigenous Peoples: We urge all parties to continue to strengthen its engagement with Arctic Indigenous Peoples in its future work by organizing high level expert seminars on other relevant technical fields.¹¹⁶⁷

Partnerships. We would like to see incentivization of profitable networking. Partnerships are key for change. There should be an incentive for collaboration.¹¹⁶⁸

The power of togetherness and networks of networks; creating an ecosystem of change¹¹⁶⁹

Create a network where everyone can share knowledge but also needs.¹¹⁷⁰

...support farmers to offset their food waste with a network of restaurants & chef partners...¹¹⁷¹

Uniting public and private sectors to delineate solutions to improve food access.¹¹⁷²

Between private and public sectors, such as universities and research facilities. Such partnerships will extend the scope of research in developing farmer prosperity by bringing sustainable and attractive agricultural practices into action.¹¹⁷³

Partnerships support for women in agriculture Improving partnership with financial institutions to enhance women access to funds Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women) Connect grass root women to multistakeholder platforms to share their experiences and challenges Link research organizations and various ministries with grass root women to create awareness on new technologies Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women Partnership

¹¹⁶⁴ 492:11 p 6 in 302_June_01_21_FAO_ICC_Multi

¹¹⁶⁵ 496:22 p 7 in 312_June_15_21_FAO_ICC_Multi

¹¹⁶⁶ 496:30 p 7 in 312_June_15_21_FAO_ICC_Multi

¹¹⁶⁷ 500:31 p 8 in 396_June_01_21_Arttjeff_Multi

¹¹⁶⁸ 504:20 p 6 in 400_June_09_21_Viera_Pollmeier

¹¹⁶⁹ 504:22 p 6 in 400_June_09_21_Viera_Pollmeier

¹¹⁷⁰ 504:67 p 10 in 400_June_09_21_Viera_Pollmeier

¹¹⁷¹ 504:72 p 11 in 400_June_09_21_Viera_Pollmeier

¹¹⁷² 389:97 p 7 in 431_June_22_21_CEBOS_EMBRAPA

¹¹⁷³ 429:229 p 15 in 470_June_17_21_Burian_Multi

*with national and county government to implement policies that are gender mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.*¹¹⁷⁴

*The academic and scientific community must play a more leading role in discussions for decision-making by governments and congresses. Many decisions about technology adoption are made under pressure from public opinion, based on fear, not science.*¹¹⁷⁵

*As part of a systems approach, establishing public-private partnerships was described as a challenging aspect of a systems approach.*¹¹⁷⁶

*Market and infrastructure. Need for digitalization and ensuring women are aware of inclusion in digital market access Developing strategies for women to be able to access funds especially in the case that loans require physical collateral and have high interest rates which women are not able to pay back Need for partnerships that engage women in policy making on various food systems and agricultural activities Support women businesses and allow them to be part of the partnerships Bank customer segmentation to address the financial needs of women.*¹¹⁷⁷

*Participants outlined how hard it is sometimes to partner with big companies because of branding and food manipulation guidelines. Companies don't want to be liable.*¹¹⁷⁸

*Also the connection between companies and farmers is not well established.*¹¹⁷⁹

*There is no real discussion and connection between the producers of food with the end consumer.*¹¹⁸⁰

*Stakeholder engagement /collaboration / partnerships. Opportunities for change through forums such as this dialogue. High percentage of young people in the region. They are creative and yet have not been given the opportunity to explore in sustainable food systems. A critical mass of people interested in business. Identify where the main leakages occur along the food system, which will create opportunities for research, collaborations as you fill the leakages. There is immense opportunity for collaboration locally, regionally and internationally to advance understanding, strategize, build capacity and harness opportunities. Invest in diversification of agricultural production and consumption to curb the double burden of malnutrition. Emerging structure to break silo's between institutions but also within an institution. Often the focus is on a particular commodity - rather than on a food system including all multidisciplinary aspects and all stakeholders.*¹¹⁸¹

The Vice-Chancellors emphasized the following: • Seek transformational approaches and solutions for broad societal interest and the common good; • Embrace collaboration and

¹¹⁷⁴ 433:15 p 7 in 474_June_18_21_Matu_Opiyo

¹¹⁷⁵ 491:21 p 6 in 301_May_27_21_CropLife Latin America

¹¹⁷⁶ 426:16 p 7 in 467_June_17_21_NWGN_Multi

¹¹⁷⁷ 433:12 p 7 in 474_June_18_21_Matu_Opiyo

¹¹⁷⁸ 504:42 p 9 in 400_June_09_21_Viera_Pollmeier

¹¹⁷⁹ 504:44 p 9 in 400_June_09_21_Viera_Pollmeier

¹¹⁸⁰ 504:46 p 9 in 400_June_09_21_Viera_Pollmeier

¹¹⁸¹ 1:19 p 8 in 072_Mar_09_21_Sibanda L

*trans disciplinarity, ensuring the right skills and talents are around the table to address the challenges at hand; • Mobilise resources and harness partnerships for greater leverage, innovation, and impact; • Adopt a systems thinking approach to deal with the complexity inherent to sustainable food systems; • Co-design and co-create research and initiatives; • Embrace diversity and inclusivity to enrich research project design and expected outcomes; • Harness technology, ICT and Big Data as critical enablers; • Ensure ongoing relevance of our research, in line with changing societal needs, with appropriate translation into practice for sustainable and resilient food systems; and • Maintain a continuous pursuit of quality and excellence.*¹¹⁸²

*Good communication is the cornerstone of effective collaborative relationships, we might not have the same motivations or objectives to participate, but we need to ensure we openly communicate the various perspectives coming into a project so that we can ensure everyone's expectations are acknowledged.*¹¹⁸³

*While Australian agtech scale-ups would like to stay local, most find they must look overseas for capital, as the investment pool within the Australian market is limited and highly competitive. Overseas markets also offer exciting opportunities for companies to 'collaborate and cluster' in the global ecosystem.*¹¹⁸⁴

*Support for small-scale stakeholders across the globe is also critical. Investments, partnerships, and support to implement lessons learned can help increase global sustainable practices across the board and help smaller businesses and farmers thrive sustainably while alleviating burdens on the environment and the food system.*¹¹⁸⁵

*Implementation of co-responsibility models that offer worthy opportunities, e.g. The new Colombian policies for the regularization of Venezuelan migrants.*¹¹⁸⁶

*Creation of donation networks, necessary for the implementation of food banks.*¹¹⁸⁷

*Access to external networking groups such as MBW can provide the support, contacts and encouragement that women in more gender-balanced sectors might normally find within their workplace.*¹¹⁸⁸

*The whole supply chain needs to work together in order to attract and retain female talent.*¹¹⁸⁹

¹¹⁸² 1:55 p 6 in 072_Mar_09_21_Sibanda L

¹¹⁸³ 2:7 p 8 in 081_Mar_15_21_CRC

¹¹⁸⁴ 2:11 p 10 in 081_Mar_15_21_CRC

¹¹⁸⁵ 4:14 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

¹¹⁸⁶ 5:2 p 6 in 105_Apr_8_21_Vieira J

¹¹⁸⁷ 5:5 p 6 in 105_Apr_8_21_Vieira J

¹¹⁸⁸ 6:7 p 7 in 166_Apr_14_21_Meat Business Women

¹¹⁸⁹ 6:9 p 7 in 166_Apr_14_21_Meat Business Women

Forming a working group to facilitate action research and policy advocacy on efficacy of various nutrition sensitive farming and traditional food system and diet diversity. (Action Tracks 1 and 2)¹¹⁹⁰

Create partnerships and support linkages and help the projects in scaling up to support more women farmers.¹¹⁹¹

Research institutions, Universities, civil society organizations and private sectors should be made to provide capacity building training and agricultural technologies solutions to these indigenous people in the socially and economically disadvantaged communities. We shouldn't leave it for the government alone.¹¹⁹²

Establish Vegetable Business Hubs to provide crop management knowledge and connect producers with traders, processors, input and credit vendors.¹¹⁹³

The group has concluded that taking into account climate change, there is required to develop regional rational water resource use as well as water protection concept. It is recommended to develop and adopt water, food, energy and environmental doctrines of Central Asia in the context of climate change.¹¹⁹⁴

It is necessary to develop regional cooperation on prevention of natural disasters (mudflows, floods, etc.) and protection of water bodies;¹¹⁹⁵

Farmers and growers must work together, both with similar producers and across sectors, while the wide variety of organizations and advisers from the farm, food and business sectors must also work to join these functions up. Of course, government and policymakers were seen as key enablers in linking these elements together, for example by using food policy as a way of addressing sustainability and health issues in Wales. The media has a role in telling the truth about food, its sources and benefits, particularly in ways that are relevant to Wales and Welsh consumers, although it was also recognized that everyone can contribute to public awareness and the national debate. The difficulties of cross-sectoral working are not underestimated, and it is suggested that Holistic Goal Setting is a useful tool to ensure that everyone is on board and has the same understanding; it is important to establish this first before moving to actions or projects.¹¹⁹⁶

Regional Network on Best practices for a sustainable fisheries and aquaculture.¹¹⁹⁷

Promoting Regional Network and supporting actions and plans for the monitoring activities on marine litter (on the sea and biota) and anthropogenic activities impacts.¹¹⁹⁸

¹¹⁹⁰ 7:9 p 7 in 167_Apr_13_21_Welthungerhilfe_Multi

¹¹⁹¹ 9:18 p 8 in 171_Mar_31_21_Atilano C

¹¹⁹² 12:5 p 7 in 192_Apr_19_21_Okafor_A

¹¹⁹³ 16:17 p 8 in 251_Jan_25_21_World Vegetable Center

¹¹⁹⁴ 17:10 p 8 in 164_Apr_15_21_Anarbekov_Akramov

¹¹⁹⁵ 17:14 p 8 in 164_Apr_15_21_Anarbekov_Akramov

¹¹⁹⁶ 20:24 p 10 in 116_Apr_21_21_Hein JR

¹¹⁹⁷ 23:46 p 8 in 205_Apr_27_21_CiHEAM_Multi

¹¹⁹⁸ 23:55 p 8 in 205_Apr_27_21_CiHEAM_Multi

*The participants then discussed the implementation and scaling challenges for nature-positive approaches. Currently, the commercialization of agriculture has led to chemical intensive mono-cropping. This can make communities more vulnerable to shocks such as drought and famine, as history has often demonstrated (for instance, the Irish potato famine). It was agreed that the first requirement for the transition was the empowerment of small farmers. This would require support through policy instruments and collectivizing institutions such as cooperatives and FPOs.*¹¹⁹⁹

*To strategically ensure access to safe nutritious food for Nigerians, it behoves on respective MDAs to work together to eradicate systemic and institutional inadequacies and amplify resources and programs in compliance with the AU Food Safety index to increase access to healthy and nutritious food from production and processing to table.*¹²⁰⁰

*There is need to establish interdisciplinary and multi sectoral regional and national committee/Working groups that treat with the issue in a comprehensive and systemic manner. Amongst other things the committee can develop standards for disposal, treatment and management of ewaste, for working with producers and manufacturers on product efficiency standards, extending product life cycles, refurbishing and reuse of ewaste and with avoiding the dumping of inferior quality electronic products in the region under the guise of aid/charity National and Regional Standards Bodies working with Academia and Scientific Community to Implement a rigorous regime of Soil and Water Testing, Supporting Small and Medium Holder Farmers, Rural communities with testing, sampling, and certification to standards.*¹²⁰¹

*A community organic certification is necessary. However, there must also be community partnerships with neighbouring communities to ensure no fertilizer being used throughout and protection of water sources occurs The formation of community-based partnerships. Partnerships with CSO, state development communities, adjacent communities, research communities Some institutions like hospitals already recognise the need to grow their own foods e.g. Point Fortin hospital in Trinidad. The initiative provides opportunity for Outpatients and the wider community to be involved in such activities. The institution supporting more community and locally grown food would also help create a more stable and viable revenue stream for local communities and for national and regional farmers. Communities like Brasso seco and Lopinot coming together to implement rain water harvesting systems which are more sustainable and in keeping with climate smart agriculture practices.*¹²⁰²

*Need for improved coordination and cooperation as transformation is a shared responsibility that involves partnerships among all sectors of society and transparency is a prerequisite for the success of those partnerships.*¹²⁰³

¹¹⁹⁹ 27:39 p 9 in 044_Feb_18_21_Bharat K S

¹²⁰⁰ 33:12 p 7 in 084_Mar_17_21_UnyimeAbasi B

¹²⁰¹ 35:49 p 8 in 095_Mar_27_21_Chinapoo C_Multi

¹²⁰² 35:91 p 12 in 095_Mar_27_21_Chinapoo C_Multi

¹²⁰³ 36:8 p 6 in 096_Mar_29_21_ESCWA

Landscape Partnerships (LPs) are increasingly seen as an inclusive, integrated solution to managing nature-positive and livelihood challenges. This was highlighted by the remarks from the UNFSS leadership, saying that “Landscapes are a perfect example of how to manage the complexity [of food systems transformation] because on a piece of land the interdependencies of water, grazing, cropping, consumption and pollution becomes clear.”¹²⁰⁴

Track 3 also highlighted that Landscape Partnerships can play a crucial role in aligning ecological processes with sustainable food production. There thus seem to be great opportunities for LPs to become a central feature of food systems transformation using nature-based climate solutions, green growth and post-covid recovery plans under development.¹²⁰⁵

Governmental support creating enabling conditions for developing and supporting landscape partnerships to transform food systems, while managing socio-ecological needs through effective governance. • Market development for natural capital value, mainly through payments for ecosystems services, giving value to landscapes and seascapes currently not accounted for. • Linking results-based financing to impacts on biodiversity and livelihoods impacts.¹²⁰⁶

Collaboration among key academic, private sector, policy, civil society, and on-farm partners is necessary to advance solutions and move sustainable food system ideas into broader action. • The discussion focused on values and value-creation. Panelists described how partnerships generated real and tangible economic, social, and environmental value. • Panelists highlighted the potential for greater value creation and capture because of the synergy that arises from the interplay between different partnerships. • The kinds of partnerships discussed can transform what happens in a food system. Partnerships can catalyze a shift from transactional steps and interactions that surround the activity of growing food on a farm to deeper, more regenerative relationships among businesses, consumers, farmers, farm workers, and the farm ecosystem. This results in amplifying value for the many stakeholders.¹²⁰⁷

Rolling out a nation-wide scheme on improving protein intake in Nigeria by exploiting innovative mechanisms such as developing both animal and plant protein through partnerships with the private sector, to tackle protein deficiency. b) Aggregate and connect farmers to ameliorate some of the challenges faced such as inadequate storage facilities. c) Collaboration between UN agencies, MDAs, the private sector and other stakeholders to drive improved nutrition and consumption of nutritious foods across Nigeria’s food systems. d) Integration of nutrition and healthy diets components in the Country Nutrition Programming framework. e) Maximization of social impact by encouraging stakeholders in partnerships and collaborations to transform the food systems.¹²⁰⁸

¹²⁰⁴ 37:5 p 6 in 097_Mar_30_21_EcoAgriculture Partners

¹²⁰⁵ 37:6 p 6 in 097_Mar_30_21_EcoAgriculture Partners

¹²⁰⁶ 37:14 p 7 in 097_Mar_30_21_EcoAgriculture Partners

¹²⁰⁷ 43:1 p 6 in 003_Nov_23_21_Posner S

¹²⁰⁸ 44:39 p 13 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

*A “One-Stop-Shop” bringing together Agri-SMEs, investors, and diverse business development service providers, with global reach but anchored into in-country activities, offering a menu of services including: • Peer-to-peer SME learning and networking • Partnerships among BDS and other supporting organizations to connect their respective initiatives and avoid silos • Curating a database of entrepreneurs and sharing the same approach to mapping their functions and supporting needs (building on ISF/SAFIN taxonomy) • Facilitating dialogue with investors • Building financial literacy and skills • Training • Guidelines and toolkits.*¹²⁰⁹

*Large corporates can use their convening power to mobilize and align value chain actors, and participate in the development and circulation of knowledge around agriculture production and financing practices. TA providers can develop the knowledge base required to better inform FSPs and producers. Public sector actors at the local level can have a mandate and capacity to engage in de-risking activities (education and partnerships), particularly those that promote young entrepreneurs in the agriculture sector, given its importance for job creation and GDP. International public actors (e.g. World Bank and EU) can contribute through funding, influence over policies and knowledge sharing across regions.*¹²¹⁰

*Relationship building to increase community connection and incite community-led action. 2a. Connecting the land-owner and farmer to co-create equitable land access. Goal outcome: Could increase cooperation through co-creation and involvement in decision making by the operator of the land, in conjunction with the landowner. 2b. Connecting the consumer to farmer/producer to build livability of farmer profession and to increase responsible consumption by consumers. Proposed solutions: Connect institutions like schools more closely to the farmer, directly, by weaving school procurement into the educational programming in K-12 schools (next level Farm 2 School programming) Embed indigenous food leaders into school food programming, to influence menus, and represent traditional, climate-smart foods that reduce packaging and can increase healthy food knowledge for food workers and students.*¹²¹¹

*Goal is to reduce poverty by decreasing cost of food, through a shorter supply chain and stronger relationships between farmers and consumers, which creates community trust, support, community action.*¹²¹²

*Key coordination needed between food systems, climate change and education industries. Collaboration is critical to inspire "radical community food action," where there is autonomy for people to access and grow their own food to increase food security.*¹²¹³

We need to design partnerships that are deeper and more profound than participation. We need to evolve mere citizen, CSO and private sector participation from one off events to ongoing entrenchment into the decision making fabric and process at national regional

¹²⁰⁹ 46:7 p 7 in 049_Feb_23_21_SAFIN_Multi

¹²¹⁰ 46:19 p 9 in 049_Feb_23_21_SAFIN_Multi

¹²¹¹ 49:17 p 6 in 086_Mar_20_21_Rosatan B

¹²¹² 49:24 p 7 in 086_Mar_20_21_Rosatan B

¹²¹³ 49:26 p 9 in 086_Mar_20_21_Rosatan B

*international. There is a need for new platforms and fora to examine these issues with different lens and flexible arrangements to impact on communities.*¹²¹⁴

*There is a need to establish national and regional coalitions and partnerships that promote and implement actions on these standards There is a need to develop a national and regional, informal and formal, systems/mechanisms/processes that support ongoing engagement and partnerships of interested parties such as CSO, academia, private sector , international donors, national and local governments in planning, implementing, studying and improving actions, interactions and impacts.*¹²¹⁵

*Nature based climate solutions will be critical to protection of water ways, reduction of carbon and conservation of water and energy Connectivity should also looked at as a sustainability issue and the impacts of e-waste on the food system should There is need for standing regional, national standing committees and working groups focussed on addressing the ongoing issues arising from the NEXUS and there should be flexible pathways for accessing financing to address these nexus issues Stronger action to protect natural waterways and governance of the commons (rivers, seas and other aspects of the natural environment) is needed and mechanisms for improved and sustained governance need to be implemented that support we need nature based, biological, engineered, hybrid and semi engineered solutions that help to reduce emissions in the design and the various assets and all stakeholders need to work together to protect and engage in asset management There are many opportunities in the nexus to develop sustainable livelihoods.*¹²¹⁶

*Partnerships and collaboration across value chain.*¹²¹⁷

*Partnerships are essential in bringing diverse food systems stakeholders closer along the whole food chain through innovative partnership models which enable action. Stakeholders should step out of different siloes to ensure integration and cooperation between different sectors and enable their alignment. Strong partnerships require transparency and interdisciplinary communication.*¹²¹⁸

*The importance of partnerships was also underscored, which would enable multidisciplinary collaboration among farmers, NGOs, governments and international organizations to design projects that can connect small farmers with international markets.*¹²¹⁹

*Creating more traceability/transparency throughout the value chain. Via Partnerships: such as the project Seed NL...*¹²²⁰

¹²¹⁴ 50:9 p 6 in 087_Mar_20_21_Chinapoo C_Multi

¹²¹⁵ 50:14 p 6 in 087_Mar_20_21_Chinapoo C_Multi

¹²¹⁶ 50:35 p 6 in 087_Mar_20_21_Chinapoo C_Multi

¹²¹⁷ 52:17 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

¹²¹⁸ 53:13 p 5 in 001_Nov_5_20_CGIAR

¹²¹⁹ 56:23 p 8 in 006_Dec_16_20_UNDESA

¹²²⁰ 63:37 p 9 in 037_Feb_12_21_Food Systems for the Future_Multi

*Stakeholders must work together to (1) increase income for those in different sectors by subsidizing maintenance products and fertilizers...*¹²²¹

*Participants are also considering the possibility of forming a group so that those in the fishing supply chain (manufacturers of fishing equipment, fishermen, merchants) can gain access to bank loans.*¹²²²

*Foster establishment of community networks for exchanging food.*¹²²³

*Participants pointed out the urgent need to bridge all stakeholder of the food sector and to work together to ensure the supply of healthy, sustainable, affordable and nutritious diet for all, prevent food losses and foster better logistical planification.*¹²²⁴

*This also includes the establishment of an inclusive ecosystem across diverse food systems stakeholders in Asia to collectively tackle pressing contemporary challenges such as climate change and the adverse health and economical effects of future pandemics.*¹²²⁵

*The topic of stakeholder involvement is also tackled in terms of the importance of engaging local authorities as well as promoting knowledge-sharing between European members of WUWM and all food sector stakeholders.*¹²²⁶

*It's important to increase know-how and peer support between north and south as well as between southern partners.*¹²²⁷

... key aspect is the key word “relationship” because the main target of the food system transformation is, indeed, provided by a set of relationships. FEBA Annual Convention 2021 “for a sustainable future food system” tried to identify the most important challenges for this transformation, recognising their complexity. Food systems are very complex entanglements of relations, some of them are visible, but many of them are hidden and they should be recognised in order to face this challenge. It emerged how food system transformation is a process of democratisation, a process that needs to blur the boundaries between the different actors, the public and the private sectors and the civil society. Food Bankers are very practical and concrete people, therefore the Annual Convention 2021 was the occasion to indicate some key aspects to move from the grand vision of the food system transformation to the practicalities of it. In fact, Food Bankers have been defined as “practitioner policy-makers”, together with the external experts and partners involved and the researchers. All these actors should be courageous and bold deciding a normative stance and the desired outcomes at the start of the process of this key transformation. Four pillars have been recognised in this respect: bringing together the social and the natural, creating or strengthening positive flows and interactions within and between food systems, making space for pluralism and connecting food with other

¹²²¹ 71:2 p 18 in 033a_Feb_6_21_Serge BDS_ENG

¹²²² 71:19 p 29 in 033a_Feb_6_21_Serge BDS_ENG

¹²²³ 75:22 p 94 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

¹²²⁴ 76:2 p 7 in 103_Apr_8_21_Carrara E_Multi

¹²²⁵ 77:3 p 7 in 108_Apr_13_21_Carrara E_Multi

¹²²⁶ 78:9 p 7 in 110_Apr_14_21_Carrara E_Multi

¹²²⁷ 79:29 p 9 in 118_Apr_21_21_Huvio T

*public goods (health, well-being, the environment, the welfare system). In this context, there are some tangible and interrelates goals for food system transformation such as the generation of co-benefits, the strengthening of linkages, social inclusion and connectivity. In fact, food insecurities are indicative of underlying socio-economic and environmental problems that need to be addressed holistically. Connecting food with other complex systems and policy priorities is a key factor, both for the private and NGO sectors.*¹²²⁸

*Another key learning was that we can reduce the burden and demotivation of lofty sustainability goals by working together, not just within the salmon or aquaculture industry but also across the supply chain and with other protein industries. Challenges are coming at accelerating pace and producers need to share information about environmental improvements with fellow producers much more quickly and adeptly if we are to respond effectively.*¹²²⁹

*This method of processing can be a movement to encourage the planting of edible trees so that the results can be used as new products while establishing partnerships with other stakeholders for the process of using them.*¹²³⁰

*Policies, mechanisms and institutions that promote synergy between the different food system stakeholders through initiatives such as agricultural assemblies are crucial. This will improve the quality of the impact we derive. Synergy between stakeholders will also assist smallholders to be active in this process and to move towards commercialisation.*¹²³¹

*Partnerships with urban planning and zoning departments- food production areas set aside; urban zoning to allow for farming. Architecture - city planners to mainstream open spaces for urban farming/kitchen gardens.*¹²³²

*Multilevel governance and coordination across departments, civil society actors, private sector actors, researchers. Importantly partner with researchers, innovators and Implement innovation informed by research.*¹²³³

*Reassessing the partnership agreement with the World Economic Forum.*¹²³⁴

*Participants from multiple parts of the supply chain expressed interest in convening (including a manufacturer and food service company who both want to talk to the distributor).*¹²³⁵

*Partnerships can help all organizations involved to fully realize economic benefit;*¹²³⁶

¹²²⁸ 81:1 p 6 in 145_May_6_21_Vandenschrik J_Multi

¹²²⁹ 85:10 p 9 in 160_20_Apr_21_GSI

¹²³⁰ 88:9 p 8 in 174_Mar_20_21_Niode K

¹²³¹ 96:6 p 6 in 255_Apr_27_21_ICLEI Africa_Multi

¹²³² 101:14 p 8 in 325_May_19_21_ICLEI Africa_Multi

¹²³³ 101:21 p 9 in 325_May_19_21_ICLEI Africa_Multi

¹²³⁴ 103:45 p 31 in 007a_Dec_18_20_NAAGD

¹²³⁵ 104:7 p 3 in 051a_Feb_24_21_Google

¹²³⁶ 104:17 p 5 in 051a_Feb_24_21_Google

*Building and strengthening solidarity and collective actions through partnerships;*¹²³⁷

*It was agreed that mobilisation of key actors along the food chain will be needed, including citizens/consumers, state and national regulatory authorities, celebrities, farmers and fishers, the national food board (Bord Bia), chefs and retailers...*¹²³⁸

*Bringing together partners at a regional and global level is promising. We can promote the creation of a food “Silicon Valley” which will attract multidisciplinary talent, operate efficiently and promote out-of-the-box thinking. The formation of national and regional innovation hubs will also promote cross-pollination of ideas and technology. These hubs enable active knowledge transfer between researchers, business, government and farmers.*¹²³⁹

*Private sector is not viewed as a partner. It can be perceived as too focused on capital or profit whereas anti-profit view is a component of culture, research community, and ecosystems. These need to be bridged to get effective innovation happening.*¹²⁴⁰

*PDBs can leverage their deep reach and networks to bring together the right actors and to accelerate good practice and innovation, including digital innovation, and help shape the policy environment in order to improve outreach to those most in need of financing (‘last mile’)...*¹²⁴¹

*Leveraging PDBs’ convening power to launch partnership round-tables around specific regions or value chains to enhance coordination amongst actors.*¹²⁴²

*Partnerships should be structured around the expertise of each actor, with PDBs focusing on bankable clients, and with donors and TA providers focusing on building capacities and addressing local market failures.*¹²⁴³

*Likewise working hand in hand at the community level i.e. government, private organizations, NGOs, CSOs need to work together for developing a farming system at the local level.*¹²⁴⁴

*Partner with colleagues from water and other sectors (different domains) to brainstorming strategies and Programmes at regional levels. Markets, policies, value addition and Partnership will help to promote food security approach and improved technology.*¹²⁴⁵

*Improve regional coordination through partnership.*¹²⁴⁶

¹²³⁷ 111:37 p 7 in 070_Mar_09_21_Akinbamiyo.O

¹²³⁸ 112:21 p 7 in 074_May_18_21_O'Mara_Teagasc

¹²³⁹ 113:37 p 10 in 075_Mar_10_21_IFAN

¹²⁴⁰ 113:48 p 13 in 075_Mar_10_21_IFAN

¹²⁴¹ 115:5 p 6 in 085_Mar_17_21_IFAD_FSFS

¹²⁴² 115:8 p 6 in 085_Mar_17_21_IFAD_FSFS

¹²⁴³ 115:22 p 10 in 085_Mar_17_21_IFAD_FSFS

¹²⁴⁴ 116:14 p 8 in 093_Mar_25_21_Adeboye_T

¹²⁴⁵ 117:23 p 10 in 109_Apr_13_21_Jacobs-Mata I

¹²⁴⁶ 117:38 p 10 in 109_Apr_13_21_Jacobs-Mata I

*Competing priorities- breaking down the silo mentality through partnership.*¹²⁴⁷

*CONNECTING ACTORS: (1) Work towards a shared ambition level to push sustainable food systems to the top of the agenda (2) Build partnerships to build trust and guarantee the availability of operating loans (3) Address the fragmentation of the value chain, by mapping and addressing all actors in the value chain and make sure that all these economic agents, can reap the benefits of their investments in sustainable food production (4) Develop common narratives for all stakeholders to bridge expectations, institutional cultures and mindsets (5) Improve successful matching between investors and producers, by mapping the different sources of finance around food (6) Connect donors to work on common requirements for concessional capital in the food sector to maximize the catalytic role of concessional capital and development impacts (7) Connect farmers with tech partners to scale up agritech adoption, with aggregators encouraging farmers to adopt technology (8) Intracompany and intercompany collaboration to make the use of blended finance mainstream among corporates.*¹²⁴⁸

*Another message to reduce inequality is blended multi stakeholder partnerships, not only blended finance. Acknowledging all players as partners, from farmers to consumers, including the midstream players, and blending them is absolutely crucial for alignment around ambitious sustainability goals.*¹²⁴⁹

*There is a need to demystify markets of financial product offerings and bring more transparency to navigate the cluster offerings in the blended finance market. This can be achieved by blending actors in the innovation ecosystem by not only formal partnership arrangements in the set-up of blended structures but also, and most important, narratives and other tools to bridge expectations, languages, understandings and ways of working. Alignment between actors is crucial in overcoming the lack of shared understanding about the main financial gaps and the lack of consensus around the best fit between type of blended solution and specific uses or market situations.*¹²⁵⁰

*In order to answer these questions, all agreed that the currently disjointed seaweed industry and scientific communities needed to come together and pool their research.*¹²⁵¹

*Another participant spoke of the need to create a strong coalition between powerful international organizations such as the FAO, the UN Environment Programme, the World Bank, and others. Together, they said, these organizations can send a strong signal as to the importance of this industry.*¹²⁵²

¹²⁴⁷ 117:70 p 17 in 109_Apr_13_21_Jacobs-Mata I

¹²⁴⁸ 118:19 p 6 in 117_Apr_22_21_Dinesh D_Multi

¹²⁴⁹ 118:31 p 9 in 117_Apr_22_21_Dinesh D_Multi

¹²⁵⁰ 118:38 p 10 in 117_Apr_22_21_Dinesh D_Multi

¹²⁵¹ 119:15 p 7 in 121_Apr_28_21_Doumeizel V

¹²⁵² 119:50 p 13 in 121_Apr_28_21_Doumeizel V

*Partnerships and collaboration: governments, private sector, communities and other stakeholders including men need to work together to address the issues affecting women.*¹²⁵³

*Partnerships and collaborations between companies and trusted local NGOs should be stimulated to work on programs related to the theme of adolescent nutrition and nutrition for the first 1000 days, while acknowledging the sensitivities around the topic related to marketing of infant foods.*¹²⁵⁴

*Partnerships are key in creating more spaces for women's representations. There is need to create a collective agenda that integrates smaller movements and unifies them into larger ones.*¹²⁵⁵

*Need academe and private sector/industry linkages.*¹²⁵⁶

*Mobilize resources to level-up organic agriculture supply and value chains through effective partnerships and linkages among industry players, local authorities, academe and government.*¹²⁵⁷

*Multi-stakeholder partnerships for continued capacity building for self-reliance of indigenous peoples and upland farming communities while promoting forest protection and conservation.*¹²⁵⁸

*The government institutions need to partner with NGOs and other organizations working with underrepresented communities such as women, small farmers, and other marginalized groups, to design interventions specifically for these population groups.*¹²⁵⁹

*The dialogue also identified the need and demand to create a global network to further explore the feasibility and practicality of developing a shared approach for monitoring and reporting food businesses nationally and globally.*¹²⁶⁰

*We need to create stronger links between national govt and benchmarks,*¹²⁶¹

*Cross-cultural Exchanges and Bridging: Sacred Land, Food and Farming program and Curriculum is focused on interfaith communities and public health through building bridges between Christianity and Indigenous perspectives- spirituality and connections to land, food, and identity.*¹²⁶²

¹²⁵³ 120:7 p 5 in 127_May_13_21_IAFN_CWFS

¹²⁵⁴ 120:34 p 12 in 127_May_13_21_IAFN_CWFS

¹²⁵⁵ 120:36 p 13 in 127_May_13_21_IAFN_CWFS

¹²⁵⁶ 122:16 p 6 in 135_June_08_21_Calub_Gregorio

¹²⁵⁷ 122:29 p 8 in 135_June_08_21_Calub_Gregorio

¹²⁵⁸ 122:46 p 8 in 135_June_08_21_Calub_Gregorio

¹²⁵⁹ 127:66 p 16 in 159_Apr_21_21_Hafeez M

¹²⁶⁰ 128:2 p 6 in 168_May_18_21_Food Foundation_Multi

¹²⁶¹ 128:8 p 7 in 168_May_18_21_Food Foundation_Multi

¹²⁶² 129:13 p 10 in 179_Apr 01_21_Livingston_Way

*Creating urban food sovereignty Initiatives and collectives: to address the many forms of isolation that urban Native/Indigenous communities face, participates spoke to the initiatives they are leading in Detroit to build food sovereignty initiatives focused on education, alliance and capacity building, community decision making bodies, public park and urban land use for food growing spaces, and looking at how land resources can be stewarded collectively in urban landscapes.*¹²⁶³

*As noted in the main findings, isolation is not something we have felt before as Indigenous Peoples. We must reframe and transform our isolation before it becomes trauma, we must build a network to support each other.*¹²⁶⁴

*Sustain intergenerational connections and teachings: Growing Together is a program in New Mexico that brings youth and elders together to grow food together. The program has been very successful in building strong relationships and honoring ancient knowledge. Elders and youth in this program feel it is so important to have these relationships. It has been difficult to sustain the program through the pandemic. In this opportunity, the elders share sacred knowledge with youth, and youth give their agility and strength to plant, and do the physical work that is hard for the elders. The youth also help to teach the elders about technology and new information. This program is working to ensure the intergenerational relationships and knowledge is kept.*¹²⁶⁵

*A key recommendation noted by participants is to bring the two sectors together and to put farmers and their communities at the heart of any reform.*¹²⁶⁶

*To consume sustainably and to develop healthy, inclusive and sustainable food systems requires the interplay of multiple agents and actors. Consumers, producers, business institutions, policies, and government leaders all need to come together and work towards a shared vision of the future.*¹²⁶⁷

*Building bridges between stakeholders/ different actors working in silos, i.e. food systems on the environment etc.; networks cross-cutting expertise/actors; national dialogues or committees;*¹²⁶⁸

*Realising the importance of “unusual” alliances between NGOs, private and public sector is essential - these partnerships can be useful, but it’s important to find a balance between the partnerships without the risk of greenwashing.*¹²⁶⁹

*Advocacy and lobby champions for farmer seed systems are still too few. There is a need to build a critical mass of champions at all levels (field, technical, policy and legislative levels).*¹²⁷⁰

¹²⁶³ 130:6 p 9 in 187_Apr_15_21_Livingston_Way

¹²⁶⁴ 130:12 p 10 in 187_Apr_15_21_Livingston_Way

¹²⁶⁵ 130:14 p 10 in 187_Apr_15_21_Livingston_Way

¹²⁶⁶ 132:6 p 6 in 193_Apr_19_21_Ringler_Kassim

¹²⁶⁷ 135:1 p 6 in 202_Apr_24_21_Hao_H

¹²⁶⁸ 138:6 p 7 in 214_May_05_21_50by40

¹²⁶⁹ 138:30 p 12 in 214_May_05_21_50by40

¹²⁷⁰ 140:35 p 10 in 223_May_12_21_Mushita A

*Creating peer exchange networks between partnerships working towards the same goal can help to share learnings and scale-up.*¹²⁷¹

*Global partnerships and coalitions are needed for scaling up MSPs.*¹²⁷²

*Working with Indigenous communities and Paired Dialogues The need to establish paired dialogues or partnerships between Indigenous knowledge holders and scientists was reiterated in the Dialogue. Indigenous knowledge, values and practices have traditionally been disregarded and excluded from the discourse on food systems despite the fact that they have created food systems that are biodiverse, nutritious, climate resilient, equitable and rooted in sustainable livelihood practices. Indigenous food systems have not only ensured the food sovereignty, health and wellbeing of Indigenous communities over generations, but have contributed to biodiversity conservation and sustainable development for the benefit of all humankind. A paired dialogue between Indigenous knowledge holders and scientists could therefore generate and improve knowledge surrounding food systems, climate change, the management of crops and seeds and other topics alike.*¹²⁷³

*Alliances between farmers, business, NGOs, governments, indigenous communities, and faith groups are important to prevent deforestation and degradation in a globalized food system We need alliances to protect biodiversity and prevent deforestation.*¹²⁷⁴

*On public policy: one sole effort that encompasses every stakeholder (much like this dialogue), to unify and bring together needed financial resources, to recover institutions with one motto for animal and plant farming: research + extension + funding for the sustainable food systems to guarantee access, availability and consumption of healthy foods.*¹²⁷⁵

*Fundamental to increase the efficiency of foods and create conditions to do so: partnerships, State, businesses to support those who can't have food or consume the calories necessary. Today those partnerships are weak, and be better regulated. And even incentivize good positive legislation to enhance good practices (like Chile).*¹²⁷⁶

*There needs to be an alliance between everyone right across food systems, to enact holistic change.*¹²⁷⁷

*For communities reliant on tourism, create ties between tourist boards and indigenous foods and cuisine.*¹²⁷⁸

¹²⁷¹ 141:22 p 11 in 229_May_18_21_NFP_Rabobank_Multi

¹²⁷² 141:47 p 15 in 229_May_18_21_NFP_Rabobank_Multi

¹²⁷³ 143:7 p 6 in 231_May_19_21_MCD

¹²⁷⁴ 144:13 p 6 in 232_May_20_21_Schwartz A

¹²⁷⁵ 146:25 p 11 in 235_May_25_21_Gonzalez B_Multi

¹²⁷⁶ 146:34 p 13 in 235_May_25_21_Gonzalez B_Multi

¹²⁷⁷ 147:1 p 6 in 239_May_27_21_Allen K

¹²⁷⁸ 148:7 p 6 in 240_May_27_21_Schwartz A

*Collectives and cooperatives need be expanded to provide support structures to provide resilience in the face of climate disasters.*¹²⁷⁹

*Sit together with big farmers, and private sector and public sector, and small farmers, and experts, and civil society to come together and have conversation not in opposition, but find the causes that bind us together, not issues that drive us apart.*¹²⁸⁰

*Encourage a shift of development partners from subsidies to markets expansion.*¹²⁸¹

*The discussion around this topic focused on the need to foster the relationship between national agricultural institutions and regional agricultural institutions, and it looked at some existing solutions with potential for scaling up.*¹²⁸²

*It was proposed during the discussion to boost strategies of circular economy, by working hand in hand with local organizations, and by enabling legal frameworks to be developed.*¹²⁸³

*Technology, apps/online platforms could be used to link and build trust and transparency between rural areas, wholesale market tenants, and regional and international stakeholders and should be further promoted across Africa.*¹²⁸⁴

*Building partnerships among formal and customary land owners resolving conflict among people, communities, governments and the private sector recognising each stakeholders' role and importance in building sustainable food systems.*¹²⁸⁵

*Establish partnership with the local governments to identify and map the IP territories.*¹²⁸⁶

*Build better connections between farmers, markets, and food retailers.*¹²⁸⁷

*Focus on partnership also reflects well the investment environment for climate-smart and nature positive agriculture.*¹²⁸⁸

*Innovations are not necessarily something totally new. Innovation is equally about how local, old and new knowledge and technologies can be applied in new contexts or scaled-up. With this basis understanding there are a wide range of innovations ready for scale. Achieving scale may be about aligning interests - takes us back to partnership and respect.*¹²⁸⁹

¹²⁷⁹ 148:20 p 10 in 240_May_27_21_Schwartz A

¹²⁸⁰ 149:6 p 6 in 243_June_03_21_Schwartz A

¹²⁸¹ 150:24 p 7 in 253_Apr_29_21_AFDB_Multi

¹²⁸² 150:29 p 8 in 253_Apr_29_21_AFDB_Multi

¹²⁸³ 151:21 p 8 in 261_May_03_21_Carrara_Le More

¹²⁸⁴ 151:26 p 8 in 261_May_03_21_Carrara_Le More

¹²⁸⁵ 152:22 p 6 in 262_May_04_21_ILC_Multi

¹²⁸⁶ 152:45 p 9 in 262_May_04_21_ILC_Multi

¹²⁸⁷ 153:28 p 10 in 263_May_06_21_CCGA

¹²⁸⁸ 158:11 p 6 in 279_May_18_21_Yoovatana M_Multi

¹²⁸⁹ 158:17 p 6 in 279_May_18_21_Yoovatana M_Multi

*Establish partnerships and strategic alliances to foster engagement of youth and women for rapid integration of forgotten foods into the national food system and engagement for policy development.*¹²⁹⁰

*Coordinate across countries to establish governance structures and learning networks that support and facilitate nature-positive production techniques, keeping in mind that there are no one-size-fits-all solutions.*¹²⁹¹

*Partnerships/stakeholder collaboration – includes the establishment of partnerships e.g. with churches, and collaborations between farmers.*¹²⁹²

*...create partnerships with local grocers, supermarkets and farmers' markets to provide access to healthy food and funding for gardens, promote plant-based options (e.g. Meatless Monday)...*¹²⁹³

*Increase partnerships are needed in general in the tourism industry- opportunity to marry caterers, hotels etc. with a community- overflow of foods from events can get donated and there can be incentives for caterers and hotels in a form of taxes etc. to reduce waste.*¹²⁹⁴

*Increase clarity and transparency by formalizing partnerships - a way to help simplify some of the challenges that take place when building collective impact efforts.*¹²⁹⁵

*The organization intends to create a network of researchers to share data and information aiming at solving problems in the food system with the support of scientists and industry and training new specialists.*¹²⁹⁶

*Innovation can take many forms – from researching new technologies, to scaling up of existing approaches and applying new ways of working, partnerships and practices.*¹²⁹⁷

*Need to dispel misinformation and bring all members of the chain, including consumers, together so the context is known, trust is built and knowledge sharing increased and consistent across the chain. This would strengthen the networks within the AKIS. Further mapping is needed to identify who is missing in the AKIS and to be able to demonstrate at a local level a specific AKIS and the actors involved...*¹²⁹⁸

*Short term improvements can be made by greater use of networks, this will help to build collaborations and also help with diversity.*¹²⁹⁹

¹²⁹⁰ 159:3 p 6 in 287_May 20_21_Akinbamiyo_Y

¹²⁹¹ 161:46 p 8 in 296_May_25_21_Battista W

¹²⁹² 163:30 p 6 in 300_May_27_21_Alesso_Pommeret

¹²⁹³ 163:37 p 6 in 300_May_27_21_Alesso_Pommeret

¹²⁹⁴ 163:59 p 8 in 300_May_27_21_Alesso_Pommeret

¹²⁹⁵ 163:114 p 15 in 300_May_27_21_Alesso_Pommeret

¹²⁹⁶ 168:12 p 7 in 322_June_03_21_Apicella_Machado

¹²⁹⁷ 169:16 p 6 in 327_May_18_21_CropLife

¹²⁹⁸ 170:16 p 7 in 328_May_19_21_Lalor_Teagasc

¹²⁹⁹ 170:28 p 9 in 328_May_19_21_Lalor_Teagasc

*Coalition of Farmers and other Local Stakeholders that Facilitate and Manage the Agricultural Innovation Process A structure that allows interaction among and between all stakeholders using stakeholder forums, group social media, regular meetings.*¹³⁰⁰

*Organising farmers to work collectively to meet the market demand.*¹³⁰¹

*Collaboration among Food Systems Actors: Important factors brought up multiple times is the need for innovation, transparency, accountability, and stronger partnership between science, the private and public sectors, farmers and other various stakeholders across food systems...*¹³⁰²

*Network all food systems actors.*¹³⁰³

*Leaders need to network and share ideas to collaborate on projects.*¹³⁰⁴

*One of the advanced proposals, for example, concerns a virtuous alliance with large-scale distribution and consumers, which does not penalize producers but enhances their work and their efforts to continue guaranteeing excellence.*¹³⁰⁵

*Networking: The need to establish relationships between a variety of stakeholders; including scientists, researchers, and economists together with farmers, civil society, government agencies, corporates, academia. These groups play a significant role in establishing circular food systems, evaluating trade-offs and measuring results.*¹³⁰⁶

*The search for alliances and complementarity among the key players in the food system has allowed small producers to access more profitable markets that help them establish stronger and more resilient business models.*¹³⁰⁷

*Participants identified a need for increased opportunities within these partnerships, including means of transport, increased marketing channels, and increased access to information.*¹³⁰⁸

*Recognizing the importance of relationships and partnerships within agri-food systems and value chains, participants identified the necessity of security and trust in ensuring resilience within markets, production systems, and investments.*¹³⁰⁹

¹³⁰⁰ 173:37 p 10 in 331_May_24_21_LNFU

¹³⁰¹ 173:133 p 19 in 331_May_24_21_LNFU

¹³⁰² 177:26 p 6 in 335_May_26_21_Laar_Multi

¹³⁰³ 177:27 p 6 in 335_May_26_21_Laar_Multi

¹³⁰⁴ 177:67 p 13 in 335_May_26_21_Laar_Multi

¹³⁰⁵ 179:5 p 6 in 337_May_26_21_CI_WFO

¹³⁰⁶ 183:16 p 7 in 341_May_28_21_Sewraj_KS

¹³⁰⁷ 184:10 p 6 in 342_May_28_21_Peralta T

¹³⁰⁸ 184:11 p 6 in 342_May_28_21_Peralta T

¹³⁰⁹ 184:40 p 8 in 342_May_28_21_Peralta T

*Capitalise on the large number of scientists over 2000 in the AGRINATURA Network to form partnerships for research in food systems and exploit the best ways to change food systems by deploying specific skills sets;*¹³¹⁰

*A paradigm shift is essential - we consider how to invite farmers to the table at dialogues and during interventions like this - instead we should be doing the work to be invited to the tables of farmers, so to speak. Relationships are key to this.*¹³¹¹

*Multi-stakeholder platforms consisted of government, CSOs and international organisations - Public officials particularly working on land and agricultural issues.*¹³¹²

*Stakeholders and partnerships - Governments - Inter-governmental organisations - Civil Society.*¹³¹³

*Build support networks to advocate for the rights of these farmers. These support systems could focus on building their capacity and resource mobilisation to sustain advocacy efforts.*¹³¹⁴

*Multi-stakeholder land networks (national, regional and international) consisted of smallholders farmers, landless people, CSOs, governments and other relevant stakeholders - Agro ecological networks to mobilise support...*¹³¹⁵

*Equitable and comprehensive networks among producers and consumers are necessary for sustainable action.*¹³¹⁶

*Better networks between producers and chefs:*¹³¹⁷

*...the need to establish new connections between certain stakeholders Such as: Equality between small and large producers and Organic producers and chemicals producers, foreign investment that affects the environment. Companies investing in the country must have farmers involved with the company.*¹³¹⁸

*The promotion of family farmers' articulation and association with other actors was also highlighted during the meeting.*¹³¹⁹

Among the main opportunities for positive change it emerged: the adoption of a gender equality approach, the importance of credit schemes, access to land, and continued collaboration through facilitated multi-stakeholder partnerships, a combination of cash transfers and improved home gardening, policies to promote gender transformation in

¹³¹⁰ 191:37 p 7 in 349_June_02_21_Ekwamu A

¹³¹¹ 192:12 p 6 in 350_June_02_21_Farm Radio Int

¹³¹² 199:20 p 7 in 358_May_11_21_ILC_Multi

¹³¹³ 199:25 p 8 in 358_May_11_21_ILC_Multi

¹³¹⁴ 199:43 p 11 in 358_May_11_21_ILC_Multi

¹³¹⁵ 199:44 p 11 in 358_May_11_21_ILC_Multi

¹³¹⁶ 204:5 p 7 in 363_May_26_21_Mehta_Bautista

¹³¹⁷ 204:29 p 10 in 363_May_26_21_Mehta_Bautista

¹³¹⁸ 209:1 p 6 in 368_May_31_21_Lao Farmer

¹³¹⁹ 214:11 p 7 in 374_June_03_21_DG INTPA

*value chain activities to ensure women participation and to increase their adaptive capacity to adequately respond to climate change challenges.*¹³²⁰

*To achieve a healthy and sustainable diet, it is important to contextualize national goals based on local conditions. At country level, designing and implementing climate and nutrition smart agricultural policies and investment plans also requires knowledge about micronutrient deficiencies and their geographic and age distribution. Getting policy makers to implement some of the solutions and advocating for innovative solutions, together with building good partnerships, were identified as key practices for successful stories.*¹³²¹

*... “linking 6 houses” (farmers, government, scientists, enterprises, banks, journalists) ...*¹³²²

*...strengthen cooperation with other countries, especially China in the consumption of agricultural products ...*¹³²³

*Future partnerships between the government and development partners must prioritize sustainable food production, food safety, reducing food waste, improving food value chains, and revitalization of neglected and underutilized crop species. Government and non-government organizations, with the common goal of improved dietary diversity, nutrition, and health, should work together to revitalize ethnic cuisines and diverse food systems.*¹³²⁴

*There is a need to enhance collaboration: comprehensive food systems evaluations take an integrated approach by design and can therefore enhance cross-sectoral collaboration between ministries (finance, agriculture, environment, health, spatial management/planning) and also between actors (government, civil society, private sector, academic community); Finance actors need to be brought on board, given their role in getting the market incentives right, support the transition and correcting market failures (ministries of finance). Private sector representatives highlighted that regulation is critical to create a commonly accepted framework to support business decision-making.*¹³²⁵

*With the progressive impact of the broader system and other factors, however, IPs cannot do this alone. It requires partnership among women, men, youth, elders and persons with disabilities and appropriate financial, technical and technological support of governments, the private sector, NGOs/Indigenous Peoples’ Organizations (IPOs) and donors/financial institutions. The recommendations advanced from this dialogue are proposals by Indigenous Peoples to enable effective response not only to the goal of ending hunger but also of sustaining the planet for the next generation.*¹³²⁶

¹³²⁰ 215:1 p 6 in 376_June_04_21_IFAD_Multi

¹³²¹ 215:9 p 6 in 376_June_04_21_IFAD_Multi

¹³²² 217:3 p 6 in 378_June_07_21_My Mai Bac

¹³²³ 217:13 p 7 in 378_June_07_21_My Mai Bac

¹³²⁴ 219:22 p 12 in 380_June_08_21_Shakya_Chettri

¹³²⁵ 220:4 p 6 in 381_June_08_21_UNEP_Multi

¹³²⁶ 221:8 p 6 in 382_June_08_21_AIPP_Multi

*In cooperation with NGOs/IPOs, establish strong partnerships and networks with all stakeholders in the food systems such as but not limited to other IPs, governments/relevant agencies and institutions (health, trade, education/trainings), the private sector, academe/science.*¹³²⁷

*In partnerships with IPOs, colleges/universities, governments and donors, (i) undertake research and documentation of indigenous foods, including wild/uncultivated, and food systems (production, processing, distribution and consumption) and associated knowledge and practices; (ii) conduct nutrition analysis; and (iii) prepare educational materials in popular forms.*¹³²⁸

*Member States need to work with their universities and other actors within and outside Africa to Marshall the needed response to strengthen Africa's food system and scale out best practices • Member States need to foster global partnerships for sustainability and inclusivity, resilience and sustainability of the food system.*¹³²⁹

*Co-developing, co-ownership and joint implementation of UNFSS agreed game-changers for food systems transformation on the Continent must be inclusive and provide equitable opportunities.*¹³³⁰

*Networked and joint/coordinated action between various civil society actors, managers, and researchers, for the development of actions, monitoring, and follow-up of results, and generation of data and information in a transparent manner. Greater approximation between farmer and consumer groups, and greater articulation between the various social movements that work on issues related to food.*¹³³¹

*Unity in political representation – Family farming needs to bring consumers closer to farmers; the link between these organizations needs to be strengthened. Federal, state, and municipal governments must work to shorten the production pipeline.*¹³³²

*Strengthen networks of family farming, artisanal fishers, and extractivists, making them more integrated. Foster partnerships between cooperatives and social movements, associations, and entities that advocate ecological farming and food security and sovereignty.*¹³³³

*The regional “Central American” aspect under the integration process, complemented in turn by the actions being developed nationally in each country since we are stronger united as a region • The “public-private partnership,” in which the skills and abilities of each country and their productive sectors are coordinated...*¹³³⁴

¹³²⁷ 221:11 p 8 in 382_June_08_21_AIPP_Multi

¹³²⁸ 221:12 p 8 in 382_June_08_21_AIPP_Multi

¹³²⁹ 223:11 p 6 in 384_June_09_21_Ekwamu A

¹³³⁰ 223:18 p 8 in 384_June_09_21_Ekwamu A

¹³³¹ 228:8 p 6 in 222a_May_11_21_FTI_ZHI_English

¹³³² 228:25 p 8 in 222a_May_11_21_FTI_ZHI_English

¹³³³ 228:64 p 20 in 222a_May_11_21_FTI_ZHI_English

¹³³⁴ 235:1 p 6 in 276a_May_13_21_CCIE_English

Likewise, the need for interaction among the various sectors of the food industry to exchange good practices was emphasized.¹³³⁵

The importance of strengthening integration among public sectors and institutions was emphasized. This is done primarily by promoting work between ministries and policy decision-makers, interdisciplinary work (especially for trade and the One Health interface), and guidelines from the highest level of national public policy coordinated with local authorities.¹³³⁶

Design a systematic plan that promotes stronger ties among all the institutions and disciplines involved to contribute to the food system and international trade. Improve unification in the Caribbean region, improve working relationships, and create a brand of Caribbean products.¹³³⁷

While the actions related to market access are the product of intergovernmental negotiations, businesses are the ones developing the export processes, so spaces for public-private dialogue must be promoted to ensure the alignment of interests and fulfilment of the goals set.¹³³⁸

The group also noted a need for improved links between research and innovation which could be met by increased emphasis on accelerator initiatives (e.g. HATCH or Aqua-Spark). The private sector was noted as a key actor responsible for aiding the facilitation of increased conversion of research into practice - potentially by creating and using pooled industry research funds.¹³³⁹

The group felt that too much power (economical, political, of communication and marketing) is in the hands of the “big players” (corporations, big producers, supermarkets), leading to a disproportionate representation of the broader industry interests. It is important that this industry influence is more equally distributed in order to promote the diversification of products and spreading of profits to sustainability leaders in production and innovation. Two ways to achieve this could be via the establishment of producers associations (clusters or cooperatives), or by legislative support for local council buy-in as a partial owner over businesses that are established in their region. The latter could evoke greater buy-in from local actors and potentially shift the types of businesses permitted to operate in certain areas in favour of more sustainable options. Reconnect policy makers, producers and industry: Policy makers have to be closer to the producers to increase mutual trust and build more functional policies that align with real industry needs...¹³⁴⁰

¹³³⁵ 235:15 p 9 in 276a_May_13_21_CCIE_English

¹³³⁶ 236:5 p 6 in 277a_May_14_21_IICA_English

¹³³⁷ 236:14 p 8 in 277a_May_14_21_IICA_English

¹³³⁸ 236:20 p 8 in 277a_May_14_21_IICA_English

¹³³⁹ 240:18 p 9 in 319_June_30_21_Fredriksson O

¹³⁴⁰ 240:27 p 10 in 319_June_30_21_Fredriksson O

3. *Connect science & industry: Industry needs to listen more to researchers and be more transparent with IP around their practices to promote research in the right areas. Economical viability and animal welfare go hand in hand.*¹³⁴¹

*Outcomes: Ms. Fan Zhihong from Beijing Normal University said, “ What the House of I and Bor Shang has been doing together is of general significance. At the beginning, the House of I was only practicing sustainable development within its own community, including food education and exploration of sustainable food. Later, it formed a close partnership with Bor Shang since they share common values regarding sustainable business development. Now, both are working together to bring the concept of “sustainable development” to more communities, pushing forward interactions among different provinces as well as interactions between urban and rural areas, enhancing communications and collaborations among various sectors.*¹³⁴²

*IFIs should support more foreign direct investments in private sector and primary agriculture, triggering the creation of linkages to foster inclusion and economic activities especially for youth, and contributing to the development of infrastructures.*¹³⁴³

*The European Commission has allocated about 500 million euros (Horizon) to support R&I projects on food systems transformation that include components linked to capacity building and awareness raising. Bridges need to be built between business leaders, research and decision-makers under a shared vision, where the science-policy interface and multi-stakeholder dialogue are crucial to achieve coordinated policies. In this environment, stakeholders are able to complement their efforts, recognising and respecting each other’s requirements.*¹³⁴⁴

*Food systems transformation must be an inclusive process. Women’s participation is paramount, and needs to be enhanced. Women shall be empowered to transfer skills and to improve their awareness on climate change, technology, human rights, health issues, agriculture, food security, production, consumption. In addition, a social and cultural change in the mindset of people is required to foster women and youth entrepreneurship (through more opportunities and more motivation), especially in the agricultural sector (cooperatives) and in rural contexts. Moreover, policy-making needs to adopt a strategic and inclusive vision to create an enabling environment for effective cooperation among all actors/stakeholders: governments, academia, private sector and civil society (quadruple helix) shall find synergies and cooperate for the collective interest of people.*¹³⁴⁵

The need for more diverse coalition forming was agreed as key by participants. In particular the need for unconventional partnerships, and bringing in actors outside of the

¹³⁴¹ 240:38 p 11 in 319_June_30_21_Fredriksson O

¹³⁴² 243:4 p 6 in 479_June_20_21_Yang_Shanna

¹³⁴³ 244:30 p 10 in 480_June_21_21_CIHEAM_Multi

¹³⁴⁴ 244:36 p 11 in 480_June_21_21_CIHEAM_Multi

¹³⁴⁵ 244:37 p 11 in 480_June_21_21_CIHEAM_Multi

supply chain to ensure that all viewpoints and needs are reflected in the transition was highlighted.¹³⁴⁶

*The transparency issue was felt to be a significant one as there is often a major felt separation of many consumers from the farm, so it also contributed to another conclusion that it is key to form stronger links between producers and consumers in driving best practice. To overcome barriers it is key for all stakeholders to work together, with policy also contributing through regulation but with consultation and consideration of how regulatory changes would impact farmers.*¹³⁴⁷

*Coalitions between farmers and businesses were agreed to be key for giving farmers a platform. Unconventional partnerships are increasingly important - traditional meat producers are increasingly interested in engaging with alternative proteins, in working together to address the problem of protein shortage. This is also important for the issue of ensuring livestock farmers and producers have a voice which the participants discussed. Participants reflected on the way that livestock farmers can work with newer plant-based entrants to avoid vilification of meat while still driving forward sustainable innovation.*¹³⁴⁸

*5. Breaking down the siloes between food, agriculture, health, insurance, policy, finance and other sectors are key to having a systemic approach that acknowledges the connection between responsible growing practices, increased nutritional quality, better tasting food, and more accessible better foods.*¹³⁴⁹

*2. How much is left to learn about food and nutritional dark matter, and the role dietitians are playing to spread more knowledge about this place and build the connection to responsible agricultural practices. Conventional medicine focuses more on a diagnosis as opposed to thriving, having the right nutrients, reducing inflammation, maximizing metabolic health, and failing individuals. Historic and traditional medical practices made the connection between food and nutritional quality with health, but there has been a lack of science for this that has steered conventional medicine away from nutritional wisdom. Medical schools teach as little as a single session around nutrition that future doctors can bring into their future practices. The health care community needs to catch up through community shared knowledge, nutrition education for the medical community, strategic partnerships between nutrition and medical entities, partnerships between responsible food service and medical institutions.*¹³⁵⁰

2) Continue to build partnerships and efficient supply chains between small businesses, regional farmers, and food emergency systems over the next two years. Advocate and efficiently use funding provided for the Pennsylvania Agricultural Surplus System (PASS), a state-specific initiative that provides money to purchase produce from area farmers for the food insecure. These funds should prioritize fruits and vegetable purchase

¹³⁴⁶ 245:4 p 6 in 481_June_23_21_Global Counsel

¹³⁴⁷ 245:10 p 7 in 481_June_23_21_Global Counsel

¹³⁴⁸ 245:20 p 10 in 481_June_23_21_Global Counsel

¹³⁴⁹ 249:2 p 6 in 485_June_22_21_Levesque_SD

¹³⁵⁰ 249:16 p 9 in 485_June_22_21_Levesque_SD

from regional growers and fair prices, and even more so, aim to support small growers and those from marginalized backgrounds. This produce is then redistributed to Food Bank and food pantries so that clients have fresh, quality, local produce. Restaurants also process this produce to create foods that are more accessible for the unhoused and those with limited cooking equipment.¹³⁵¹

In the end, building resilient food systems and delivering on zero hunger is work that happens, first and foremost, in relationships. Therefore, having these conversations together so that we can understand each other, is an important step towards that direction. Researchers and policymakers should remember the importance of these conversations, in prioritizing the lived experiences of those impacted by inequities in our food system, and value input from people on the ground. As a coalition, and specifically as a coalition of workers in Northeast, Pennsylvania, in the United States, we will inevitably come across disagreements, but we must prioritize our work as a coalition and always seek to understand and learn from one another first.¹³⁵²

Partnerships with respect to NFPs and levels of government working together to resolve food insecurity issues that are in Toronto: Vulnerable groups and people who are really in need of support (data to drive decision making; understanding where vulnerabilities lie and where the gaps are) Looking in the future, food banks are not viable future - we need better tracking of food insecurity and replace this with income security...¹³⁵³

3. Enablers for more transformative kinds of innovation: a. Breaking out of our “innovation bubbles” to develop better ideas more in line with what the world needs b. Rethinking partnerships to build in more ambition and make the best use of respective capabilities c. “Matchmaking” to drive impact, including innovating where it’s needed the most and supporting those who already offer a solution d. More collective voice and coordination across existing smaller-scale innovators e. Combining the best of the past (e.g. recipes) and the present (e.g. science) to go faster f. Supporting some innovations as bridges to a better place if not our ultimate, ideal solution g. Advocating for policies, subsidies, regulation etc that recognise the connections between health, nutrition, food and the environment...¹³⁵⁴

Rethinking partnerships: to build in more ambition and make the best use of respective capabilities - working with those who can take our innovations to scale in different ways, help us share knowledge and information more effectively, distribute our products/services, or help make them more affordable... - “Matchmaking” to drive impact, including innovating where it’s needed the most, or supporting those who already offer a solution to my problem (rather than competing or reinventing).¹³⁵⁵

Building partnerships between producers, state and non-state actors as well as consumers will ensure sustainable production systems which lead to the development of

¹³⁵¹ 252:3 p 7 in 488_June_22_21_Harrison_CC

¹³⁵² 252:6 p 8 in 488_June_22_21_Harrison_CC

¹³⁵³ 257:13 p 11 in 493_June_23_21_Kevany_Van

¹³⁵⁴ 259:4 p 6 in 495_June_23_21_Forum for the Future

¹³⁵⁵ 259:17 p 9 in 495_June_23_21_Forum for the Future

*localized research to support and address key food production systems that will work well for the Pacific people.*¹³⁵⁶

*Building partnerships with various stakeholders, state and non-state actors within the Pacific food systems chain – for instance, a partnership between big farmers and smallholder farmers between the main island and outer islands in the transfer of planting materials, seeds to sustain long term supply of good quality and healthy plants...*¹³⁵⁷

*...promote the localization of research partnerships to include civil societies and NGOs...*¹³⁵⁸

...improve partnerships with international organizations with research focusing and prioritizing the needs of local farmers, fishers, private sector, and country governments. Increase investments –¹³⁵⁹

*...identify a broad group of African champions that can use their leadership or large networks to amplify and advocate for food systems transformation in Africa...*¹³⁶⁰

*Entrepreneurial skills are also important to build strong partnerships in the system (e.g. potential clients to sell your harvest).*¹³⁶¹

*...joining up youth groups and cooperatives with agro-businesses to facilitate access to processing equipment, market linkage facilities, and loans...*¹³⁶²

*A call for partnerships, and a deliberate effort for investment in home grown institutions to provide local solutions with more appropriate application to local contexts. Science solutions for growth: For Africa, esp.*¹³⁶³

*...the coalition should work to bring actors together in the HDP nexus and support dialogue between different types of actors (e.g. donors, practitioners, local actors) around important topics for coordination.*¹³⁶⁴

*...the coalition should make sure it connects to local actors, mechanisms and structures...*¹³⁶⁵

*Emphasis on linking peacekeeping, humanitarian, and development in food systems resilience programmes i.e., the nexus approach, especially linking peace actors at country level with the humanitarian and development work.*¹³⁶⁶

¹³⁵⁶ 268:7 p 6 in 504_June_30_21_Susumu_Leiva

¹³⁵⁷ 268:14 p 7 in 504_June_30_21_Susumu_Leiva

¹³⁵⁸ 268:21 p 8 in 504_June_30_21_Susumu_Leiva

¹³⁵⁹ 268:22 p 8 in 504_June_30_21_Susumu_Leiva

¹³⁶⁰ 271:18 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

¹³⁶¹ 272:11 p 7 in 508_June_30_21_GDPRD

¹³⁶² 272:23 p 8 in 508_June_30_21_GDPRD

¹³⁶³ 276:8 p 7 in 512_July_01_21_Malawi President_Ekwamu

¹³⁶⁴ 278:11 p 7 in 514_July_01_21_Bolling_Multi

¹³⁶⁵ 278:13 p 7 in 514_July_01_21_Bolling_Multi

¹³⁶⁶ 278:25 p 9 in 514_July_01_21_Bolling_Multi

*Connections are paramount, between and within sectors. Conversations need to build the bridge between nutrition science and regenerative agriculture.*¹³⁶⁷

*Sectors and communities of practice need to consider developing and implementing joint and cohesive policy that will support these phases of discovery by: 1) policy adjustment; 2) setting priorities, 3) engagement and support from public and private financing; and, 4) collaboration between academics and governments.*¹³⁶⁸

*Support strong local food/farmers' markets and connect producers and consumers (to harness their economic and political power). Consumer information, education and communication is essential. Scale up, not through corporatization or industrialization, but grow through aggregation with the support of appropriate local platforms controlled by local actors (e.g., food hubs) and local alliances.*¹³⁶⁹

*It is urgent to stop short term economic thinking and explore alternative financial incentives (slow money, municipal bonds geared to green infrastructure investments, ecosystem services payments etc.), seek inclusion and territoriality. Policies should support bonding and bridging through social networks...*¹³⁷⁰

*Create networks of actors, for example procurement officers, to help understand the landscape of people involved and possible actions. School food programs could help build public procurement dialogues and infrastructure.*¹³⁷¹

*Organizations can contribute by joining networks and linking up across networks. This can include support for Food Policy Councils, educating people in legal terminology, and/or food policy for local procurement.*¹³⁷²

*Knowledge – Farmers should be able to collaborate through one platform or a network such as an innovation hub that enables them to address concerns as well as share resources and knowledge that can add value to their produce.*¹³⁷³

*That there is room and willingness for civil society organizations, as well as the public sector, to constitute themselves as a more cross-cutting force, as a network, and to build constructive joint paths.*¹³⁷⁴

*The opportunities for transforming food systems only arise with collaboration, integration, and convergence of the various actors in the food chain.*¹³⁷⁵

¹³⁶⁷ 280:86 p 13 in 516_July-01_21_Anastasiou K

¹³⁶⁸ 299:32 p 8 in 535_July_08_UNESCO Chair on Food

¹³⁶⁹ 299:40 p 9 in 535_July_08_UNESCO Chair on Food

¹³⁷⁰ 299:47 p 9 in 535_July_08_UNESCO Chair on Food

¹³⁷¹ 299:72 p 12 in 535_July_08_UNESCO Chair on Food

¹³⁷² 299:77 p 12 in 535_July_08_UNESCO Chair on Food

¹³⁷³ 300:46 p 12 in 536_July_08_21_Musabyimana JC

¹³⁷⁴ 301:5 p 6 in 537_July_08_21_ANP_WWF

¹³⁷⁵ 301:6 p 6 in 537_July_08_21_ANP_WWF

Establish platforms for coordination of AE stakeholders (Agroecology Hub in Tanzania-AEHT).¹³⁷⁶

Promote use of participatory approach involving various stakeholders (e.g. researchers, policymakers, agro-dealers, and producers) in advocacy and out-scaling of AEI technologies...¹³⁷⁷

Ensure integrated, participatory, rights-based approaches to governance and policymaking at all levels to address the structural inequities and power imbalances in food systems. Build processes and policy platforms on democratic principles, transparent deliberations, shared power, and inclusive participation to ensure that policies are driven not only by evidence but also by ethics and the broader public interest.¹³⁷⁸

Support innovation in urban agriculture through dedicated funds and programmes, which would contribute to higher social cohesion among community members, promotion of green, low-carbon intensity products and better inclusivity of all members of society to leave no one behind.¹³⁷⁹

COVID-19 underscored the vulnerabilities of the food value chain that can be addressed through infrastructure investment, but opportunities were also identified in broadening markets, particularly in establishing digital platforms that can help producers, value chain actors, consumers, and policymakers make informed decisions.¹³⁸⁰

Building back rural communities in a much better way would require continued and sustained effort from R&D and extension platforms along with policy support to facilitate the expedition of proposed suggestions.¹³⁸¹

Moving forward, the Market Cities Initiative will be developing ways for stakeholders to connect through online platforms, events, and conferences. Opportunities to connect to an even larger group of stakeholders will also be explored.¹³⁸²

Machinery Professional Cooperative Association could empower member farmers to gain access to heavy agricultural machinery with multiple ways of reducing food loss at various stages of the production cycle and storage, as a lever in transformative change of food system.¹³⁸³

The cooperation and engagement among international community, national governments, private sectors, and social organizations are critical for reducing food loss and waste. More efforts could be focused on 1. Enhancing food supply chain with efficient inputs 2. Building systemic technologies achieving food loss and waste reduction through food chain covering post-harvest, storage and warehousing, processing, transportation and

¹³⁷⁶ 305:27 p 8 in 541_July_12_21_AEHT

¹³⁷⁷ 305:28 p 8 in 541_July_12_21_AEHT

¹³⁷⁸ 309:21 p 7 in 545_July_13_21_Mbenya R

¹³⁷⁹ 310:29 p 8 in 546_July_13_21_INDEP

¹³⁸⁰ 313:12 p 6 in 549_July_14_21_Meah N

¹³⁸¹ 313:27 p 9 in 549_July_14_21_Meah N

¹³⁸² 314:4 p 6 in 550_July_15_21_Danie_Verel

¹³⁸³ 315:15 p 6 in 551_July_15_21_FAO_ESCAP_Multi

distribution, and consuming section. 3. Strengthening advocacy for food loss and waste reduction (e.g. global initiative) with more active engagement of UN agencies, NGOs, and private sectors.¹³⁸⁴

*While it was also noted as a challenge, the theme of interdependence was seen by participants as an opportunity. Participants continually pointed to the power of collaboration and coalition. This means not seeing other businesses as competitors, but rather partners in solving the complex issues of the global food system. Each sustainable food business's own success is positively correlated to the success of its competitors. Democratizing access to the tools necessary for radical food systems change will benefit all. The Dialogue emphasized an all-hands-on-deck approach to tackling the changes that are urgently needed.*¹³⁸⁵

*Participants also spoke about marrying conversations surrounding sustainability more broadly. Often, food-specific discussions and climate-specific discussions focus on the same issues in separate forums. The food and agriculture system needs to be brought fully into the global conversation surrounding the climate crisis at forums like UNFCCC's COP. The industry should acknowledge its role in the global environmental, human health, and social justice crises, and also recognize its potential as a powerful solution for those same crises.*¹³⁸⁶

*In the case of the Brazilian participants and speakers new relationships were created as they did not know each other but found enough shared interests (and challenges) to express their commitment to develop the relation further. Likewise, researchers based in Europe and in Brazil committed to translate the book 'Roca e Vida' from Portuguese to English as a way to honor and value local agricultural knowledge, and in particular, the dissemination of the traditional agricultural system of the Quilombo communities in the Ribeira Valley in Brazil to non-Brazilian settings.*¹³⁸⁷

Well-being of people living in cities improved by permaculture and regenerative approaches to produce food. Expansion of awareness and education about the origin and means of production of food. Gardening as a 'perfect melting pot for communities' to learn together and lead more healthy lives. This is possible through:

- *Peer-to-peer marketing that helps to reconnect people with food through showcase by growers in local areas.*

- *Emphasis on local production reduces CO2 for food transport.*
- *Farming and taking time to prepare the soil derives in mental health benefits.*
- *Besides growing own food, surplus and replication of urban farming model can become profitable activities in a small scale.*

¹³⁸⁴ 315:23 p 9 in 551_July_15_21_FAO_ESCAP_Multi

¹³⁸⁵ 316:18 p 8 in 553_July_15_21_Food Tank_Oatly

¹³⁸⁶ 316:23 p 9 in 553_July_15_21_Food Tank_Oatly

¹³⁸⁷ 317:5 p 6 in 554_July_15_21_Lopez DE

- *Get children involved in the recovery and caring of empty lots or ‘dead spaces’ in the cities to educate future generations with different values.*
- *Create digital content on YouTube and social media.*¹³⁸⁸

Some of the ideas in transforming the society beyond feeding the society is as follows: 1. Developing community-based agriculture that leverage on local biodiversity.

2. Developing opportunities for indigenous communities, including on being part of the organic food production.

3. Building an ecosystem with incentives to foster multi-stakeholder effort.

4. Urban farming as a solution for the urban poor to obtain some nutritious food items, requiring policy action and civil society movement.

*5. Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.*¹³⁸⁹

*Green technology is still more expensive than fossil fuels, so in the context of economics small farmers are already at a disadvantage. We need to protect small farmers – whether they are profitable or not. However, this is clearly at loggerheads with a State Government’s responsibility to feed its population. Nevertheless, this still begs the questions is producing nutrient dense food more important than simply feeding a population processed food? What will be the medical and/or health implications of this in the future? Are we simply delaying an even bigger health crisis? These are all questions that need to be redressed at an international and a State level.*¹³⁹⁰

*However, small farmers can take practical step themselves to advance their livelihoods. For instance, by collaborating with one another, via cooperatives, to have a larger more enhanced voice in policy discussions and to be able to access bigger markets and partnerships.*¹³⁹¹

*However, the more universal solution to this would be the implementation of more consistently applied international standards for agricultural production, supply and distribution. That can only be achieved by an international organisation, such as the United Nations, taking ownership of the many challenges and issues currently presented by the global agricultural sector and working with all of the relevant stakeholders to achieve a more sustainable future both for us and for our planet. For example, it was noted that on a global scale there is a clear lack of safety nets for small farmers, especially in developing nations, that would ensure that they are enabled to bounce back after periods of protracted uncertainty and disarray such as has been seen during the COVID-19 pandemic.*¹³⁹²

¹³⁸⁸ 317:14 p 8 in 554_July_15_21_Lopez DE

¹³⁸⁹ 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

¹³⁹⁰ 323:30 p 11 in 560_July 19_21_Arbuthnott_Multi

¹³⁹¹ 323:35 p 12 in 560_July 19_21_Arbuthnott_Multi

¹³⁹² 323:37 p 13 in 560_July 19_21_Arbuthnott_Multi

*Platforms for stakeholder engagement and as “space” or “hubs” to influence change, foster collaborative action, and deploy knowledge resources and tools for supporting transformative action. This is key to fostering engagement between line ministries (e.g. agriculture, forestry, environment, and water resources) and between government agencies, businesses, and financial institutions. The challenge is ensuring the long-term efficiency of such platforms, which requires time for building trust with professional facilitation.*¹³⁹³

*Chance to associate community canteens with the school meals program, including as distribution centres, which aided logistics and removed the need for farmers to have working capital dedicated to sales. The canteens buy the products that are later sold to the schools. There is experience of this: a network of 27 canteens that operate, 5 of which are on indigenous lands and Conservation Areas in the north of the country, and provide this service;*¹³⁹⁴

*School Meals Council – Instrumentalization from the CECANES (School Meals and Nutrition Centres) as a neutral agent in the management, with a corporate control mission. Create permanent forums with commitments from managers and participation of parents.*¹³⁹⁵

*Prioritized actions to be proposed to private actors: 1) Need for actors in the supply chain to work towards integration in order to make use of products that are currently surplus production or industrial by-products. 2) Integrate FF with consumers, based on the example of agroecology experiences. 3) Work to develop waste collection for the production of organic fertilizers that return to production quickly and efficiently (community organizations, in small neighbourhoods or towns). 4) Organizations/cooperatives, funding actions to reduce waste.*¹³⁹⁶

*The building of a national project, "Food Systems of the indigenous peoples of Venezuela", was identified as a priority for action in order to mitigate the effect of global disruption caused by the Covid pandemic, eradicate the structural inequality caused by welfare food policies, build intercultural and sustainable food policies.*¹³⁹⁷

*We need a group of countries that collaborate and create an alliance to establish global models, and it would serve to put it under discussion, give transparency to the balances and demonstrate the transformational perspective.*¹³⁹⁸

From this dialogue space we agreed to strengthen the relationships between the FAO and rural social organizations, which remain at the grassroots. Social organizations declare

¹³⁹³ 327:4 p 6 in 564_July_20_21_Bakarr_MI

¹³⁹⁴ 339:39 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

¹³⁹⁵ 339:79 p 17 in 393a_June_01_21_Food of Tomorrow_Eng

¹³⁹⁶ 340:26 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

¹³⁹⁷ 343:7 p 6 in 417a_June_18_21_Fernandez L_Eng

¹³⁹⁸ 344:4 p 7 in 418a_June_18_21_CLOC_Eng

that they must have the ability to influence governments and not the governments influencing FAO.¹³⁹⁹

This demand must be established and discussed with governments to generate public policies that commit to food sovereignty, ensuring healthy, sustainable, inclusive production. Good food is the best medicine. [...] Organization must be the most important task. We need to be organizational promoters in unions and coops, the organization being what endures over time. This provides jobs in different economic, social and political sectors.¹⁴⁰⁰

Operation: • Local markets, points of sale, and FA e-commerce. • Subsidies to FA for roles in addition to production. • Special credits to FA for processing and commercializing. • Businesses and industries must implement transparent supply contracts with FA. • Businesses and industries must form development tables with FA and authorities, to improve the system. • Banks must consider the specificities of FA, looking for new ways to access credit.¹⁴⁰¹

Create strategic alliances between small, medium and large-scale processors to add value to perishable products, incorporating those integration and support policies for companies and producers, which include security and timely payment. Check. Observe. Narrative suggestion: Add productive chain.¹⁴⁰²

...examples of projects and initiatives that are already being carried out were mentioned, such as the Food Bank, the Alimentistas initiative, the Lloverá foundation, and many others that have ties or relationships with each other and with other organizations for connecting donors with the non-profit organizations that can deliver the food to the end recipients. There are also institutional projects such as the PIMA-CENADA wholesale center where 16 registered organizations work together with volunteers to collect and redistribute products that concessionaires donate or wish to redistribute in an orderly manner. It was also mentioned that there are already multisectoral alliances and platforms such as the Costa Rican Network for the Reduction of Food Loss and Waste that promote the issue and analyze it in spaces such as today's, keeping in mind other possibilities for direct alliances with the Institute for Training and Research and the Red Cross and its campaigns, among others.¹⁴⁰³

A third and final aspect was focused on participants, considering: in addition to key donation participants (companies and businesses that provide food services, primary producers and producers on various scales, markets, recipient organizations, etc.), it was considered important to involve consumers as potential donors and volunteers, municipalities as managing entities (they could carry out campaigns, structure processes, give information, etc.), universities (for training and expansion on various topics such as post-harvest management and the handling, processing and management of waste),

¹³⁹⁹ 344:6 p 7 in 418a_June_18_21_CLOC_Eng

¹⁴⁰⁰ 345:8 p 7 in 419a_June_08_21_CLOC_Eng

¹⁴⁰¹ 347:10 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

¹⁴⁰² 350:7 p 6 in 424a_June_28_21_PROLIDER_Eng

¹⁴⁰³ 352:4 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

*Boards of Education and other public entities that are in some way related to food distribution programs (so that they also follow good practices and/or join in donating), ministries of various types (economy, finance, commerce, primary and industrial production, environment, social assistance, health), international organizations, and existing cross-industry networks.*¹⁴⁰⁴

Coordination

*The Food Industry will continue to be available to work with all sectors that contribute to maintaining food systems, but it is necessary to put aside preconceptions in order to regain confidence.² It is necessary that all sectors involved in strengthening fragile food systems and the strongest systems reduce their egos so as to be up to the task to face a new way of working imposed by the Pandemic that follows that humanity is a team and it must behave as such.*¹⁴⁰⁵

*Advocate and promote the articulation of entities from all sectors and levels: Promote community processes that foster articulation and therefore advocacy. Training spaces should be opened to accompany more young people so that they have greater impact and women should be present in all the axes of production.*¹⁴⁰⁶

*Encourage linkage between coops at various levels and scopes. First, by the promotion and establishment of second-level coops (coops of coops) to strengthen capabilities and facilitate marketing and advocacy capacity. Second, through the promotion of coops in production chain links and their inclusion for added value and establishment of chains of coops. Third, placing emphasis on the connection between the producer and consumer organizations that make up the urban-rural territories.*¹⁴⁰⁷

*Collaborate with different agencies – national, local, municipal, NGOs and the private sector. Successful projects cannot be implemented without collaborative effort.*¹⁴⁰⁸

*We need to "work collaboratively - not in silos", "give the industry a voice" and "create a communication network of all parties including Iwi/Te Ao Māori", loosely translatable as 'Māori tribes/the Māori way of looking at things'.*¹⁴⁰⁹

Farming unions, landowners and schools need to work together to improve access to land for children and encourage them to consider agriculture or horticulture as a career. Schools and agricultural colleges, along with other further education colleges, also need to ensure that their students understand food, including how to cook: a sustainable food production education programme was suggested. Advisory organisations should support

¹⁴⁰⁴ 352:11 p 9 in 567a_July_21_21_FLWRN_FBN_Eng

¹⁴⁰⁵ 511:6 ¶ 261 – 262 in 083a_May_27_21_Leiva M_Eng

¹⁴⁰⁶ 523:6 p 7 in 113a_July_06_21_Fernandez I_Eng

¹⁴⁰⁷ 525:6 p 10 in 122a_July_13_21_RIMISP_Eng

¹⁴⁰⁸ 9:21 p 8 in 171_Mar_31_21_Atilano C

¹⁴⁰⁹ 18:8 p 8 in 114_Apr_19_21_Maurer H_Roskrug N

current and future farmers to develop the appropriate skillsets and mindsets to enable them to innovate and thrive.¹⁴¹⁰

All the groups had ideas that require the co-operation of various elements of the food and farming systems. Perhaps the call for a National Food Strategy sums this up best.¹⁴¹¹

Farmers and growers must work together, both with similar producers and across sectors, while the wide variety of organizations and advisers from the farm, food and business sectors must also work to join these functions up. Of course, government and policymakers were seen as key enablers in linking these elements together, for example by using food policy as a way of addressing sustainability and health issues in Wales. The media has a role in telling the truth about food, its sources and benefits, particularly in ways that are relevant to Wales and Welsh consumers, although it was also recognized that everyone can contribute to public awareness and the national debate. The difficulties of cross-sectoral working are not underestimated, and it is suggested that Holistic Goal Setting is a useful tool to ensure that everyone is on board and has the same understanding; it is important to establish this first before moving to actions or projects.¹⁴¹²

Enhance coordination with all stakeholders to focus efforts on improving situation.¹⁴¹³

Government coordination and public finance to de-risk investments from the private sector • “Green growth” business transition, incubation and acceleration support for local entrepreneurs and businesses.¹⁴¹⁴

Administration of the agricultural sector should be more state-led. The Federal Ministry of Agriculture and Rural Development needs to be slimmer at the top and more resources funneled to the state and local government level.¹⁴¹⁵

Increased coordination by regional bodies to develop road maps on priority sectors for development in the agriculture space that can guide entrepreneurs and investors. “One” voice/body would give the different stakeholders confidence but should also be resourced appropriately to support acceleration of investment activity and ultimately crowd in investors from across the capital structure (i.e., business development teams to work with entrepreneurs, structuring of incentives/grants, etc.).¹⁴¹⁶

Panelists noted that better coordination among government ministries is crucial because support for food systems requires the support of multiple ministries.¹⁴¹⁷

Food rescuing: One of the main barriers is the Ministry of Health restrictions on the use of reusable utensils and on the use of saved food for the feeding program. The MOH

¹⁴¹⁰ 20:18 p 9 in 116_Apr_21_21_Hein JR

¹⁴¹¹ 20:19 p 10 in 116_Apr_21_21_Hein JR

¹⁴¹² 20:24 p 10 in 116_Apr_21_21_Hein JR

¹⁴¹³ 30:13 p 6 in 071_Mar_11_21_ESCWA_FAO

¹⁴¹⁴ 37:16 p 8 in 097_Mar_30_21_EcoAgriculture Partners

¹⁴¹⁵ 44:31 p 11 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

¹⁴¹⁶ 46:20 p 10 in 049_Feb_23_21_SAFIN_Multi

¹⁴¹⁷ 56:24 p 8 in 006_Dec_16_20_UNDESA

*requirements for school caterings are for a variety of 4 fruits and vegetables a week, which cannot be controlled when using rescued food. This problem can be solved by communicating and cooperating between authorities.*¹⁴¹⁸

*We have to tackle this issue in a holistic way to help all stakeholders join for the good of all. 8. There is a lack of a national holistic food policy. Each ministry works independently without any coordination.*¹⁴¹⁹

*A need for cross-departmental cooperation has also been identified as important in creating holistic and meaningful policies.*¹⁴²⁰

*All governments (department of agriculture, trade, health, urban development, rural affairs, etc.) should ensure policy coherence, synergy and compatibility, and have common aims when it comes to food.*¹⁴²¹

*Participants want to form a cooperative or association to quickly sell their products to people from cities and even other countries as well as purchase processing equipment to produce attiéké on a large scale.*¹⁴²²

*Both private actors and Food Banks must invest on trust, shared goals, legal agreements, a clear and frank communication, a more efficient coordination, long-term relations, raising local awareness, engage volunteers from the Companies, rely on Food Banks' logistic ability and invest on skills.*¹⁴²³

*But how Food Banks would like to be seen in the future? Food Banks are not the producers or the users – Food Banks are the dotted line that connect the needs. This connection of need is something really powerful to communicate. The bigger role of FEBA is to continue the discussion on this topics as an opportunity to look at branding and reposition ourselves in the hearts and minds of the stakeholders and looking at having a shared language. There is a new role for Food Banks as very important actors in the food system that can work towards a more sustainable future where it is important to build a common understanding. It is a very complex environment where build awareness is a key. The lack of understanding, where complexity is the enemy, can be damaging and limiting the future growth. Food Banks need to reframe the narrative to improve understanding and build broad-based support. Time is right to reframe and reshape Food Banks' position and it is time to go!*¹⁴²⁴

*Government • An agreed definition on what is “food waste” • Measure food waste to create a national baseline and track progress • Cross-collaboration within government departments: MfE, MPI and others...*¹⁴²⁵

¹⁴¹⁸ 64:36 p 8 in 041_Feb_17_21_Adler D

¹⁴¹⁹ 64:75 p 12 in 041_Feb_17_21_Adler D

¹⁴²⁰ 65:9 p 6 in 050_Feb_23_21_World Vision Ireland

¹⁴²¹ 65:10 p 7 in 050_Feb_23_21_World Vision Ireland

¹⁴²² 71:24 p 33 in 033a_Feb_6_21_Serge BDS_ENG

¹⁴²³ 81:7 p 8 in 145_May_6_21_Vandenschrik J_Multi

¹⁴²⁴ 81:9 p 9 in 145_May_6_21_Vandenschrik J_Multi

¹⁴²⁵ 87:3 p 7 in 173_Mar_25_21_Mayne A

*They can help connect people with the moral and compassion argument to respecting food, the planet and natural world that provides that food and ultimately changing consumption patterns. Progress can be assessed through the number of faith/indigenous leaders connected with and the number of sermons/talks given educating on food consumption behaviors.*¹⁴²⁶

*Importance of synthesising different positions (maintaining the evidence-based approach), the need to reflect on the difference between multi-stakeholderism vs. multilateralism (and how to organise the dialogue with civil society), the importance of learning from more localised experiences (where participation seems to be more effective and it is often easier to connect food system actors).*¹⁴²⁷

*He believed that only by cooperation could we achieve the sustainable development of the global food system.*¹⁴²⁸

*The participants proposed that they could support these changes by ensuring a greater level of consensus on core messages, by embedding healthy food and nutrition in institutional structures and by seeking out common ground and building on it. It was proposed that cooperation between the relevant government ministries (Department of Agriculture, Food & the Marine and Department of Health) be strengthened and that efforts be reinforced to work towards agreement on the national 2030 Agri-Food Strategy.*¹⁴²⁹

*Donor coordination in developing countries is also key, otherwise different donors push different solutions, none of which become possible to take to scale so we must identify locally those projects that would benefit most from being scaled up. Donor coordination in developing countries is also key.*¹⁴³⁰

*Convening of a coalition of PDBs to share knowledge and experiences, including, but not limited to, mobilization and application of green finance in the food and agriculture sector. Such a group could help to set and promote the adoption of shared standards for the measurement and verification of what constitutes 'green' finance in the sector.*¹⁴³¹

*Partnership roundtable discussions at sectoral or national level to enhance coordination amongst PDBs and other actors.*¹⁴³²

*Other outcomes included the need for institutional coordination, specifically reconciling donor interests with nation state and regional/local institutional interests.*¹⁴³³

¹⁴²⁶ 92:7 p 8 in 225_May_13_21_Schwartz A

¹⁴²⁷ 95:7 p 7 in 252_Apri_29_21_EU Commission

¹⁴²⁸ 105:2 p 10 in 176a_Mar_25_21 AGFEP

¹⁴²⁹ 112:25 p 7 in 074_May_18_21_O'Mara_Teagasc

¹⁴³⁰ 113:39 p 11 in 075_Mar_10_21_IFAN

¹⁴³¹ 115:6 p 6 in 085_Mar_17_21_IFAD_FSFS

¹⁴³² 115:26 p 10 in 085_Mar_17_21_IFAD_FSFS

¹⁴³³ 117:4 p 7 in 109_Apr_13_21_Jacobs-Mata I

Regional organisations become important players in coordinating regional priorities and also sharing needed knowledge on food security, resilience etc.¹⁴³⁴

Water transboundary- providing support and coordination across countries...¹⁴³⁵

A lack of political will and direction is also seen as a large coordination issue. The WEF nexus requires institutional buy in that requires ministries to work together, and often requires direction from the highest level of government. This is especially important when dealing with different spheres of governance, but also on trans-boundary issues.¹⁴³⁶

Regional coordination, alongside the systems approach, can help avoid issues of inward looking policies that may be detrimental to a country in the long-run.¹⁴³⁷

Governments to work across ministries to reach common goals in different sectors, to create an enabling environment for investments, and to redirect public finance support towards food systems that add instead of subtracting value through hidden costs.¹⁴³⁸

Supply chain players need to interact differently with (new) players in their value chain by getting out of silos, even within organizations by including finance teams and getting conversation within mainstream. It is essential to have intercompany as well as intracompany collaboration...¹⁴³⁹

Another intervention was about the importance of creating an interdisciplinary cross-cutting multi ministry approach, in order to get better metrics (what is wanted to be achieved), but also a better joint work between ministries from different countries, since currently, their work is quite fragmented.¹⁴⁴⁰

The ideal state would be to coordinate with industry/national advisory boards to develop and adopt generally-accepted climate/natural capital accounting and valuation methodologies; climate-related financial risk disclosures.¹⁴⁴¹

Policy makers and stakeholders must work together in a coordinated approach to tackle these issues and ensure systemic change.¹⁴⁴²

Dialogue participants emphasized improving policy coherence among key ministries through better inter-sectoral coordination and capacity building and raising awareness among researchers, policymakers, government officials, and farmers about the benefits of

¹⁴³⁴ 117:25 p 10 in 109_Apr_13_21_Jacobs-Mata I

¹⁴³⁵ 117:33 p 10 in 109_Apr_13_21_Jacobs-Mata I

¹⁴³⁶ 117:44 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁴³⁷ 117:45 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁴³⁸ 118:10 p 6 in 117_Apr_22_21_Dinesh D_Multi

¹⁴³⁹ 118:52 p 11 in 117_Apr_22_21_Dinesh D_Multi

¹⁴⁴⁰ 118:58 p 12 in 117_Apr_22_21_Dinesh D_Multi

¹⁴⁴¹ 118:62 p 12 in 117_Apr_22_21_Dinesh D_Multi

¹⁴⁴² 120:2 p 5 in 127_May_13_21_IJAFN_CWFS

*WEF nexus modelling approaches to optimise agriculture production in the Indus Basin.*¹⁴⁴³

*Devise an effective and improved coordination mechanism for provincial and federal department to discuss ways to make our food systems more resilient...*¹⁴⁴⁴

*Finally, this session identified the silos that exist and limit the usefulness of WEF models at present, so our organizations need to work together to maximize the impacts of outputs derived from modeling and data management exercises. Thus, coordination on the international research side is also required.*¹⁴⁴⁵

*Discussants came up with various solutions and strategies to support water security in Egypt over the next three years. It was suggested that better coordination within and increased authority of existing inter-ministerial committees would be more efficient than building new structures from scratch. A discussant mentioned that in some cases committees had a very well-established development plan that was affected by the lack of coordination between ministries and agencies.*¹⁴⁴⁶

*Institutions need a more efficient coordination to optimize water and food security goals.*¹⁴⁴⁷

*The need to generate what a Common understanding of what Food Systems Resilience implies. This will include communication and the need for coordination in capturing and disseminating information and data across all levels and geographies...*¹⁴⁴⁸

*It's critical to connect the dots: Intergovernmental processes need to be better connected, such as COP and FSS. The food system is a huge contributor to the climate crisis, and there is so much potential to address that issue jointly, but connections being made are not visible...*¹⁴⁴⁹

*Multiple actors working on digitalisation in agri-food should take responsibility to develop this sector further to deliver on food security outcomes. They can grasp opportunities to improve the performance of this sector through cooperation. The Netherlands should invest in digitalisation as a contribution to food security, and Dutch actors can share their broad experience in this domain with LMIC actors. Stakeholders working on digitalisation and mainstream organisations need to capitalize on their differences. Introducing technology and creating infrastructure is only one aspect, adoption of digital tools by farmers requires cooperation between different actors.*¹⁴⁵⁰

They came up with ideas such as empowering local authorities/reinforcing capacity building in food governance; tackling the lack of coordination among actors; fostering

¹⁴⁴³ 127:4 p 7 in 159_Apr_21_21_Hafeez M

¹⁴⁴⁴ 127:22 p 10 in 159_Apr_21_21_Hafeez M

¹⁴⁴⁵ 127:51 p 14 in 159_Apr_21_21_Hafeez M

¹⁴⁴⁶ 132:27 p 9 in 193_Apr_19_21_Ringler_Kassim

¹⁴⁴⁷ 132:29 p 9 in 193_Apr_19_21_Ringler_Kassim

¹⁴⁴⁸ 133:21 p 9 in 196_Apr_20_21_Attah-Krah K

¹⁴⁴⁹ 138:27 p 11 in 214_May_05_21_50by40

¹⁴⁵⁰ 141:24 p 12 in 229_May_18_21_NFP_Rabobank_Multi

*collaboration with universities/experts; reinforcing/investing in food logistics and finally ensuring participatory and inclusive food system in Africa.*¹⁴⁵¹

*Coordinate across countries to establish governance structures and learning networks that support and facilitate nature-positive production techniques, keeping in mind that there are no one-size-fits-all solutions.*¹⁴⁵²

*Increase coordination efforts – necessary to partner and scale up the action...*¹⁴⁵³

*This Digital Roadmap will need high-level coordination if it is to be successful.*¹⁴⁵⁴

*This could be achieved through better co-ordination and meaningful collaboration to ensure the development of tools that present real value to end users...*¹⁴⁵⁵

*...strengthening business strategies to establish alliances and cooperation between various stakeholders (technology sector, financing, NGOs etc.) was considered as a priority...*¹⁴⁵⁶

*Improve fortification governance and coordination mechanisms...*¹⁴⁵⁷

*Multi-stakeholder dialogue, coordination across sectors and among policy arenas are required to articulate concrete and holistic measures capable of rebuilding food systems from the grassroot-level...*¹⁴⁵⁸

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030. People are individuals living in individual communities – as a result we need more global, granular level detail around the perceptions and behaviours to determine who people trust, the corresponding communication methods and the channels required to overcome challenges around accessibility of information. There is no one-size fits all solution, but we should look at broader education about food and more transparent communications which are tailored to communities and which people can understand and trust. In many parts of the world, the consumer, who may be facing significant economic and environmental challenges will be under pressure around the food decisions they make so public stakeholders together with the private sector need to collaborate to develop better standardization and certification. This in turn will also increase trust.*¹⁴⁵⁹

Networked and joint/coordinated action between various civil society actors, managers, and researchers, for the development of actions, monitoring, and follow-up of results, and generation of data and information in a transparent manner. Greater approximation

¹⁴⁵¹ 151:29 p 9 in 261_May_03_21_Carrara_Le More

¹⁴⁵² 161:46 p 8 in 296_May_25_21_Battista W

¹⁴⁵³ 163:113 p 15 in 300_May_27_21_Alesso_Pommeret

¹⁴⁵⁴ 170:49 p 12 in 328_May_19_21_Lalor_Teagasc

¹⁴⁵⁵ 170:61 p 12 in 328_May_19_21_Lalor_Teagasc

¹⁴⁵⁶ 184:8 p 6 in 342_May_28_21_Peralta T

¹⁴⁵⁷ 193:28 p 9 in 351_June_03_21_CIF_Multi

¹⁴⁵⁸ 205:20 p 9 in 364_May_26_21_DPIHD

¹⁴⁵⁹ 207:11 p 8 in 366_May_27_21_Cumbers S

*between farmer and consumer groups, and greater articulation between the various social movements that work on issues related to food.*¹⁴⁶⁰

*An important finding that emerged from the roundtable was the general agreement on the need for strengthened regional cooperation to foster sustainable food systems at different levels (harmonization of legal frameworks, setting of standards, trade, sharing of data, knowledge and best practices, promotion of regional models, etc).*¹⁴⁶¹

*The need for more participation from Southern/Eastern countries in the coordination and co-ownership of funded research projects was also pointed out. The necessity of setting an equal balance among diverse stakeholders in the co-development and governance of multi-stakeholder partnerships such as the SFS-MED Platform emerged as a key challenge. It was considered critical to have all stakeholders on the same playfield since the inception of the partnership, in order to avoid top-down decisions.*¹⁴⁶²

*They brought together 35 organizations across sectors in order to break down the silos of conversations. They have crafted four ambitions for Wales: i) land use that leads to revitalized connections between the land, air and water that optimizes positive impact for nature, community and carbon; ii) the Welshe food system is optimised for the wellbeing of citizens, community and nature; iii) the hidden voices of nature and future generations are present for all decisions in government and business; and iv) integrating community and nature in the delivery of scaled-up prevention to improve wellbeing outcomes.*¹⁴⁶³

*1 Breaking down policy siloes in the US that are relevant for both health and agriculture. The Food and Drug Administration manages drug use and approvals, antibiotics for animal production and aquaculture, monitors chemical use on vegetables, food safety parameters (e.g. safety of compost). The US Department of Agriculture monitors for meat, soil, land conservation with the Natural Resources Conservation Service, Agriculture Marketing Services. Pesticide safety and approval lies with EPA, so do manure and antimicrobial cleaners. And these are not areas that overlap or converse with each other. For example, health is not frequently part of conversations at the USDA. Antibiotic use has been a uniting topic as there have been inter-agency panels with the CDC. 2. The ability for recent policies to bring these separate departments and advocacy groups together, such as carbon banking or true cost accounting. 3. Low hanging fruit opportunities for policy. For example, 23 states still have subsidies for fossil fuel based fertilizers as they are tax exempt. This should be the opposite to tax fossil fuel inputs and chemicals that are damaging towards nutritious food and ecosystems. Another example includes EPA regulations that make it easier to spray antibiotics on crops where there is no proof of its utility.*¹⁴⁶⁴

The second champion, Dr. Glenn Gregorio of SEARCA, viewed food systems transformation from the perspective of improving the agricultural research and

¹⁴⁶⁰ 228:8 p 6 in 222a_May_11_21_FTI_ZHI_English

¹⁴⁶¹ 244:17 p 8 in 480_June_21_21_CiHEAM_Multi

¹⁴⁶² 244:19 p 9 in 480_June_21_21_CiHEAM_Multi

¹⁴⁶³ 249:12 p 8 in 485_June_22_21_Levesque_SD

¹⁴⁶⁴ 249:38 p 15 in 485_June_22_21_Levesque_SD

*development pipeline of technology generators, adopters, and end-users. By strengthening the academe-industry-government linkages through research collaboration and co-sharing of resources, the delivery of innovation from research to market can be expedited...*¹⁴⁶⁵

*Stakeholders involved in investments approached the issue of sustainability in two ways. First, by focusing on production systems that provide tangible benefits to investors and end-users; and then via a more transformative approach that incentivizes broader sustainability impact within a longer timescale. These pathways generally align with short- and long-term views on food systems transformation, and can be implemented in parallel if there is coordination and collaboration among the relevant sectors.*¹⁴⁶⁶

*Most participants agreed that governments and industry have the greatest power to drive sustainable systematic change. However, all stakeholders need to engage and collaborate to make change possible.*¹⁴⁶⁷

*More collective voice and coordination across existing smaller-scale innovators, such as community-based initiatives and entrepreneurs (often overstretched and underfunded) to share skills and resources, and demonstrate collective impact and value. Perhaps starting with a national union of community initiatives...*¹⁴⁶⁸

*Participants shared various business models that were successful in their experience. These ranged from public sector support and coordination to private sector involvement, as well as multiple stakeholder approaches, namely those stressing the linkages between youth farmers and agribusinesses and the conditions necessary to enable this.*¹⁴⁶⁹

*Data architecture and infrastructure is a recurring and critical problem in the food systems space. We need improved coordination across scales and methodology...*¹⁴⁷⁰

*These include more long term and flexible funding, pooled funding and transparency around what different organizations are planning so that coordination can take place...*¹⁴⁷¹

*Understanding that the aid architecture for protracted crises would need to improve for humanitarian and development efforts to align has been there for a long time. In that time there has already been change in this direction. Currently there is agreement among some like-minded donors that a much better coordinated approach is necessary.*¹⁴⁷²

Connecting to existing mechanisms and institutions - Connect to existing mechanisms for NGO coordination, like the Food Security and Livelihood Clusters, local/national

¹⁴⁶⁵ 254:6 p 6 in 490_June_22_21_Yasmi Y

¹⁴⁶⁶ 254:30 p 11 in 490_June_22_21_Yasmi Y

¹⁴⁶⁷ 256:5 p 6 in 492_June_23_21_Liu JA

¹⁴⁶⁸ 259:18 p 9 in 495_June_23_21_Forum for the Future

¹⁴⁶⁹ 272:22 p 8 in 508_June_30_21_GDPRD

¹⁴⁷⁰ 274:2 p 6 in 510_June_30_21_ACFSR_Multi

¹⁴⁷¹ 278:12 p 7 in 514_July_01_21_Bolling_Multi

¹⁴⁷² 278:17 p 8 in 514_July_01_21_Bolling_Multi

*universities and research institutes, to develop strong coordination and a joint approach.*¹⁴⁷³

*Mobilization builds cross-sectoral and cross-service dialogue and coordination to reduce fragmentation between public, private, NGO, and producer organizations so small-scale producers do not fall through the cracks, where collective action is led by farmers to improve service provision from all angles and provide programmatic examples that can be scaled to a broader framework/approach.*¹⁴⁷⁴

*Greater coordination between governments and civil society responses should be established to ensure that policies better reflect differentiated needs, and those most impacted can access relief and recovery programs.*¹⁴⁷⁵

*Effectively coordinate AE stakeholders by agroecology Hub in Tanzania.*¹⁴⁷⁶

*In inner areas, property is fragmented and soils unproductive; actor-to-actor coordination along the food chain helps achieve scale and upgrading to higher-value activities. The cases showed that, alongside traditional cooperatives, new contracts forms can respond to diverse needs (like the “network contract”).*¹⁴⁷⁷

*Sustainable food systems also require changes in non-food sectors. Community cooperatives (CC) are an innovative coordination form to manage common goods (i.e., abandoned public land) and generate value for the community. In many cases, the CC established for a specific objective (e.g., integrating migrants) grew to manage other areas like public housing, agri-processing, marketing, training and tourism.*¹⁴⁷⁸

Alignment with and implementation of dietary guidelines across multiple sectors is essential: Participants highlighted a wide range of opportunities across sectors such as schools and child care; the health sector; food marketing; the local built environment; food assistance programs; agricultural and trade policy. Within this, several points were highlighted: – Multi-sectoral progress requires government action to set policy and regulations, provide guidance and lead by example, e.g. through public sector procurement and catering policies. – At minimum, all relevant sector policy should ensure alignment with dietary guidelines in preference to industry-led / voluntary schemes. Sector leaders can also take steps independently to innovate and implement best practice, for example R&D into meat and dairy alternatives with demonstrated health and sustainability advantages. – Ensuring clear and easy to understand front-of-pack labelling to help guide both healthy and sustainable food purchasing: there is an opportunity to extend, strengthen and potentially mandate existing schemes. – Prompt steps should be taken to align catering, curricula, procurement and other programs with

¹⁴⁷³ 278:73 p 14 in 514_July_01_21_Bolling_Multi

¹⁴⁷⁴ 299:28 p 8 in 535_July_08_UNESCO Chair on Food

¹⁴⁷⁵ 302:18 p 8 in 538_July_09_21_IDS_Multi

¹⁴⁷⁶ 305:10 p 8 in 541_July_12_21_AEHT

¹⁴⁷⁷ 306:5 p 6 in 542_July_12_21_Prota_L

¹⁴⁷⁸ 306:8 p 6 in 542_July_12_21_Prota_L

*dietary guidelines within hospitals, schools, universities, workplaces and other institutions.*¹⁴⁷⁹

*The cooperation and engagement among international community, national governments, private sectors, and social organizations are critical for reducing food loss and waste. More efforts could be focused on 1. Enhancing food supply chain with efficient inputs 2. Building systemic technologies achieving food loss and waste reduction through food chain covering post-harvest, storage and warehousing, processing, transportation and distribution, and consuming section. 3. Strengthening advocacy for food loss and waste reduction (e.g. global initiative) with more active engagement of UN agencies, NGOs, and private sectors.*¹⁴⁸⁰

*Finally, the Dialogue centered on the theme that there is no one-size-fits-all for the food system. Rather than searching for a silver bullet, it's imperative that all players focus on supporting family farmers, sustainable agricultural practices, education, and other investments to help incentivize making a radical change towards a healthier future. Moving forward, sustainable food businesses must maintain this open conversation and continue to challenge each other.*¹⁴⁸¹

*National Forum for Dryland Food Systems could be established in countries with large dryland areas to catalyze activities of all the dryland food system stakeholders. The forum could work with its respective Governments to develop and enforce policies for the betterment of dryland research and extension.*¹⁴⁸²

*Importance of partners providing coordinated support towards Government's prioritized actions ...*¹⁴⁸³

*Partners coordinate on advocacy for Government's consideration of policy priorities ...*¹⁴⁸⁴

*Establishment of a decentralized agency focused on nutrition to drive coordinated actions towards nutrition interventions ...*¹⁴⁸⁵

*Producers (farmers and ranchers) need financial and technical assistance to help de-risk the transition to more sustainable practices. It will take a coordinated, multi-factor approach (banks and lenders, insurers, CDFIs, government, food and ag brands, agri-business corporations, others) and agreed standards to ensure the transition is accessible and equitable for producers.*¹⁴⁸⁶

The marketplace thrives on a variety of production, processing, delivery, and marketing systems. Working together and having a unified message in agriculture is critical, no

¹⁴⁷⁹ 312:22 p 10 in 548_July_14_21_Genoni A

¹⁴⁸⁰ 315:23 p 9 in 551_July_15_21_FAO_ESCAP_Multi

¹⁴⁸¹ 316:11 p 6 in 553_July_15_21_Food Tank_Oatly

¹⁴⁸² 321:21 p 12 in 558_July_16_21_RICH_ICRISAT

¹⁴⁸³ 330:21 p 6 in 568_July_21_21_Cooper-Liverpool M

¹⁴⁸⁴ 330:22 p 6 in 568_July_21_21_Cooper-Liverpool M

¹⁴⁸⁵ 330:74 p 13 in 568_July_21_21_Cooper-Liverpool M

¹⁴⁸⁶ 335:4 p 2 in 484a_June_24_21_WBCSD_USFRA

matter what production system works best for any one farm or ranch, to ensure lower costs at the foundational level of food production.¹⁴⁸⁷

Innovation and technology as great allies. All participants stressed its importance during the discussion, and indeed, innovation will be key in the future to ensure more efficient, productive, resilient, and safer crops. Therefore, it is essential to promote R&D initiatives to develop this type of crop at an affordable price for small producers. On the other hand, the digitization and scalability of technological solutions along the supply chain represent a great opportunity, both in terms of natural resources optimization and traceability, data reliability, and collaboration.¹⁴⁸⁸

Need for joint and coordinated actions between various stakeholders and authorities which comprise the execution ecosystem for school meals, such as government departments, federal regulators of the school meals program and technical assistance, academia and organized civil society, in order to allow continuity of school meals within the framework of the national policy that ensures it is free of charge, universal, nutritious and also fosters local, family and traditional food production.¹⁴⁸⁹

•Many public institutions have gathered information, however, there is still no common repository or initiatives promoting inter-ministerial programs and projects. •The welfare vision solves the acute issue, but not the chronic problem; an inter-institutional repository would allow for informed and joint decision-making in order to address the issue of access to healthy food in a more permanent way. The approach must shift from a welfare focus to one of capacity building.¹⁴⁹⁰

There is a need for a national inter-institutional repository with free access to statistics and censuses regarding the state of Food and Nutrition Security (FNS). There is also a need for programs and projects to coordinate actions.¹⁴⁹¹

In order to promote food security, it is important to achieve better coordination (governance) between the institutions responsible for the case.¹⁴⁹²

Improve productivity from a sustainable point of view, thus allowing for better access to food through institutional coordination. • Strengthen the existing mechanisms of the ministries of the entities or institutions in charge, which would allow for better coordination. • Create mechanisms such as joint agendas, using these as a basis for monitoring the processes that are carried out. What are the conditions that allow for the creation of environments that are favorable for effective implementation of the normative

¹⁴⁸⁷ 336:9 p 3 in 494a_June_23_21_US Farmers

¹⁴⁸⁸ 337:8 p 9 in 132a_May_27_21_Forética_Eng

¹⁴⁸⁹ 339:5 p 6 in 393a_June_01_21_Food of Tomorrow_Eng

¹⁴⁹⁰ 351:4 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

¹⁴⁹¹ 351:16 p 7 in 552a_July_15_21_Frente_Parlamentario_Eng

¹⁴⁹² 351:29 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

framework of the Human Right to Food and Food and Nutrition Security? (Education, health, social protection, agriculture, environment, technology/innovation).¹⁴⁹³

Guiding Theme 18. Ensure Openness and Transparency

Adopt a systems thinking approach to deal with the complexity inherent to sustainable food systems...¹⁴⁹⁴

It was universally acknowledged in every panel discussion and presentation that collaboration – and effective communication between collaborating parties – was essential to securing our food future.¹⁴⁹⁵

A more open, predictable, rules-based global trading environment with fewer barriers will facilitate more efficient movement of agriculture and food products, including to regions suffering from malnutrition and food insecurity.¹⁴⁹⁶

Have a series of conversations with female farmers. They are parents, they nurture their children and guide them in choosing their career and consult with them. In exploring challenges with the parents, then together we will find practical solutions to these problems.¹⁴⁹⁷

Indeed, transparency and trust in the food chain should be improved and supported by normative work in a more coherent way.¹⁴⁹⁸

o Regulatory measures on marketing in the agri-food and fisheries sectors. Improve transparency to foster the consumer trust needed for MedD adoption.¹⁴⁹⁹

In this regard, one of the most burning issues raised by consumers was precisely that of receiving guarantees about the transparency and traceability of food products and this can be remedied through clear regulatory processes that can grant fair and transparent information to consumers...¹⁵⁰⁰

Implement transparency in the supply chain to ensure equity to all stakeholders.¹⁵⁰¹

¹⁴⁹³ 351:31 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

¹⁴⁹⁴ 1:38 p 6 in 072_Mar_09_21_Sibanda L

¹⁴⁹⁵ 2:18 p 6 in 081_Mar_15_21_CRC

¹⁴⁹⁶ 4:36 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

¹⁴⁹⁷ 9:27 p 8 in 171_Mar_31_21_Atilano C

¹⁴⁹⁸ 22:5 p 7 in 191_Apr_16_21_Donati L

¹⁴⁹⁹ 23:15 p 11 in 205_Apr_27_21_CIHEAM_Multi

¹⁵⁰⁰ 24:2 p 6 in 323_Apr_28_21_Giuliodori A

¹⁵⁰¹ 34:2 p 9 in 089_Mar_22_21_Gee S

*Strong partnerships require transparency and interdisciplinary communication.*¹⁵⁰²

*Alliances should be promoted along the whole food chain supported by transparency, interdisciplinary communication and promoting the use of scientific information in regulation.*¹⁵⁰³

*Alliances should be promoted along the whole food chain supported by transparency, interdisciplinary communication and promoting the use of scientific information in regulation.*¹⁵⁰⁴

*...panelists stressed that countries must ensure more inclusive, transparent, resilient and environmentally friendly agricultural supply chains, both at global and local levels.*¹⁵⁰⁵

*A multi-actor initiative to bring more transparency into the business development service market for agri-SMEs, including an evidence-based benchmarking of effective models against impact on access to finance, an effort to standardize BDS curricula on the basis of such benchmarking, and value-for-money metrics for funders of such services.*¹⁵⁰⁶

*We need transparency and trust, accompanied by a change in regulations in a way that waste and losses are considered either as expensive or as a resource to close a loop.*¹⁵⁰⁷

*There is a need for a transparent, professional supervisory system with accountability on all livestock food systems.*¹⁵⁰⁸

*To secure success, their features should include: o strength, ambition, transparency, science at their core; o robustness against vested interests; o comprehensiveness, convergence and coherence.*¹⁵⁰⁹

*Promoting increased transparency along the food chain: a shared responsibility o Food chain actors must support healthy and sustainable diets and transform their production and operation methods. This requires human and financial investments and therefore should also bring economic returns.*¹⁵¹⁰

*Meanwhile, innovation and advancement are also key. For example, to improve the linkages, efficiency, and transparency between markets, producers, and consumers, digital innovations need to be supported.*¹⁵¹¹

There is a need to encourage transparency and traceability. It is important to provide transparent, voluntary product information to consumers (e.g. through digital means)

¹⁵⁰² 53:3 p 5 in 001_Nov_5_20_CGIAR

¹⁵⁰³ 53:38 p 6 in 001_Nov_5_20_CGIAR

¹⁵⁰⁴ 53:40 p 6 in 001_Nov_5_20_CGIAR

¹⁵⁰⁵ 56:4 p 7 in 006_Dec_16_20_UNDESA

¹⁵⁰⁶ 58:2 p 5 in 011_Jan_11_21_SAFIN

¹⁵⁰⁷ 60:36 p 7 in 021_Jan_27_21_Donati L

¹⁵⁰⁸ 64:9 p 12 in 041_Feb_17_21_Adler D

¹⁵⁰⁹ 66:5 p 6 in 052_Feb_25_21_EUFIC

¹⁵¹⁰ 66:10 p 12 in 052_Feb_25_21_EUFIC

¹⁵¹¹ 77:27 p 9 in 108_Apr_13_21_Carrara E_Multi

and foster responsible food marketing and advertising practices by setting standards, certification and labels.¹⁵¹²

...EU countries are evolving in order reduce their emissions and citizens are asking for more transparency and traceability several challenges where raised in order to ensure that smart logistics and urban planning are optimally implemented.¹⁵¹³

Data as fundamental information to make good decisions.¹⁵¹⁴

Enhance accountability & transparency: This was considered essential in building confidence in food systems. Participants highlighted the importance of metrics that transparently report on progress, reveal priorities, and collect/share environmental and animal care data.¹⁵¹⁵

Participants deemed the following necessary to better realize private sector's potential for impact: more transparency and disclosure; more transparent reporting; more effective carbon foot-printing disclosure; decoupling deforestation up and down the value chain; and Life Cycle Assessment (LCA) methodology and standardization.¹⁵¹⁶

Participants discussed how transparency is key in setting sustainability standards and being accountable if they are not met. It is important to be transparent about what was reached and what was not rather than simply changing the metric after the fact to align with the outcome.¹⁵¹⁷

Able to act in a more focused way Having baseline data will enable solutions to be put in place that are realistic, tailored to that community/region and measurable. Data provides insight and in Aotearoa, local insight is key. There would be increased transparency in what people and groups are doing around the country, not needing to reinvent the wheel but to learn from each other.¹⁵¹⁸

The success of such actions could be indicated through: - Public sector investment will support and facilitate such policy changes - Commercial viability. Not increasing livestock numbers but quality and yield. Transparency – reporting, metrics, incentives to mitigate environmental impact.¹⁵¹⁹

Find the true cost of food so that consumers can choose which product to buy not only in terms of price but also on how it was produced.¹⁵²⁰

¹⁵¹² 78:14 p 8 in 110_Apr_14_21_Carrara E_Multi

¹⁵¹³ 78:29 p 9 in 110_Apr_14_21_Carrara E_Multi

¹⁵¹⁴ 81:23 p 7 in 145_May_6_21_Vandenschrik J_Multi

¹⁵¹⁵ 84:1 p 7 in 153_Apr_28_21_GCNEF_Multi

¹⁵¹⁶ 85:4 p 6 in 160_20_Apr_21_GSI

¹⁵¹⁷ 85:14 p 12 in 160_20_Apr_21_GSI

¹⁵¹⁸ 87:6 p 8 in 173_Mar_25_21_Mayne A

¹⁵¹⁹ 93:81 p 8 in 227_May_18_21_Tarawali S

¹⁵²⁰ 99:67 p 13 in 285_May_20_21_TFFF_Multi

Participants noted that transparency will directly enable the leveling and normalization of multiple firms.¹⁵²¹

In summary, the group strongly agreed that clearer communication is essential for enacting change in our diets and that a greater level of consensus & collaboration is urgently required, based around a single, succinct message within the food system. The importance of labelling in empowering consumers to make informed and healthy choices is also critical.¹⁵²²

Communication on research findings would be needed to support these efforts and convert research results into implemented solutions.¹⁵²³

...his discussion group explored the role of science communication in enabling a better future for food systems in 2030. The first of the key actions agreed by the participants was the need to understand the consumer and include the consumer voice in the debate.¹⁵²⁴

Making evidence more readily available, including solid data sources and fact-checking capabilities, was also deemed critical.¹⁵²⁵

Participants agreed that communications should be aimed at those who trust and believe in science, rather than the detractors.¹⁵²⁶

In summary, it was agreed that we need to understand the consumer better and involve the consumer voice more in the debate. We need to recognise the many different 'publics' with different points of view and listen to them.¹⁵²⁷

Also, there is a need to harmonize the risk approval process at national, regional and even global levels in order to speed up dissemination of information and not reinvent the regulatory approval wheel each time. Different regulatory bodies must build a level of trust with each other.¹⁵²⁸

Create spaces for transparent dialogues between farmers, consumers and authorities. Consumers need to be educated on the innovations used and the science behind everything to trust the farmers. Systems to provide data for smallholders to allow them to aggregate to sell products and export are also essential.¹⁵²⁹

¹⁵²¹ 104:23 p 4 in 051a_Feb_24_21_Google

¹⁵²² 112:112 p 7 in 074_May_18_21_O'Mara_Teagasc

¹⁵²³ 112:124 p 14 in 074_May_18_21_O'Mara_Teagasc

¹⁵²⁴ 112:125 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁵²⁵ 112:127 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁵²⁶ 112:129 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁵²⁷ 112:130 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁵²⁸ 113:55 p 10 in 075_Mar_10_21_IFAN

¹⁵²⁹ 113:58 p 11 in 075_Mar_10_21_IFAN

*There needs to be more communication between scholars and researchers involved in biodynamic food production and the actual farmers and cultivators.*¹⁵³⁰

*...information sharing was highlighted as a strong entry point for improved coordination, especially to address conflicts of priority. A common problem is that the policy environment is not well understood by all stakeholders. Thus, at implementation, opportunities to collaborate and improve program design are missed. The SADC regional knowledge hub presents an opportunity to overcome this, by providing a platform to highlight and map different policies, which sectors they impact, and where opportunities for collaboration exist.*¹⁵³¹

*Open communication on the politics of how the implications would be for different countries - Distribution of power and capital in our food systems: ensure a fair allocation at all stages of the food chain and include everyone in decision making - from seed production to where we purchase our food - Scale up CSO actions to ensure accountability and transparency (watchdog role).*¹⁵³²

*Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change).*¹⁵³³

*For complete transparency, the FSS government structure should be open to civil society, and an accountability system should be set up, shared and owned by all the stakeholders.*¹⁵³⁴

*All actions must be transdisciplinary, inclusive, and aligned with rights-based approaches to achieve equitable food systems transformation. This includes building processes and policy platforms on democratic principles, including transparency, accountability, and inclusive participation to ensure that interventions are both evidence- and rights-based.*¹⁵³⁵

*Improving trust in dairy by increasing transparency and acknowledging areas that need improvement.*¹⁵³⁶

*We need better labelling and classification to give information about the environmental impact of food (e.g. Nutri-score in many European countries for the health impact, but we could do that on the environment as well).*¹⁵³⁷

We need actions to raise awareness about the Impact of the traditional agriculture practices that are not sustainable and animal industry in the food system: A shift toward

¹⁵³⁰ 116:25 p 10 in 093_Mar_25_21_Adeboye_T

¹⁵³¹ 117:89 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁵³² 138:34 p 7 in 214_May_05_21_50by40

¹⁵³³ 138:35 p 7 in 214_May_05_21_50by40

¹⁵³⁴ 138:39 p 8 in 214_May_05_21_50by40

¹⁵³⁵ 138:42 p 8 in 214_May_05_21_50by40

¹⁵³⁶ 156:8 p 11 in 275_May_13_21_Dornom H

¹⁵³⁷ 160:3 p 11 in 292_May_21_21_ProVeg_Multi

*plant-rich diets is important because those are healthy, they protect nature and animals.*¹⁵³⁸

*The main area of divergence that emerged during our Dialogue was the opposition Producers/Consumers → While producers' interests should be more taken into account with fair prices, we cannot forget that some consumers' categories are not able to make sustainable and healthy food choices.*¹⁵³⁹

*Transparency - is needed and can be made possible e.g. through vizualizations of food system map, audits and research.*¹⁵⁴⁰

*Communication - we need to communicate to counter misinformation and educate.*¹⁵⁴¹

*We need more transparency on distribution of access points: we should count them, and overlay them with health outcomes.*¹⁵⁴²

*Most participants would be willing to advocate for most of the issues above if there were clear channels through which they could do so.*¹⁵⁴³

*Partnership: Game-changing Solutions for transforming Food Systems Actions urgently needed: 1) Increase coordination efforts – necessary to partner and scale up the action 2) Increase clarity and transparency by formalizing partnerships - a way to help simplify some of the challenges that take place when building collective impact efforts.*¹⁵⁴⁴

*Creating a channel between environmental scientists/researchers and consumers so they could communicate their findings with the general consumers (everyone, basically) (each to their level of understanding) about the positive impact of responsible consumption and lowering the ecological footprint in the long run on the environment.*¹⁵⁴⁵

*The importance of promoting awareness, on the national and regional level, of (1) the nutrients contained in foods in relation to their roles in body maintenance, growth, reproduction, health, and disease prevention and (2) convincing people to change their eating habits toward more environmentally sustainable food consumption.*¹⁵⁴⁶

*Creating a channel between environmental scientists/researchers and consumers so they could communicate their findings with the general consumers (everyone, basically) (each to their level of understanding) about the positive impact of responsible consumption and lowering the ecological footprint in the long run on the environment.*¹⁵⁴⁷

¹⁵³⁸ 160:4 p 12 in 292_May_21_21_ProVeg_Multi

¹⁵³⁹ 160:5 p 13 in 292_May_21_21_ProVeg_Multi

¹⁵⁴⁰ 163:2 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁵⁴¹ 163:3 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁵⁴² 163:5 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁵⁴³ 163:10 p 11 in 300_May_27_21_Alesso_Pommeret

¹⁵⁴⁴ 163:19 p 15 in 300_May_27_21_Alesso_Pommeret

¹⁵⁴⁵ 165:2 p 6 in 310_June_14_21_FAO

¹⁵⁴⁶ 166:2 p 5 in 355_June_14_21_FAO

¹⁵⁴⁷ 166:4 p 6 in 355_June_14_21_FAO

*Finally, it is necessary to reshape the chain with sustainability and justice at its core. Participants agreed that a just food system is needed and that it is essential to respect the local production, local crops, local types of animals, and to avoid homologation. Each country, each region has its own personality and the base of the system has to be transparency and trust.*¹⁵⁴⁸

*Transparency and accountability in sharing of data. Data should be made accessible to all the actors along the food systems and the private sector should share their rich sources of data for food systems decision-making.*¹⁵⁴⁹

*Transparency and accountability in sharing of data. Data should be made accessible to all the actors across food systems and the private sector should share their rich sources of data for food systems decision-making.*¹⁵⁵⁰

*A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases. The focus of the discussion, therefore, was on the proper use and structure of labels. Labels cannot be the solution. They often report information in a partial or extremely superficial way, failing to reflect the complexity of certain realities such as the issue of sustainability. A feasible solution would be to develop technologies that support both producers and consumers, such as QR codes.*¹⁵⁵¹

*Consumers, on the other hand, have stressed their right to a transparent value chain.*¹⁵⁵²

*Labelling cannot be the only solution and tool for conveying information to consumers. Among these, a large proportion are illiterate in terms of specific and technical descriptions. The intention to shift this burden back to consumers is a hazardous and unfair one. On the other hand, examples were raised on how to deliver a comprehensive scheme on which consumers can rely and compare different products.*¹⁵⁵³

*Market policies that are not transparent and do not favor the use of local food sources as healthy and quality food have created some derivative problems, such as competition for local food as a source of healthy and quality food, low technology, and opportunities for access to local food. Food as a source of healthy and quality food is available in large quantities and is affordable both in terms of area and access.*¹⁵⁵⁴

*Use of vernacular and local languages encourages participation and respect within programs.*¹⁵⁵⁵

¹⁵⁴⁸ 171:4 p 10 in 329_May_19_21_CI_WFO

¹⁵⁴⁹ 177:2 p 6 in 335_May_26_21_Laar_Multi

¹⁵⁵⁰ 177:4 p 7 in 335_May_26_21_Laar_Multi

¹⁵⁵¹ 178:1 p 7 in 336_May_26_21_CI_WFO

¹⁵⁵² 179:1 p 6 in 337_May_26_21_CI_WFO

¹⁵⁵³ 179:2 p 7 in 337_May_26_21_CI_WFO

¹⁵⁵⁴ 185:7 p 6 in 343_May_28_21_Abdullah_S

¹⁵⁵⁵ 192:2 p 6 in 350_June_02_21_Farm Radio Int

*Without communication, meaningful change to food systems cannot happen - farmers will not be empowered to make transformative changes based on their own circumstances. In this sense, people-based solutions are important.*¹⁵⁵⁶

*Teaching and respecting rights of treaties, change the culture of priorities: Treaty Rights, histories and current arrangements need to be taught at all levels with Indigenous communities. There is a need for a broader understanding and knowledge of the Treaty Rights that Indigenous Peoples hold across the United States, Mexico, and Canada. The teaching and respecting of the treaties, can also be taught in combination with teaching/shifting cultural values towards respect, reciprocity, balance, harmony and relational values. Such teachings and values can be taught in schools, on up through government municipalities, private sector, civil society and conservation organizations, development sector etc.*¹⁵⁵⁷

*Increase transparency and accountability in land investments and make sure that agreed plans are followed through citizen monitoring - Recognise all forms of tenure (including the commons, lease agreements and user rights).*¹⁵⁵⁸

*Ensuring that the private sector is encouraged – or required – to develop their food labelling practices and transparency around the source of food and potential risks associated therein.*¹⁵⁵⁹

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030 2. Ensuring consumers across the world can identify the source of food they buy quickly and reliably 3. Ensuring food safety information will be trusted by consumers 4. Ensuring the food industry in all countries has sufficient skill.*¹⁵⁶⁰

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030.*¹⁵⁶¹

*Ensuring consumers across the world can identify the source of food they buy quickly and reliably Food labels are heavily relied on, but consumers are often overwhelmed by labels. As diets change and people move away from traditional foods or cook less, our approach to food safety labelling also needs also change.*¹⁵⁶²

Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve

¹⁵⁵⁶ 192:3 p 6 in 350_June_02_21_Farm Radio Int

¹⁵⁵⁷ 197:18 p 8 in 356_Apr_08_21_Livingston_Way

¹⁵⁵⁸ 199:65 p 12 in 358_May_11_21_ILC_Multi

¹⁵⁵⁹ 207:23 p 8 in 366_May_27_21_Cumbers S

¹⁵⁶⁰ 207:26 p 5 in 366_May_27_21_Cumbers S

¹⁵⁶¹ 207:28 p 8 in 366_May_27_21_Cumbers S

¹⁵⁶² 207:29 p 10 in 366_May_27_21_Cumbers S

*the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*¹⁵⁶³

*AT2 Sustainable consumption: Raise consumer awareness of the importance of clean and safe consumption, Promote Food Security and Reduce Hunger, address malnutrition to reduce child mortality.*¹⁵⁶⁴

*On the demand side, it is crucial to build trust and confidence among consumers through scientific research on the values of these foods, ensuring hygiene and food safety, and highlighting the health and environmental benefits.*¹⁵⁶⁵

*Need for information and data generation with transparency and for combatting false narratives. Need for regular indicators on the nutritional status of the population, as well as clear and reliable data on the production and consumption chains of safe/nutritious food.*¹⁵⁶⁶

*Promote greater traceability in production, from soil to all agricultural practices.*¹⁵⁶⁷

*In short, it is essential to have powerful INFORMATION AND COMMUNICATION mechanisms of the LIVESTOCK-MEAT FOOD SYSTEM that guarantee optimal knowledge and appreciation by society of the attributes and contributions of said system, in terms of nutrition, health, socioeconomic impact, contribution to the rural environment and environmental sustainability.*¹⁵⁶⁸

*Engaging the public in open access forums, so things/decisions are more transparent and citizens have the change to understand what happens behind the scenes and decision makers will feel more accountability.*¹⁵⁶⁹

*1. Labels are valuable tools for communicating with consumers, but these need to be transparent, regulated and governed in order to be trusted by consumers and to create meaningful impact. 2. Labels should capture social, economical and environmental sustainability metrics. 3. Labels need to be supplemented by consumer knowledge & engagement: be it through the education sector, independent research etc.*¹⁵⁷⁰

Communication: • In terms of communication, all the stakeholders should also promote what Brazil has done right – for instance, 56% of the territory is native forest, best practices/productivity improvements over the years.

¹⁵⁶³ 207:32 p 11 in 366_May_27_21_Cumbers S

¹⁵⁶⁴ 209:22 p 7 in 368_May_31_21_Lao Farmer

¹⁵⁶⁵ 219:40 p 9 in 380_June_08_21_Shakya_Chettri

¹⁵⁶⁶ 228:68 p 6 in 222a_May_11_21_FTI_ZHI_English

¹⁵⁶⁷ 236:26 p 8 in 277a_May_14_21_IICA_English

¹⁵⁶⁸ 237:26 p 14 in 284a_May_19_21_INTERPORC_English

¹⁵⁶⁹ 256:46 p 8 in 492_June_23_21_Liu JA

¹⁵⁷⁰ 256:48 p 10 in 492_June_23_21_Liu JA

• *Communication is key in fighting fake news. We need to find ways to get good and correct information to the society. It is also an education process...*¹⁵⁷¹

*Transparency: Right from harvesting to remuneration, where it is going and what it looks like ecologically. All of these combined should make the value chain adaptable and manageable.*¹⁵⁷²

*Food suppliers and retailers should commit to providing and incentivising sustainable food options – it needs to be the easy choice for consumers, not a burden. A label should incorporate all the relevant aspects from a consumer points of view, health, climate, environment, social, agricultural.*¹⁵⁷³

*A label can play a role, but consumers are not waiting for the next new label. A label should incorporate all the relevant aspects from a consumer points of view, health, climate, environment, social, agricultural...*¹⁵⁷⁴

*The general consensus was that data and sharing data is absolutely critical to transition. We are able to share data, not only because it provides transparency trust to prevent the authenticity of the journey of the transition progress, but also because the sharing of the story and building positive momentum around regenerative agriculture would inspire further ones.*¹⁵⁷⁵

*A first step is to recognise that we need to think in terms of living systems principles. Principles rather than prescriptive processes.*¹⁵⁷⁶

*Food labeling is not transparent.*¹⁵⁷⁷

*There is no clear evidence to distinguish between healthy, safe foods, and junk foods.*¹⁵⁷⁸

*Transparency – If there is a real desire for cooperation through a common set of principles a lot more is possible. Actors should start by broadly sharing data they have available. For instance, share what you are planning in more detail so that coordination can take place. This should also include UN agencies.*¹⁵⁷⁹

In terms of proposed solutions, the youth suggested the need for governments to openly share information with the young farmers, to sensitize young farmers on available policies, the need to gather feedback from youth on effectiveness of provided policies and

¹⁵⁷¹ 261:8 p 12 in 497_June_24_21_Fontes_Multi

¹⁵⁷² 264:1 p 10 in 500_June_26_21_Edible_Issues

¹⁵⁷³ 273:1 p 10 in 509_June_30_21_FFA_Nestlé

¹⁵⁷⁴ 273:3 p 11 in 509_June_30_21_FFA_Nestlé

¹⁵⁷⁵ 273:4 p 12 in 509_June_30_21_FFA_Nestlé

¹⁵⁷⁶ 273:5 p 13 in 509_June_30_21_FFA_Nestlé

¹⁵⁷⁷ 277:2 p 7 in 513_July_01_21_Weise S

¹⁵⁷⁸ 277:3 p 7 in 513_July_01_21_Weise S

¹⁵⁷⁹ 278:7 p 14 in 514_July_01_21_Bolling_Multi

*for the governments to prioritise youth inclusion in policy making and implementation.*¹⁵⁸⁰

*Develop a consistent understanding of terms and goals (e.g. food system; nutrition science; nutrition principles, goals of food system transformation) and clearly articulate them.*¹⁵⁸¹

*The next steps are not about starting conversations about food systems and environmental sustainability, but rather building on existing conversations. Effective communication is needed to build inclusivity across the food system.*¹⁵⁸²

*Better food labelling.*¹⁵⁸³

Transparency vs Health by stealth There was discussion about whether improving the consumption of more nutritious foods & diets should be conducted in a transparent way by consumer information and education to encourage the uptake of healthier foods or to use 'stealth' to make the composition of 'less healthy foods healthier via modifying food production & processing methods such as, gene editing technologies, breeding lines selection, biofortification & food fortification and the reformulation of foods to provide affordable priced products in order to reach the consumers who need it most.¹⁵⁸⁴

*We can further empower consumers to make informed choices by developing new sustainability food labels. But such labels must be built on robust sustainability frameworks and metrics (currently lacking, decisions here could be controversial); data collection methods that are accessible, affordable and realistic for even small farmers to use; and policies that ensure producers and processors track these sustainability metrics and communicate them via product labels (will require education and engagement initiatives).*¹⁵⁸⁵

*Some ideas on using technologies to truly benefit farmers and increase productivity as follow: 1. Training younger generation at school and university levels on design, software, marketing etc that build capacity for the agriculture sector. 2. Technology start-up competition focused on the food system. 3. Increase transparency on the food system, including on genetically modified feeds etc. 4. Modernising aquaculture and agriculture.*¹⁵⁸⁶

Open

*Food systems affect us all, and it is important to create a fully accessible virtual space where all actors across the agri-food value chain feel comfortable sharing their priorities, aspirations and challenges in an open manner.*¹⁵⁸⁷

¹⁵⁸⁰ 279:1 p 7 in 515_July_01_21_EastAfricanFarmers

¹⁵⁸¹ 280:1 p 6 in 516_July-01_21_Anastasiou K

¹⁵⁸² 280:4 p 12 in 516_July-01_21_Anastasiou K

¹⁵⁸³ 285:3 p 11 in 521_July_05_21_BBSRC-UKRI

¹⁵⁸⁴ 285:5 p 19 in 521_July_05_21_BBSRC-UKRI

¹⁵⁸⁵ 295:4 p 6 in 531_July_07_21_Shaunak A

¹⁵⁸⁶ 319:12 p 9 in 556_July_15_21_Von Goh_GenTan

¹⁵⁸⁷ 6:24 p 3 in 166_Apr_14_21_Meat Business Women

*Food systems affect us all, and it is important to create a virtual space where all actors across the agri-food value chain feel comfortable sharing their priorities, aspirations and challenges in an open, discursive manner.*¹⁵⁸⁸

*We need to bring people together on these innovations, their ideas, talk about complex issues that we might have because only by talking and having an open dialogue can we move forward.*¹⁵⁸⁹

*We wanted to begin an open discussion between students who are working on grassroots initiatives and leaders and decision makers in the field of global food security to create a food security environment for university students.*¹⁵⁹⁰

*This requires human and financial investments and therefore should also bring economic returns. o Increased fairness and equity along the chain is required to succeed in transitioning towards sustainable food systems. o A fair and transparent policy (open communication, fair prices, risk sharing) promoting more transparency along supply chains and better distribution of value is needed. o Capacity development is key, especially for farmers groups and MSMEs, providing support to operators in meeting required economic, social and environmental standards...*¹⁵⁹¹

*In light of climate change, the problems of food insecurity and malnutrition, sustainable consumption and equitable livelihoods need to be re-examined with open minds and reason using the advances in science and technology towards Sustainable Agriculture.*¹⁵⁹²

*He explained that economists advocate for a more open-trade environment where it allows external competition and that it is able to assert that homegrown producers can be as productive and competitive as external producers.*¹⁵⁹³

*Being open to difference.*¹⁵⁹⁴

*Open mindsets to new solutions.*¹⁵⁹⁵

*In light of climate change, the problems of food insecurity and malnutrition, sustainable consumption and equitable livelihoods need to be re-examined with open minds and reason using the advances in science and technology towards Sustainable Agriculture.*¹⁵⁹⁶

Information sharing was highlighted as a strong entry point for improved coordination, especially to address conflicts of priority. A common problem is that the policy

¹⁵⁸⁸ 28:21 p 3 in 064_Mar_4_21_Farming First

¹⁵⁸⁹ 32:14 p 10 in 082_Mar_15_21_Yoovatana M

¹⁵⁹⁰ 48:7 p 5 in 078_Mar_11_21_Cadogan T

¹⁵⁹¹ 66:95 p 12 in 052_Feb_25_21_EUFIC

¹⁵⁹² 74:56 p 6 in 189a_April_16_21_Ateneo de Manila

¹⁵⁹³ 74:60 p 33 in 189a_April_16_21_Ateneo de Manila

¹⁵⁹⁴ 92:37 p 3 in 225_May_13_21_Schwartz A

¹⁵⁹⁵ 99:76 p 13 in 285_May_20_21_TFFF_Multi

¹⁵⁹⁶ 103:81 p 6 in 007a_Dec_18_20_NAAGD

*environment is not well understood by all stakeholders. Thus, at implementation, opportunities to collaborate and improve program design are missed. The SADC regional knowledge hub presents an opportunity to overcome this, by providing a platform to highlight and map different policies, which sectors they impact, and where opportunities for collaboration exist.*¹⁵⁹⁷

*Community group discussion: Marginalized groups, primarily women are often ignored in the WEF nexus due to its top-down approach. Women and other minority groups are usually left out from the decision-making processes at the community/provincial/national level. While at the household level, women are responsible for managing food, energy and the water supply, their representation on decision-making bodies such as the village council is very limited. The deeply ingrained patriarchal social norms act as barriers for women and other groups to participate in the bureaucratic system that is responsible for making decisions related to the WEF nexus. This fact is verified from the low levels of representation of women and other minority groups on political bodies. The inadequate representation of these groups on such forums limits their ability to effectively voice their concerns, and thus, they are neglected in the management of the WEF nexus actions.*¹⁵⁹⁸

*The third segment provided the Conclusions and Recommendations, emphasizing seven Guiding Principles that came out as essential for building Food Systems Resilience in the face of shocks and stresses. These principles were: i) Maintain diversity and redundancy, ii) Manage connectivity, iii) Manage slow variables and feedbacks, iv) Foster complex adaptive system thinking, v) Encourage learning, vi) Broaden participation, and vii) Promote polycentric governance systems.*¹⁵⁹⁹

*Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change).*¹⁶⁰⁰

*Honor indigenous food systems and knowledge by returning land to be managed by indigenous communities and fostering an integrated approach to cultivating food that allows biodiversity to flourish.*¹⁶⁰¹

*Stronger mechanisms for political accountability for hunger and food insecurity.*¹⁶⁰²

A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases. The focus of the discussion, therefore, was on the proper use and structure of labels. Labels cannot be the solution. They often report information in a partial or extremely superficial way, failing to reflect the complexity of certain realities

¹⁵⁹⁷ 117:89 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁵⁹⁸ 127:99 p 18 in 159_Apr_21_21_Hafeez M

¹⁵⁹⁹ 133:26 p 5 in 196_Apr_20_21_Attah-Krah K

¹⁶⁰⁰ 138:35 p 7 in 214_May_05_21_50by40

¹⁶⁰¹ 144:28 p 8 in 232_May_20_21_Schwartz A

¹⁶⁰² 150:2 p 7 in 253_Apr_29_21_AFDDB_Multi

*such as the issue of sustainability. A feasible solution would be to develop technologies that support both producers and consumers, such as QR codes.*¹⁶⁰³

*We need to be open and optimistic and co-create; we need to be together, unite in the fight. There are so many communities working towards a change, predominantly indigenous populations, if we talk about the future, let's make sure they are included, and their knowledge- amplified.*¹⁶⁰⁴

*Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*¹⁶⁰⁵

*It was universally acknowledged in every panel discussion and presentation that collaboration – and effective communication between collaborating parties – was essential to securing our food future.*¹⁶⁰⁶

*A more open, predictable, rules-based global trading environment with fewer barriers will facilitate more efficient movement of agriculture and food products, including to regions suffering from malnutrition and food insecurity.*¹⁶⁰⁷

*Have a series of conversations with female farmers. They are parents, they nurture their children and guide them in choosing their career and consult with them. In exploring challenges with the parents, then together we will find practical solutions to these problems.*¹⁶⁰⁸

*Indeed, transparency and trust in the food chain should be improved and supported by normative work in a more coherent way.*¹⁶⁰⁹

*o Regulatory measures on marketing in the agri-food and fisheries sectors. Improve transparency to foster the consumer trust needed for MedD adoption.*¹⁶¹⁰

*In this regard, one of the most burning issues raised by consumers was precisely that of receiving guarantees about the transparency and traceability of food products and this can be remedied through clear regulatory processes that can grant fair and transparent information to consumers...*¹⁶¹¹

¹⁶⁰³ 178:1 p 7 in 336_May_26_21_CI_WFO

¹⁶⁰⁴ 204:10 p 8 in 363_May_26_21_Mehta_Bautista

¹⁶⁰⁵ 207:32 p 11 in 366_May_27_21_Cumbers S

¹⁶⁰⁶ 2:18 p 6 in 081_Mar_15_21_CRC

¹⁶⁰⁷ 4:36 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

¹⁶⁰⁸ 9:27 p 8 in 171_Mar_31_21_Atilano C

¹⁶⁰⁹ 22:5 p 7 in 191_Apr_16_21_Donati L

¹⁶¹⁰ 23:15 p 11 in 205_Apr_27_21_CHEAM_Multi

¹⁶¹¹ 24:2 p 6 in 323_Apr_28_21_Giuliodori A

*Implement transparency in the supply chain to ensure equity to all stakeholders.*¹⁶¹²

*Strong partnerships require transparency and interdisciplinary communication.*¹⁶¹³

*Alliances should be promoted along the whole food chain supported by transparency, interdisciplinary communication and promoting the use of scientific information in regulation.*¹⁶¹⁴

*Alliances should be promoted along the whole food chain supported by transparency, interdisciplinary communication and promoting the use of scientific information in regulation.*¹⁶¹⁵

*...panelists stressed that countries must ensure more inclusive, transparent, resilient and environmentally friendly agricultural supply chains, both at global and local levels.*¹⁶¹⁶

*A multi-actor initiative to bring more transparency into the business development service market for agri-SMEs, including an evidence-based benchmarking of effective models against impact on access to finance, an effort to standardize BDS curricula on the basis of such benchmarking, and value-for-money metrics for funders of such services.*¹⁶¹⁷

*We need transparency and trust, accompanied by a change in regulations in a way that waste and losses are considered either as expensive or as a resource to close a loop.*¹⁶¹⁸

*There is a need for a transparent, professional supervisory system with accountability on all livestock food systems.*¹⁶¹⁹

*To secure success, their features should include: o strength, ambition, transparency, science at their core; o robustness against vested interests; o comprehensiveness, convergence and coherence.*¹⁶²⁰

*Promoting increased transparency along the food chain: a shared responsibility o Food chain actors must support healthy and sustainable diets and transform their production and operation methods. This requires human and financial investments and therefore should also bring economic returns.*¹⁶²¹

*Meanwhile, innovation and advancement are also key. For example, to improve the linkages, efficiency, and transparency between markets, producers, and consumers, digital innovations need to be supported.*¹⁶²²

¹⁶¹² 34:2 p 9 in 089_Mar_22_21_Gee S

¹⁶¹³ 53:3 p 5 in 001_Nov_5_20_CGIAR

¹⁶¹⁴ 53:38 p 6 in 001_Nov_5_20_CGIAR

¹⁶¹⁵ 53:40 p 6 in 001_Nov_5_20_CGIAR

¹⁶¹⁶ 56:4 p 7 in 006_Dec_16_20_UNDESA

¹⁶¹⁷ 58:2 p 5 in 011_Jan_11_21_SAFIN

¹⁶¹⁸ 60:36 p 7 in 021_Jan_27_21_Donati L

¹⁶¹⁹ 64:9 p 12 in 041_Feb_17_21_Adler D

¹⁶²⁰ 66:5 p 6 in 052_Feb_25_21_EUFIC

¹⁶²¹ 66:10 p 12 in 052_Feb_25_21_EUFIC

¹⁶²² 77:27 p 9 in 108_Apr_13_21_Carrara E_Multi

*There is a need to encourage transparency and traceability. It is important to provide transparent, voluntary product information to consumers (e.g. through digital means) and foster responsible food marketing and advertising practices by setting standards, certification and labels.*¹⁶²³

*...EU countries are evolving in order reduce their emissions and citizens are asking for more transparency and traceability several challenges where raised in order to ensure that smart logistics and urban planning are optimally implemented.*¹⁶²⁴

*Data as fundamental information to make good decisions.*¹⁶²⁵

*Enhance accountability & transparency: This was considered essential in building confidence in food systems. Participants highlighted the importance of metrics that transparently report on progress, reveal priorities, and collect/share environmental and animal care data.*¹⁶²⁶

*Participants deemed the following necessary to better realize private sector's potential for impact: more transparency and disclosure; more transparent reporting; more effective carbon foot-printing disclosure; decoupling deforestation up and down the value chain; and Life Cycle Assessment (LCA) methodology and standardization.*¹⁶²⁷

*Participants discussed how transparency is key in setting sustainability standards and being accountable if they are not met. It is important to be transparent about what was reached and what was not rather than simply changing the metric after the fact to align with the outcome.*¹⁶²⁸

*Able to act in a more focused way Having baseline data will enable solutions to be put in place that are realistic, tailored to that community/region and measurable. Data provides insight and in Aotearoa, local insight is key. There would be increased transparency in what people and groups are doing around the country, not needing to reinvent the wheel but to learn from each other.*¹⁶²⁹

*The success of such actions could be indicated through: - Public sector investment will support and facilitate such policy changes - Commercial viability. Not increasing livestock numbers but quality and yield. Transparency – reporting, metrics, incentives to mitigate environmental impact.*¹⁶³⁰

¹⁶²³ 78:14 p 8 in 110_Apr_14_21_Carrara E_Multi

¹⁶²⁴ 78:29 p 9 in 110_Apr_14_21_Carrara E_Multi

¹⁶²⁵ 81:23 p 7 in 145_May_6_21_Vandenschrik J_Multi

¹⁶²⁶ 84:1 p 7 in 153_Apr_28_21_GCNEF_Multi

¹⁶²⁷ 85:4 p 6 in 160_20_Apr_21_GSI

¹⁶²⁸ 85:14 p 12 in 160_20_Apr_21_GSI

¹⁶²⁹ 87:6 p 8 in 173_Mar_25_21_Mayne A

¹⁶³⁰ 93:81 p 8 in 227_May_18_21_Tarawali S

*Find the true cost of food so that consumers can choose which product to buy not only in terms of price but also on how it was produced.*¹⁶³¹

*Participants noted that transparency will directly enable the leveling and normalization of multiple firms.*¹⁶³²

*In summary, the group strongly agreed that clearer communication is essential for enacting change in our diets and that a greater level of consensus & collaboration is urgently required, based around a single, succinct message within the food system. The importance of labelling in empowering consumers to make informed and healthy choices is also critical.*¹⁶³³

*Communication on research findings would be needed to support these efforts and convert research results into implemented solutions.*¹⁶³⁴

*...his discussion group explored the role of science communication in enabling a better future for food systems in 2030. The first of the key actions agreed by the participants was the need to understand the consumer and include the consumer voice in the debate.*¹⁶³⁵

*Making evidence more readily available, including solid data sources and fact-checking capabilities, was also deemed critical.*¹⁶³⁶

*Participants agreed that communications should be aimed at those who trust and believe in science, rather than the detractors.*¹⁶³⁷

*In summary, it was agreed that we need to understand the consumer better and involve the consumer voice more in the debate. We need to recognise the many different 'publics' with different points of view and listen to them.*¹⁶³⁸

*Also, there is a need to harmonize the risk approval process at national, regional and even global levels in order to speed up dissemination of information and not reinvent the regulatory approval wheel each time. Different regulatory bodies must build a level of trust with each other.*¹⁶³⁹

Create spaces for transparent dialogues between farmers, consumers and authorities. Consumers need to be educated on the innovations used and the science behind

¹⁶³¹ 99:67 p 13 in 285_May_20_21_TFFF_Multi

¹⁶³² 104:23 p 4 in 051a_Feb_24_21_Google

¹⁶³³ 112:112 p 7 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁴ 112:124 p 14 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁵ 112:125 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁶ 112:127 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁷ 112:129 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁸ 112:130 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁶³⁹ 113:55 p 10 in 075_Mar_10_21_IFAN

*everything to trust the farmers. Systems to provide data for smallholders to allow them to aggregate to sell products and export are also essential.*¹⁶⁴⁰

*There needs to be more communication between scholars and researchers involved in biodynamic food production and the actual farmers and cultivators.*¹⁶⁴¹

*...information sharing was highlighted as a strong entry point for improved coordination, especially to address conflicts of priority. A common problem is that the policy environment is not well understood by all stakeholders. Thus, at implementation, opportunities to collaborate and improve program design are missed. The SADC regional knowledge hub presents an opportunity to overcome this, by providing a platform to highlight and map different policies, which sectors they impact, and where opportunities for collaboration exist.*¹⁶⁴²

*Open communication on the politics of how the implications would be for different countries - Distribution of power and capital in our food systems: ensure a fair allocation at all stages of the food chain and include everyone in decision making - from seed production to where we purchase our food - Scale up CSO actions to ensure accountability and transparency (watchdog role).*¹⁶⁴³

*Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change).*¹⁶⁴⁴

*For complete transparency, the FSS government structure should be open to civil society, and an accountability system should be set up, shared and owned by all the stakeholders.*¹⁶⁴⁵

*All actions must be transdisciplinary, inclusive, and aligned with rights-based approaches to achieve equitable food systems transformation. This includes building processes and policy platforms on democratic principles, including transparency, accountability, and inclusive participation to ensure that interventions are both evidence- and rights-based.*¹⁶⁴⁶

*Improving trust in dairy by increasing transparency and acknowledging areas that need improvement.*¹⁶⁴⁷

*We need better labelling and classification to give information about the environmental impact of food (e.g. Nutri-score in many European countries for the health impact, but we could do that on the environment as well).*¹⁶⁴⁸

¹⁶⁴⁰ 113:58 p 11 in 075_Mar_10_21_IFAN

¹⁶⁴¹ 116:25 p 10 in 093_Mar_25_21_Adeboye_T

¹⁶⁴² 117:89 p 12 in 109_Apr_13_21_Jacobs-Mata I

¹⁶⁴³ 138:34 p 7 in 214_May_05_21_50by40

¹⁶⁴⁴ 138:35 p 7 in 214_May_05_21_50by40

¹⁶⁴⁵ 138:39 p 8 in 214_May_05_21_50by40

¹⁶⁴⁶ 138:42 p 8 in 214_May_05_21_50by40

¹⁶⁴⁷ 156:8 p 11 in 275_May_13_21_Dornom H

¹⁶⁴⁸ 160:3 p 11 in 292_May_21_21_ProVeg_Multi

*We need actions to raise awareness about the Impact of the traditional agriculture practices that are not sustainable and animal industry in the food system: A shift toward plant-rich diets is important because those are healthy, they protect nature and animals.*¹⁶⁴⁹

*The main area of divergence that emerged during our Dialogue was the opposition Producers/Consumers → While producers' interests should be more taken into account with fair prices, we cannot forget that some consumers' categories are not able to make sustainable and healthy food choices.*¹⁶⁵⁰

*Transparency - is needed and can be made possible e.g. through vizualizations of food system map, audits and research.*¹⁶⁵¹

*Communication - we need to communicate to counter misinformation and educate.*¹⁶⁵²

*We need more transparency on distribution of access points: we should count them, and overlay them with health outcomes.*¹⁶⁵³

*Most participants would be willing to advocate for most of the issues above if there were clear channels through which they could do so.*¹⁶⁵⁴

*Partnership: Game-changing Solutions for transforming Food Systems Actions urgently needed: 1) Increase coordination efforts – necessary to partner and scale up the action 2) Increase clarity and transparency by formalizing partnerships - a way to help simplify some of the challenges that take place when building collective impact efforts.*¹⁶⁵⁵

*Creating a channel between environmental scientists/researchers and consumers so they could communicate their findings with the general consumers (everyone, basically) (each to their level of understanding) about the positive impact of responsible consumption and lowering the ecological footprint in the long run on the environment.*¹⁶⁵⁶

*The importance of promoting awareness, on the national and regional level, of (1) the nutrients contained in foods in relation to their roles in body maintenance, growth, reproduction, health, and disease prevention and (2) convincing people to change their eating habits toward more environmentally sustainable food consumption.*¹⁶⁵⁷

Creating a channel between environmental scientists/researchers and consumers so they could communicate their findings with the general consumers (everyone, basically) (each

¹⁶⁴⁹ 160:4 p 12 in 292_May_21_21_ProVeg_Multi

¹⁶⁵⁰ 160:5 p 13 in 292_May_21_21_ProVeg_Multi

¹⁶⁵¹ 163:2 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁶⁵² 163:3 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁶⁵³ 163:5 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁶⁵⁴ 163:10 p 11 in 300_May_27_21_Alesso_Pommeret

¹⁶⁵⁵ 163:19 p 15 in 300_May_27_21_Alesso_Pommeret

¹⁶⁵⁶ 165:2 p 6 in 310_June_14_21_FAO

¹⁶⁵⁷ 166:2 p 5 in 355_June_14_21_FAO

to their level of understanding) about the positive impact of responsible consumption and lowering the ecological footprint in the long run on the environment.¹⁶⁵⁸

Finally, it is necessary to reshape the chain with sustainability and justice at its core. Participants agreed that a just food system is needed and that it is essential to respect the local production, local crops, local types of animals, and to avoid homologation. Each country, each region has its own personality and the base of the system has to be transparency and trust.¹⁶⁵⁹

Transparency and accountability in sharing of data. Data should be made accessible to all the actors along the food systems and the private sector should share their rich sources of data for food systems decision-making.¹⁶⁶⁰

Transparency and accountability in sharing of data. Data should be made accessible to all the actors across food systems and the private sector should share their rich sources of data for food systems decision-making.¹⁶⁶¹

A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases. The focus of the discussion, therefore, was on the proper use and structure of labels. Labels cannot be the solution. They often report information in a partial or extremely superficial way, failing to reflect the complexity of certain realities such as the issue of sustainability. A feasible solution would be to develop technologies that support both producers and consumers, such as QR codes.¹⁶⁶²

Consumers, on the other hand, have stressed their right to a transparent value chain.¹⁶⁶³

Labelling cannot be the only solution and tool for conveying information to consumers. Among these, a large proportion are illiterate in terms of specific and technical descriptions. The intention to shift this burden back to consumers is a hazardous and unfair one. On the other hand, examples were raised on how to deliver a comprehensive scheme on which consumers can rely and compare different products.¹⁶⁶⁴

Market policies that are not transparent and do not favor the use of local food sources as healthy and quality food have created some derivative problems, such as competition for local food as a source of healthy and quality food, low technology, and opportunities for access to local food. Food as a source of healthy and quality food is available in large quantities and is affordable both in terms of area and access.¹⁶⁶⁵

¹⁶⁵⁸ 166:4 p 6 in 355_June_14_21_FAO

¹⁶⁵⁹ 171:4 p 10 in 329_May_19_21_CI_WFO

¹⁶⁶⁰ 177:2 p 6 in 335_May_26_21_Laar_Multi

¹⁶⁶¹ 177:4 p 7 in 335_May_26_21_Laar_Multi

¹⁶⁶² 178:1 p 7 in 336_May_26_21_CI_WFO

¹⁶⁶³ 179:1 p 6 in 337_May_26_21_CI_WFO

¹⁶⁶⁴ 179:2 p 7 in 337_May_26_21_CI_WFO

¹⁶⁶⁵ 185:7 p 6 in 343_May_28_21_Abdullah_S

*Use of vernacular and local languages encourages participation and respect within programs.*¹⁶⁶⁶

*Without communication, meaningful change to food systems cannot happen - farmers will not be empowered to make transformative changes based on their own circumstances. In this sense, people-based solutions are important.*¹⁶⁶⁷

*Teaching and respecting rights of treaties, change the culture of priorities: Treaty Rights, histories and current arrangements need to be taught at all levels with Indigenous communities. There is a need for a broader understanding and knowledge of the Treaty Rights that Indigenous Peoples hold across the United States, Mexico, and Canada. The teaching and respecting of the treaties, can also be taught in combination with teaching/shifting cultural values towards respect, reciprocity, balance, harmony and relational values. Such teachings and values can be taught in schools, on up through government municipalities, private sector, civil society and conservation organizations, development sector etc.*¹⁶⁶⁸

*Increase transparency and accountability in land investments and make sure that agreed plans are followed through citizen monitoring - Recognise all forms of tenure (including the commons, lease agreements and user rights).*¹⁶⁶⁹

*Ensuring that the private sector is encouraged – or required – to develop their food labelling practices and transparency around the source of food and potential risks associated therein.*¹⁶⁷⁰

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030 2. Ensuring consumers across the world can identify the source of food they buy quickly and reliably 3. Ensuring food safety information will be trusted by consumers 4. Ensuring the food industry in all countries has sufficient skill.*¹⁶⁷¹

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030.*¹⁶⁷²

*Ensuring consumers across the world can identify the source of food they buy quickly and reliably Food labels are heavily relied on, but consumers are often overwhelmed by labels. As diets change and people move away from traditional foods or cook less, our approach to food safety labelling also needs also change.*¹⁶⁷³

Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The

¹⁶⁶⁶ 192:2 p 6 in 350_June_02_21_Farm Radio Int

¹⁶⁶⁷ 192:3 p 6 in 350_June_02_21_Farm Radio Int

¹⁶⁶⁸ 197:18 p 8 in 356_Apr_08_21_Livingston_Way

¹⁶⁶⁹ 199:65 p 12 in 358_May_11_21_ILC_Multi

¹⁶⁷⁰ 207:23 p 8 in 366_May_27_21_Cumbers S

¹⁶⁷¹ 207:26 p 5 in 366_May_27_21_Cumbers S

¹⁶⁷² 207:28 p 8 in 366_May_27_21_Cumbers S

¹⁶⁷³ 207:29 p 10 in 366_May_27_21_Cumbers S

*private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*¹⁶⁷⁴

*AT2 Sustainable consumption: Raise consumer awareness of the importance of clean and safe consumption, Promote Food Security and Reduce Hunger, address malnutrition to reduce child mortality.*¹⁶⁷⁵

*On the demand side, it is crucial to build trust and confidence among consumers through scientific research on the values of these foods, ensuring hygiene and food safety, and highlighting the health and environmental benefits.*¹⁶⁷⁶

*Need for information and data generation with transparency and for combatting false narratives. Need for regular indicators on the nutritional status of the population, as well as clear and reliable data on the production and consumption chains of safe/nutritious food.*¹⁶⁷⁷

*Promote greater traceability in production, from soil to all agricultural practices.*¹⁶⁷⁸

*In short, it is essential to have powerful INFORMATION AND COMMUNICATION mechanisms of the LIVESTOCK-MEAT FOOD SYSTEM that guarantee optimal knowledge and appreciation by society of the attributes and contributions of said system, in terms of nutrition, health, socioeconomic impact, contribution to the rural environment and environmental sustainability.*¹⁶⁷⁹

*Engaging the public in open access forums, so things/decisions are more transparent and citizens have the change to understand what happens behind the scenes and decision makers will feel more accountability.*¹⁶⁸⁰

*1. Labels are valuable tools for communicating with consumers, but these need to be transparent, regulated and governed in order to be trusted by consumers and to create meaningful impact. 2. Labels should capture social, economical and environmental sustainability metrics. 3. Labels need to be supplemented by consumer knowledge & engagement: be it through the education sector, independent research etc.*¹⁶⁸¹

Communication: • In terms of communication, all the stakeholders should also promote what Brazil has done right – for instance, 56% of the territory is native forest, best practices/productivity improvements over the years.

¹⁶⁷⁴ 207:32 p 11 in 366_May_27_21_Cumbers S

¹⁶⁷⁵ 209:22 p 7 in 368_May_31_21_Lao Farmer

¹⁶⁷⁶ 219:40 p 9 in 380_June_08_21_Shakya_Chettri

¹⁶⁷⁷ 228:68 p 6 in 222a_May_11_21_FTI_ZHI_English

¹⁶⁷⁸ 236:26 p 8 in 277a_May_14_21_IICA_English

¹⁶⁷⁹ 237:26 p 14 in 284a_May_19_21_INTERPORC_English

¹⁶⁸⁰ 256:46 p 8 in 492_June_23_21_Liu JA

¹⁶⁸¹ 256:48 p 10 in 492_June_23_21_Liu JA

• *Communication is key in fighting fake news. We need to find ways to get good and correct information to the society. It is also an education process...*¹⁶⁸²

*Transparency: Right from harvesting to remuneration, where it is going and what it looks like ecologically. All of these combined should make the value chain adaptable and manageable.*¹⁶⁸³

*Food suppliers and retailers should commit to providing and incentivising sustainable food options – it needs to be the easy choice for consumers, not a burden. A label should incorporate all the relevant aspects from a consumer points of view, health, climate, environment, social, agricultural.*¹⁶⁸⁴

*A label can play a role, but consumers are not waiting for the next new label. A label should incorporate all the relevant aspects from a consumer points of view, health, climate, environment, social, agricultural...*¹⁶⁸⁵

*The general consensus was that data and sharing data is absolutely critical to transition. We are able to share data, not only because it provides transparency trust to prevent the authenticity of the journey of the transition progress, but also because the sharing of the story and building positive momentum around regenerative agriculture would inspire further ones.*¹⁶⁸⁶

*A first step is to recognise that we need to think in terms of living systems principles. Principles rather than prescriptive processes.*¹⁶⁸⁷

*Food labeling is not transparent.*¹⁶⁸⁸

*There is no clear evidence to distinguish between healthy, safe foods, and junk foods.*¹⁶⁸⁹

*Transparency – If there is a real desire for cooperation through a common set of principles a lot more is possible. Actors should start by broadly sharing data they have available. For instance, share what you are planning in more detail so that coordination can take place. This should also include UN agencies.*¹⁶⁹⁰

In terms of proposed solutions, the youth suggested the need for governments to openly share information with the young farmers, to sensitize young farmers on available policies, the need to gather feedback from youth on effectiveness of provided policies and

¹⁶⁸² 261:8 p 12 in 497_June_24_21_Fontes_Multi

¹⁶⁸³ 264:1 p 10 in 500_June_26_21_Edible_Issues

¹⁶⁸⁴ 273:1 p 10 in 509_June_30_21_FFA_Nestlé

¹⁶⁸⁵ 273:3 p 11 in 509_June_30_21_FFA_Nestlé

¹⁶⁸⁶ 273:4 p 12 in 509_June_30_21_FFA_Nestlé

¹⁶⁸⁷ 273:5 p 13 in 509_June_30_21_FFA_Nestlé

¹⁶⁸⁸ 277:2 p 7 in 513_July_01_21_Weise S

¹⁶⁸⁹ 277:3 p 7 in 513_July_01_21_Weise S

¹⁶⁹⁰ 278:7 p 14 in 514_July_01_21_Bolling_Multi

*for the governments to prioritise youth inclusion in policy making and implementation.*¹⁶⁹¹

*Develop a consistent understanding of terms and goals (e.g. food system; nutrition science; nutrition principles, goals of food system transformation) and clearly articulate them.*¹⁶⁹²

*The next steps are not about starting conversations about food systems and environmental sustainability, but rather building on existing conversations. Effective communication is needed to build inclusivity across the food system.*¹⁶⁹³

*Better food labelling.*¹⁶⁹⁴

*Transparency vs Health by stealth There was discussion about whether improving the consumption of more nutritious foods & diets should be conducted in a transparent way by consumer information and education to encourage the uptake of healthier foods or to use 'stealth' to make the composition of 'less healthy foods healthier via modifying food production & processing methods such as, gene editing technologies, breeding lines selection, biofortification & food fortification and the reformulation of foods to provide affordable priced products in order to reach the consumers who need it most.*¹⁶⁹⁵

*We can further empower consumers to make informed choices by developing new sustainability food labels. But such labels must be built on robust sustainability frameworks and metrics (currently lacking, decisions here could be controversial); data collection methods that are accessible, affordable and realistic for even small farmers to use; and policies that ensure producers and processors track these sustainability metrics and communicate them via product labels (will require education and engagement initiatives).*¹⁶⁹⁶

*Some ideas on using technologies to truly benefit farmers and increase productivity as follow: 1.Training younger generation at school and university levels on design, software, marketing etc that build capacity for the agriculture sector. 2. Technology start-up competition focused on the food system. 3.Increase transparency on the food system, including on genetically modified feeds etc. 4. Modernising aquaculture and agriculture.*¹⁶⁹⁷

¹⁶⁹¹ 279:1 p 7 in 515_July_01_21_EastAfricanFarmers

¹⁶⁹² 280:1 p 6 in 516_July-01_21_Anastasiou K

¹⁶⁹³ 280:4 p 12 in 516_July-01_21_Anastasiou K

¹⁶⁹⁴ 285:3 p 11 in 521_July_05_21_BBSRC-UKRI

¹⁶⁹⁵ 285:5 p 19 in 521_July_05_21_BBSRC-UKRI

¹⁶⁹⁶ 295:4 p 6 in 531_July_07_21_Shaunak A

¹⁶⁹⁷ 319:12 p 9 in 556_July_15_21_Von Goh_GenTan

Trust

*Public understanding and trust of food systems is key to sustainable choices, as well as to attracting and retaining the talent needed to secure the future of the agricultural and food supply.*¹⁶⁹⁸

*Establish trust and traceability relationships.*¹⁶⁹⁹

*Indeed, transparency and trust in the food chain should be improved and supported by normative work in a more coherent way.*¹⁷⁰⁰

*Regulatory measures on marketing in the agri-food and fisheries sectors. Improve transparency to foster the consumer trust needed for MedD adoption.*¹⁷⁰¹

*Although there was an emerging need to establish practices that can enhance trust between producers and consumers in the food systems, globally.*¹⁷⁰²

*We need transparency and trust, accompanied by a change in regulations in a way that waste and losses are considered either as expensive or as a resource to close a loop.*¹⁷⁰³

*The complexity of the food systems must be acknowledged: o by taking a stepwise, cross-sectoral approach, to avoid resistance that a “big bang” approach could trigger; allow working in a complementary fashion facilitate (re)building trust in the food systems; by aligning on a definition of sustainability, as we must be clear on where we are heading, if we are to develop successful solutions; the existing divisions could lead to further confusion & loss of trust among food systems actors.*¹⁷⁰⁴

*Second, foster trust and quality guarantee given that better information availability from producers, enables wholesale markets to become places of information collection and ensure quality and safety throughout the food supply chain.*¹⁷⁰⁵

The last part of the discussion focused on how COVID-19 boosted corporate partnerships and the fact that this challenging period was an accelerator for corporate partnerships and the collaboration between the private sector and the Food Banks in Europe .How to keep this relationship over time for a post-Covid Europe? Both private actors and Food Banks must invest on trust, shared goals, legal agreements, a clear and frank

¹⁶⁹⁸ 4:35 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

¹⁶⁹⁹ 16:27 p 8 in 251_Jan_25_21_World Vegetable Center

¹⁷⁰⁰ 22:5 p 7 in 191_Apr_16_21_Donati L

¹⁷⁰¹ 23:15 p 11 in 205_Apr_27_21_CIHEAM_Multi

¹⁷⁰² 24:10 p 11 in 323_Apr_28_21_Giuliodori A

¹⁷⁰³ 60:36 p 7 in 021_Jan_27_21_Donati L

¹⁷⁰⁴ 66:4 p 6 in 052_Feb_25_21_EUFIC

¹⁷⁰⁵ 78:18 p 9 in 110_Apr_14_21_Carrara E_Multi

*communication, a more efficient coordination, long-term relations, raising local awareness, engage volunteers from the Companies, rely on...*¹⁷⁰⁶

*Having trustworthy, accessible and robust processes for making decisions...*¹⁷⁰⁷

*Trust is key and power dynamics matter...*¹⁷⁰⁸

*Trust in science has increased (e.g. SFI Science in Ireland Barometer 2020, IPSOS Veracity Index 2020) and we need to include more scientists in the communication, which should be underpinned by training for scientists in public communication. They should also be facilitated to allocate time to communication and receive rewards/recognition for such work.*¹⁷⁰⁹

*Making evidence more readily available, including solid data sources and fact-checking capabilities, was also deemed critical...*¹⁷¹⁰

*The potential impact of such actions would be to enhance trust in science, which has already increased during the pandemic. There was some divergence in relation to trust in science on food, however, with some perceptions that when it comes to food, other factors are at play and consumers tend to rely on other sources of information, that may not be underpinned by scientific evidence.*¹⁷¹¹

*In summary, it was agreed that we need to understand the consumer better and involve the consumer voice more in the debate. We need to recognise the many different 'publics' with different points of view and listen to them.*¹⁷¹²

*Recognize the importance of establishing platforms with an inclusive atmosphere and a multidisciplinary approach in pre-competitive spaces such as innovation hubs. Stakeholders, such as farmers, students, government representatives, NGOs, and companies, can be brought in early to see the development and potential of innovations which in turn works to build trust among them.*¹⁷¹³

*Also, there is a need to harmonize the risk approval process at national, regional and even global levels in order to speed up dissemination of information and not reinvent the regulatory approval wheel each time. Different regulatory bodies must build a level of trust with each other.*¹⁷¹⁴

There is a lack of trust in new technology - we do not have enough examples (e.g biogas) of such technology working well. Therefore, the needs to be more demonstrations to show

¹⁷⁰⁶ 81:24 p 8 in 145_May_6_21_Vandenschrik J_Multi

¹⁷⁰⁷ 107:10 p 7 in 047_Feb_19_21_O'Doherty M

¹⁷⁰⁸ 107:12 p 7 in 047_Feb_19_21_O'Doherty M

¹⁷⁰⁹ 112:126 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁷¹⁰ 112:127 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁷¹¹ 112:128 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁷¹² 112:130 p 16 in 074_May_18_21_O'Mara_Teagasc

¹⁷¹³ 113:54 p 9 in 075_Mar_10_21_IFAN

¹⁷¹⁴ 113:55 p 10 in 075_Mar_10_21_IFAN

*people the technology works that would ensure more buy-in and less sceptism amongst policy makers.*¹⁷¹⁵

*Smuggling of staple crops and misappropriation needs to be tackled. Rampant and unchecked smuggling of agricultural produce out of Pakistan threatens food security in the country.*¹⁷¹⁶

*Open communication on the politics of how the implications would be for different countries - Distribution of power and capital in our food systems: ensure a fair allocation at all stages of the food chain and include everyone in decision making - from seed production to where we purchase our food - Scale up CSO actions to ensure accountability and transparency (watchdog role).*¹⁷¹⁷

*Improving trust in dairy by increasing transparency and acknowledging areas that need improvement.*¹⁷¹⁸

*Implementation – can be fostered by bringing in community members of trust...*¹⁷¹⁹

*The group identified a number of challenges/tensions: • Some farmers are defensive • Many enterprises are limited by income • Technology scares some farmers • Farmers don't always trust processors.*¹⁷²⁰

*Finally, it is necessary to reshape the chain with sustainability and justice at its core. Participants agreed that a just food system is needed and that it is essential to respect the local production, local crops, local types of animals, and to avoid homologation. Each country, each region has its own personality and the base of the system has to be transparency and trust.*¹⁷²¹

*There also seems to be a lack of trust by the public in the science. This could be due to the boundless information available via social channels or by the conflicting science they see governments and global institutions arguing over in public arenas.*¹⁷²²

*CONSUMER INFORMATION Labelling cannot be the only solution and tool for conveying information to consumers. Among these, a large proportion are illiterate in terms of specific and technical descriptions. The intention to shift this burden back to consumers is a hazardous and unfair one. On the other hand, examples were raised on how to deliver a comprehensive scheme on which consumers can rely and compare different products.*¹⁷²³

¹⁷¹⁵ 117:85 p 8 in 109_Apr_13_21_Jacobs-Mata I

¹⁷¹⁶ 127:92 p 12 in 159_Apr_21_21_Hafeez M

¹⁷¹⁷ 138:34 p 7 in 214_May_05_21_50by40

¹⁷¹⁸ 156:8 p 11 in 275_May_13_21_Dornom H

¹⁷¹⁹ 163:4 p 6 in 300_May_27_21_Alesso_Pommeret

¹⁷²⁰ 170:2 p 12 in 328_May_19_21_Lalor_Teagasc

¹⁷²¹ 171:4 p 10 in 329_May_19_21_CI_WFO

¹⁷²² 175:5 p 13 in 333_May_25_21_GMA_Multi

¹⁷²³ 179:2 p 7 in 337_May_26_21_CI_WFO

*Without communication, meaningful change to food systems cannot happen - farmers will not be empowered to make transformative changes based on their own circumstances. In this sense, people-based solutions are important.*¹⁷²⁴

*Teaching and respecting rights of treaties, change the culture of priorities: Treaty Rights, histories and current arrangements need to be taught at all levels with Indigenous communities. There is a need for a broader understanding and knowledge of the Treaty Rights that Indigenous Peoples hold across the United States, Mexico, and Canada. The teaching and respecting of the treaties, can also be taught in combination with teaching/shifting cultural values towards respect, reciprocity, balance, harmony and relational values. Such teachings and values can be taught in schools, on up through government municipalities, private sector, civil society and conservation organizations, development sector etc.*¹⁷²⁵

*Fishermen and fisherwomen are facing violent attacks when exercising their treaty rights: Some of our brothers and sisters who fish and catch lobster, especially along the Atlantic coast of Canada, are facing violent attacks and targeted destruction of their fishing equipment and warehouses for exercising our treaty rights. They are being attacked by non-Indigenous fishers who are not able to fish at the same times as Indigenous fishers due to the differences and rights stated in our treaties. This conflict has caused great danger and destruction for the Indigenous fishers of the Atlantic coast of Canada.*¹⁷²⁶

*Sources of trust around food and the sources of food safety information most trusted - often being heavily weighted towards family and friends, closely followed by food labels, then medical professionals, celebrities and religious leaders and correspondingly, low(er) trust in food safety authorities.*¹⁷²⁷

*There is a lack of public trust in authorities around food safety, with many people relying on friends, family, celebrities and religious bodies for their knowledge of safe food.*¹⁷²⁸

*Ensuring that the private sector is encouraged – or required – to develop their food labelling practices and transparency around the source of food and potential risks associated therein.*¹⁷²⁹

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030 2. Ensuring consumers across the world can identify the source of food they buy quickly and reliably 3. Ensuring food safety information will be trusted by consumers 4. Ensuring the food industry in all countries has sufficient skill.*¹⁷³⁰

¹⁷²⁴ 192:3 p 6 in 350_June_02_21_Farm Radio Int

¹⁷²⁵ 197:18 p 8 in 356_Apr_08_21_Livingston_Way

¹⁷²⁶ 197:20 p 11 in 356_Apr_08_21_Livingston_Way

¹⁷²⁷ 207:20 p 5 in 366_May_27_21_Cumbers S

¹⁷²⁸ 207:22 p 7 in 366_May_27_21_Cumbers S

¹⁷²⁹ 207:23 p 8 in 366_May_27_21_Cumbers S

¹⁷³⁰ 207:26 p 5 in 366_May_27_21_Cumbers S

*Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*¹⁷³¹

*On the demand side, it is crucial to build trust and confidence among consumers through scientific research on the values of these foods, ensuring hygiene and food safety, and highlighting the health and environmental benefits.*¹⁷³²

*On the other hand, the state of play reveals that the African food system is truly vulnerable to Covid -19 but nevertheless the traditional food system has been able to preserve itself. This is why it is important to build trust between the stakeholders involved in the local food system. Organic farming would be a suitable solution for producers for a sustainable food system.*¹⁷³³

*The fisheries and aquaculture industries are underpinned by a significant degree of mistrust between policymakers and producers - a culmination of decades of disconnected decision making that neglected to award many producers direct input or voice at the decision making table. Because of this, policy for positive innovation has often misaligned with industry needs and legislation (or lack thereof) has caused bottlenecks to innovative progress. Greater linkages and dialogue between these two sectors is needed - communicators and interdisciplinary actors will be integral to bridging this gap.*¹⁷³⁴

*...foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion...*¹⁷³⁵

*Better food labelling.*¹⁷³⁶

*Key to design and delivery of comprehensive policy responses should be the inclusion of local voices in decision making and strategy design as well as indigenous knowledge and food production practices. Civil society can be a link to understanding the needs of the most impacted (we define this to include women, youth, people with disabilities, displaced persons and those working in the informal sector), and there is a need to strengthen coordination between formal government responses and community level responses (through networks, community organizations, civil society). It was suggested that greater collaboration with civil society may help foster trust in government responses in contexts where trust is weak.*¹⁷³⁷

¹⁷³¹ 207:32 p 11 in 366_May_27_21_Cumbers S

¹⁷³² 219:40 p 9 in 380_June_08_21_Shakya_Chettri

¹⁷³³ 229:18 p 9 in 226a_May_17_21_Oteyami O_English

¹⁷³⁴ 240:42 p 6 in 319_June_30_21_Fredriksson O

¹⁷³⁵ 244:41 p 8 in 480_June_21_21_CiHEAM_Multi

¹⁷³⁶ 285:3 p 11 in 521_July_05_21_BBSRC-UKRI

¹⁷³⁷ 302:8 p 7 in 538_July_09_21_IDS_Multi

Guiding Theme 19. Act With Urgency

Facilitating Innovation platforms and the use of ICT tools for long term sustainability; Development of innovation ecosystems within and across value chains and leveraging. All the transformations above will need an urgent shift in the agri-food systems workforce configuration from pre-occupation with farm production, to expansion into badly needed skills in food processing and service industries. Bridging the missing middle between the global-scale scientific options and the local and national level capacities to innovate and share. One CGIAR concept is expected to enhance the implementation of this agenda. This and many other conversations about the enhancement of the agricultural value chains have been discussed during the last fifteen years have been on the front burners but success continues to elude our continent in these regards.¹⁷³⁸

The dialogue recognized that the issues of Africa food system are complex and diverse. The dialogue also recognized that to address these issues, different stakeholders need to be brought on board and remain active, and work to complement the efforts of each other. With this background, the dialogue was opened to any stakeholder who recognizes the urgent need to improve the food system in Africa. Furthermore, discussants at the dialogue were meticulously selected from a broad spectrum of actors in the food system that are involved, contribute, are affected, and also benefit from agricultural research and development on the continent.¹⁷³⁹

OUTCOMESFOR EACH DISCUSSION TOPIC Participants in the dialogue expressed the view of an urgent need for a broad-based partnership between the major stakeholders and players across the entire agricultural and food system and innovation systems. This collaboration needs to provide strategic platform that fosters continental and global collective actions including networking to strengthen the innovation to impact pathways of Africa's agricultural research and food systems.¹⁷⁴⁰

It is necessary to correctly set goals and formulate priorities at the national and international levels in the course of the dialog with key market members. With the growing number of vulnerable people in terms of access to food, the priority is to ensure that the world's population has access to food. It is imperative to abandon the creation of additional rationally unjustified barriers that impede the provision of food with sufficient calories to population, which replace the objective needs with not quite obvious tasks associated with promoting unjustifiably expensive types of food that in no way offer a solution to the core problem.¹⁷⁴¹

There is an awareness that technological innovation is a driving force to transform the farmer in the region and help them meet pressing climate and economic challenges.

¹⁷³⁸ 505:11 p 6 in 062_Feb_16_21_FARA-CAADP

¹⁷³⁹ 505:12 p 3 in 062_Feb_16_21_FARA-CAADP

¹⁷⁴⁰ 505:13 pp 6 – 7 in 062_Feb_16_21_FARA-CAADP

¹⁷⁴¹ 507:14 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

However, aging farmers and lack of education do not favor an accelerated adoption of these new technologies.¹⁷⁴²

There is an urgent need to address the many barriers that rural girls/women (RF) face to avoid unskilled, low-paying informal jobs with no legal or social protection. Equal provision of services and infrastructure is essential to enhance their skills and access to education and production resources. Greater efforts must be made to improve women farmers' representation in decision-making institutions. It is also necessary to ensure that their workload is lightened, their contribution acknowledged, and that they have access to fair wages and working conditions. To do this, the marginalization of women farmers must end; as it is rooted in socio-cultural ills and practices, incentive policies must be created to further integrate gender issues in the agricultural sector.¹⁷⁴³

There is an urgent need to create a global fund managed by indigenous peoples themselves with adequate funding for the successful and effective protection and support of the food systems of indigenous peoples and local communities.¹⁷⁴⁴

General Overview • Despite COVID-19 crisis, it has provided opportunity for FS transformation • But the pandemic adds to the MENA additional burden on top of; oil crises, political transitions & food imports • Agri-food system in the MENA region has shown some resilience but in a varied manner across countries &; across sub-sectors e.g. aromatic plants less affected but fruit sectors heavily affected in case of Jordan • The food systems in the MENA and the policies that support them have contributed to poor nutritional outcomes.¹⁷⁴⁵

Progress on reducing diet related NCDs (a form of malnutrition) is off track to achieve targets due to decades of neglect and de-prioritization – this summit is an opportunity to elevate and accelerate action for this and other urgent issues.¹⁷⁴⁶

There is an urgent need to create an environment that assures technology and its accompanying knowledge can be used in transforming agri-food systems in a sustainable way.¹⁷⁴⁷

(iii) Ease farmer's access to food production input to build up farmer's resilience to crisis.¹⁷⁴⁸

In this way, they were able to embrace the principles of engagement and to highlight the urgent need of concrete actions and strategies to achieve the transformation of food systems in Italy and in the Mediterranean.¹⁷⁴⁹

¹⁷⁴² 520:36 p 6 in 107a_June_22_21_Trimarchi A_Eng

¹⁷⁴³ 520:37 p 8 in 107a_June_22_21_Trimarchi A_Eng

¹⁷⁴⁴ 354:8 p 6 in 407_June_10_21_CSIPN_Aborigin Forum

¹⁷⁴⁵ 358:9 p 6 in 402_June_10_21_Ekwamu_El Dukheri

¹⁷⁴⁶ 361:4 p 3 in 405_June_10_21_NCD Alliance

¹⁷⁴⁷ 366:46 p 3 in 410_June_14_21_Gregorio_Tan

¹⁷⁴⁸ 385:4 p 7 in 428_July_14_21_Sadira C

¹⁷⁴⁹ 386:3 p 3 in 429_July_05_21-CIHEAM Bari

*From Action Track 2 - there was acknowledgement that disruption of Indigenous Peoples' food systems has caused for a nutritional crisis and epidemic of malnourishment related diseases for high percentages of Indigenous Peoples, and that returning to traditional foods and diets is a multi-factored and critical solution to reestablish/safeguard sustainable consumption patterns for Indigenous Peoples; further noting the world has much to learn from Indigenous Peoples about "no waste" and using only what we need as central values in Indigenous Peoples' food systems.*¹⁷⁵⁰

*...COVID- 19), other economy shocks (e.g. the 2008 global financial crisis) or manmade conflicts (e.g. the Rohingya crisis).*¹⁷⁵¹

*The emphasis on making the safety nets more nutrition and gender sensitive will allow the country to ensure access to nutritious food at an affordable rate for the poor whose livelihood strategies have been disrupted either by climate related shocks or due to COVID-19 crisis.*¹⁷⁵²

*The Global Indigenous Youth Forum adhered to the principles of the Summit in various ways. - By bringing voices of Indigenous youth together to address issues of resilience and sustainability relating to food systems, the Forum acted with urgency, also underscoring the need for urgent to ensure continuation of Indigenous Peoples' food systems. - The dialogue was committed to the Summit, as it specifically contributes to its objectives and vision of inclusivity, by bringing together Indigenous youth from across the world specifically for the purpose of bringing their insights to the UNFSS. - The Global Indigenous Youth Forum was respectful, recognizes complexity as well as embraced multi-stakeholder inclusivity by bringing together Indigenous youth, actors who are normally not included in policy discussions to a sufficient extent, but bring vast, diverse and unique knowledge for stewardship of natural ecosystems, resilient food systems, protection of local cultures and practices for sustainability. - Further, it provided a safe space, focusing extensively on building trust with Indigenous youth, who are in many settings exploited or exposed to extractive exchanges with non-Indigenous actors.*¹⁷⁵³

*This critical function of small holders had become particularly clear during the COVID-19 crisis.*¹⁷⁵⁴

*Our societies and economies are driving the three planetary crises the world is now facing: climate change, biodiversity loss, and pollution.*¹⁷⁵⁵

*Uneven access to funding to BIPOC organizations meant they were not able to respond quickly in times of crisis such as COVID-19.*¹⁷⁵⁶

¹⁷⁵⁰ 390:2 p 6 in 432_Dec_15_20_UNPFII_FAO

¹⁷⁵¹ 392:4 p 7 in 434_June_02_21_Hanan_KA

¹⁷⁵² 392:5 p 8 in 434_June_02_21_Hanan_KA

¹⁷⁵³ 394:4 p 3 in 436_June_16_21_GIYC_Multi

¹⁷⁵⁴ 396:22 p 12 in 438_June_16_21_Caballero_Multi

¹⁷⁵⁵ 401:20 p 3 in 442_Apr_08_21_Mizenko B

¹⁷⁵⁶ 404:5 p 8 in 445_May_26_21_ICLEI USA

*Panellists believe that an urgent change needed is the dismantling of silos.*¹⁷⁵⁷

*We organized the virtual forum as an urgent response to the need for a dialogue that would focus on wild foods and the role of indigenous peoples and local communities, highlighting their unique and important perspectives often not heard or given adequate space in policy discussions about food security, eradicating hunger and poverty.*¹⁷⁵⁸

*The COVID-19 pandemic was a wake up call to the glaring fragility and inequalities of the global, regional, and national agri-food systems, thus making the resolve for sustainable, inclusive, and resilient food systems extremely urgent.*¹⁷⁵⁹

*Development partners, NGOs, and Corporate Social Responsibility (CSR) wings of private sector can partner with volunteer organizations (such as Biddyanando Foundation) to reach food aids to urban poor communities in an efficient manner during crisis.*¹⁷⁶⁰

*Involve, Engage and Sensitise Men - There is an urgent need to engage men in women's empowerment at all levels, from the household to the community to the institutional level.*¹⁷⁶¹

*The Dialogue was organized with the intention that there is an urgent need to address the flaws in our current global food system and that this needs to be addressed in the way development and humanitarian aid is conducted.*¹⁷⁶²

*The Principles were implicitly incorporated in the organisation of the Dialogue, by highlighting the urgent need for commitments and investments in women nutrition and enhancing women abilities to play their roles in the food system, especially as the Covid-19 pandemic has exacerbated health and nutrition status of women and their children.*¹⁷⁶³

*If existing channels do not work for them, alternative models of capital distribution must be given urgent attention.*¹⁷⁶⁴

*This means paying particular attention to vulnerable populations, and, going beyond, actively supporting those who suffer the most from systemic shocks such as the COVID-19 crisis.*¹⁷⁶⁵

Some key areas of interest for our participants included a) collaborating and supporting existing BIPOC food sovereignty initiatives, b) building the capacity of our "Food Corps," which helps provides labour for small-scale agro-ecological farmers and healthy food for hungry food insecure communities, c) the creation of a farm training

¹⁷⁵⁷ 407:5 p 7 in 448_Feb_25_21_IFAD_Multi

¹⁷⁵⁸ 408:6 p 3 in 449_March_08_21_Wild Foods_Multi

¹⁷⁵⁹ 416:5 p 6 in 457_May_20_21_Ekwamu_A

¹⁷⁶⁰ 418:9 p 11 in 459_June_01_21_Rashid Md J

¹⁷⁶¹ 421:15 p 6 in 462_June_10_21_NISD_RySS_Multi

¹⁷⁶² 424:7 p 3 in 465_June_16_21_Congressional Hunger

¹⁷⁶³ 430:4 p 3 in 471_June_08_21_van Liere M

¹⁷⁶⁴ 460:66 p 16 in 131_May_25_21_IISLA Ventures

¹⁷⁶⁵ 463:23 p 10 in 155_Apr_27_21_FCDO_Multi

curriculum for our volunteers, d) calling for urgent action from our government regarding the current food crisis in the form of an open letter (see attached).¹⁷⁶⁶

Overall, agroecology as a science and a movement is a transformative way to break out of many current crises afflicting the planet.¹⁷⁶⁷

What transformations are necessary / urgent in the Chilean food system to make it more sustainable and inclusive?¹⁷⁶⁸

Along with an economic contraction, there is always a social crisis and the one that originated with the Covid-19 pandemic will certainly be the strongest in the last 100 years, raising the number of people in poverty to more than 190 million from which 72 million are in extreme poverty.¹⁷⁶⁹

The participants agreed with the urgent issues mentioned by the panellists and identified several other issues to be addressed in the future.¹⁷⁷⁰

We need to see the climate crisis in terms of crisis management and use learnings from how we deal with man-made conflicts- and realise that we are indeed at war- and get smart fast.¹⁷⁷¹

Further and urgent actions required are concerned with re-bagging, digitalization and newer methods of irrigation , which is critical in improving Cocoa production due to recent climate change challenge.¹⁷⁷²

Progress on reducing diet related NCDs (a form of malnutrition) is off track to achieve targets due to decades of neglect and de-prioritization – this summit is an opportunity to elevate and accelerate action for this and other urgent issues.¹⁷⁷³

Small fishers are facing worst crises today.¹⁷⁷⁴

Production, processing, distribution and education integration to achieve solutions in the future o Innovation and digitalisation to increase resilience and productivity of small-scale farmers o The Covid19 crisis indeed could be an opportunity to think of more locally rooted food systems (what foods I can get from my environment?) - Stakeholder engagement /collaboration / partnerships o Opportunities for change through forums such as this dialogue o High percentage of young people in the region.¹⁷⁷⁵

¹⁷⁶⁶ 464:8 p 6 in 185_Apr_14_21_Local Farm_Multi

¹⁷⁶⁷ 472:5 p 6 in 241_May_19_21_IFAD_Food Tank_Multi

¹⁷⁶⁸ 474:15 p 5 in 246_June_09_21_Boza_Kanter

¹⁷⁶⁹ 483:5 p 6 in 283_May_18_21_ICLEI_FAO

¹⁷⁷⁰ 485:11 p 5 in 288_May_20_21_GAN_Multi

¹⁷⁷¹ 486:23 p 14 in 291_May_21_21_Polman_Prabha

¹⁷⁷² 499:13 p 8 in 394_June_01_21_Egyir I

¹⁷⁷³ 502:3 p 3 in 398_June_07_21_NCD Alliance

¹⁷⁷⁴ 503:19 p 5 in 399_June_9_21_AFA_Multi

¹⁷⁷⁵ 1:64 p 8 in 072_Mar_09_21_Sibanda L

*Venezuelan civil society, for approximately 6 years, has been articulating in favor of those most affected by the Complex Humanitarian Crisis, together we could understand the situation, and propose solutions to malnutrition and uninformed migration.*¹⁷⁷⁶

*As an outcome of the Dialogue, below are the issues which needs urgent action (in the next six months): • Framing agriculture policy for the state of Jharkhand with strong focus on ecological farming.*¹⁷⁷⁷

*More important than these competing perspectives on where to begin the discussion, the group spoke with a unified voice in making the case for addressing urgent problems right now, while also envisioning continual improvement for the long term.*¹⁷⁷⁸

*This calls for urgent action for advocacy, awareness creation and sensitization on gender equality and inclusion of the indigenous women as stakeholders for a sustainable food system.*¹⁷⁷⁹

*There is an urgent call to action to empower the indigenous women and youth from the disadvantaged and underserved coastal communities to mobilize and become the core of generational knowledge transfer facilitating development that spreads from not just farmer to farmer but also to the children in their households and also the men in their lives.*¹⁷⁸⁰

*Reflections highlighted the complexity of food systems and the urgent necessity of a common understanding that could lead to the development of a SFS conceptual framework specific to the Mediterranean context, taking into consideration local specificities and cultural aspects.*¹⁷⁸¹

*All participants were in agreement on the main findings of the Dialogue, especially on the urgent need to shift to regenerative agriculture, to empower small producers and women, to decentralize the implementation of government schemes and to build consumer awareness.*¹⁷⁸²

*We outlined the major crises facing our food systems today, and the pandemic's role in exacerbating their effects.*¹⁷⁸³

*There is an urgent need to actively conserve and promote such indigenous knowledge, which is rapidly dying out due to the pressures of food security and commercialization.*¹⁷⁸⁴

¹⁷⁷⁶ 5:7 p 5 in 105_Apr_8_21_Vieira J

¹⁷⁷⁷ 7:35 p 7 in 167_Apr_13_21_Welthungerhilfe_Multi

¹⁷⁷⁸ 8:86 p 13 in 169_Apr_6_21_Shea E

¹⁷⁷⁹ 12:45 p 4 in 192_Apr_19_21_Okafor_A

¹⁷⁸⁰ 12:48 p 7 in 192_Apr_19_21_Okafor_A

¹⁷⁸¹ 23:96 p 3 in 205_Apr_27_21_CiHEAM_Multi

¹⁷⁸² 26:43 p 12 in 023_Jan_29_21_Bharat K S

¹⁷⁸³ 26:59 p 3 in 023_Jan_29_21_Bharat K S

¹⁷⁸⁴ 27:12 p 8 in 044_Feb_18_21_Bharat K S

*All participants were in agreement on the main findings of the Dialogue, especially on the urgent need to shift to regenerative agriculture, to empower small producers and women through collectivization, to conserve and promote traditional knowledge and to improve access to resources for marginalized communities.*¹⁷⁸⁵

*We outlined the major crises facing our food systems today, and the pandemic's role in exacerbating their effects.*¹⁷⁸⁶

*There is an urgent and continued need for robust data and innovation, and for food systems policies to be informed by and formulated based on science.*¹⁷⁸⁷

*Climate change is requiring more urgent and diverse need for innovation in terms of inputs, extension and access to information and finance.*¹⁷⁸⁸

*Farmers must collaborate more effectively (e.g. via cooperatives) to have a larger voice in policy discussions and to be able to access bigger markets or partnerships • There is an urgent need for metrics that make it easier to measure progress and outcomes.*¹⁷⁸⁹

*Promote and establishing decentralized local markets, in partnership with small farmers, to ensure access to healthy food in light of crises.*¹⁷⁹⁰

*This session highlighted the need for Dialogue especially in terms of building resilience of agricultural production systems especially for small holder farmers in response to crisis in the region.*¹⁷⁹¹

*Develop and adopt a regional guiding legislation about importance of having strategic stocks of essential commodities, whether food or non-food commodities so that it contributes to setting a safety percentage of these necessary commodities to avoid any shortages and crisis as witnessed during the Covid-19 pandemic.*¹⁷⁹²

*The participants were knowledgeable of the main challenges in the region and stressed on the need to have urgent action and implementation.*¹⁷⁹³

*The liberalization of agricultural trade, which will only become more important in light of the climate crisis and the inability of certain parts of the world to feed themselves.*¹⁷⁹⁴

¹⁷⁸⁵ 27:16 p 11 in 044_Feb_18_21_Bharat K S

¹⁷⁸⁶ 27:77 p 3 in 044_Feb_18_21_Bharat K S

¹⁷⁸⁷ 28:39 p 6 in 064_Mar_4_21_Farming First

¹⁷⁸⁸ 28:40 p 8 in 064_Mar_4_21_Farming First

¹⁷⁸⁹ 28:41 p 10 in 064_Mar_4_21_Farming First

¹⁷⁹⁰ 30:68 p 6 in 071_Mar_11_21_ESCWA_FAO

¹⁷⁹¹ 36:65 p 4 in 096_Mar_29_21_ESCWA

¹⁷⁹² 36:66 p 6 in 096_Mar_29_21_ESCWA

¹⁷⁹³ 36:68 pp 10 –11 in 096_Mar_29_21_ESCWA

¹⁷⁹⁴ 38:11 p 7 in 101_Apr_1_21_Doaa A

*There is an urgent need to use Information Communication Technology as never before in salvaging the needs of farmers, input distributors, and farm produce off-takers for an effective service delivery towards more farm yields.*¹⁷⁹⁵

*There is urgent need to raise the awareness of using affordable agro-commerce platforms or social media handles among farmers locally to trace where agro inputs are available and cheaper in their locality.*¹⁷⁹⁶

*Pests & Diseases, drought and flooding are pressing challenges affecting farmers and need urgent attention.*¹⁷⁹⁷

*Urgent attention by the policy makers around policy that drives small scale farmers' productivity.*¹⁷⁹⁸

*Communicate the message of the urgent need to reduce food waste at all levels.*¹⁷⁹⁹

*The climate crisis will likely cause rise in food prices, as temperature rise, droughts, water shortages, fires, floods and more are tackling many areas of the world.*¹⁸⁰⁰

*Short term solutions: solutions to the nutrition insecure children at the corona crisis
Long term solutions: Education – to include again, healthy and sustainable nutrition education as core subject at the education system: from the early age thru graduations as it is crucial to their development and health thru their lives.*¹⁸⁰¹

*On the other hand, the necessity to reduce meat consumption, especially in Israel, one of the world leaders in meat consumption per person, was expressed as an urgent and robust solution that must be adapted for the population's health and the globe.*¹⁸⁰²

*World Vision Ireland recognized the need for urgent action and organised the first Independent Dialogue in Ireland.*¹⁸⁰³

*Acting with urgency of the Curator's introduction stressed the importance of an urgent action.*¹⁸⁰⁴

Starting from a premise that a shift towards sustainable food systems can only be achieved by enabling and empowering citizens to make healthier and more sustainable food and lifestyle choices, the dialogue was set to bring EU stakeholders around the

¹⁷⁹⁵ 51:21 p 5 in 137_Mar_24_21_Ejezie J

¹⁷⁹⁶ 51:22 p 6 in 137_Mar_24_21_Ejezie J

¹⁷⁹⁷ 61:32 p 8 in 030_Feb_4_21_CAFS_CSAYN

¹⁷⁹⁸ 61:33 p 9 in 030_Feb_4_21_CAFS_CSAYN

¹⁷⁹⁹ 64:30 p 7 in 041_Feb_17_21_Adler D

¹⁸⁰⁰ 64:126 p 9 in 041_Feb_17_21_Adler D

¹⁸⁰¹ 64:129 p 10 in 041_Feb_17_21_Adler D

¹⁸⁰² 64:133 p 14 in 041_Feb_17_21_Adler D

¹⁸⁰³ 65:2 p 3 in 050_Feb_23_21_World Vision Ireland

¹⁸⁰⁴ 66:103 p 3 in 052_Feb_25_21_EUFIC

*table, to ensure a paradigm shift and break the silos in addressing the urgent need to combat all forms of malnutrition and environmental degradation.*¹⁸⁰⁵

*However, to obtain better results and ensure the sustainability of the assets generated by this dialogue of experts in multiple specific sectors, better organization and capacity building of national, regional, and local communities through training and monitoring in the various CSA food system intervention areas and action tracks checked (1, 2, 3, 4, and 5) is necessary and urgent for the DRC.*¹⁸⁰⁶

*Therefore, there is an urgent benefit to launching large-scale climate-smart agriculture (CSA) activities in the DRC, to support food and nutritional security and strengthen community resilience.*¹⁸⁰⁷

*Due to the number of households experiencing food insecurity, the need to develop the Strategic Framework and implement the DRC's Action Plan to strengthen food security and eradicate poverty is urgent.*¹⁸⁰⁸

*Pope Francis said that the crisis of the pandemic, in a sense, has given us a chance to develop new ways of living.*¹⁸⁰⁹

*In the case of the Philippines, many Filipinos today, especially the poor, are vulnerable to food disruption and food insecurity due to frequent typhoons and the pandemic crisis.*¹⁸¹⁰

*The economic crisis which is further aggravated by the pandemic and climate change being the biggest threat perhaps next to us, the way we behave as consumers, or the way we behave as eaters.*¹⁸¹¹

*The principles of action from the 2021 Food Systems Summit were included beginning with the Dialogue's design, and were applied and conveyed in different ways during the event's preparation and implementation: • The Dialogue itself reflects the organizers' commitment to urgent action in order to advance a positive transformation of the Mérida food system and contribute to attaining the sustainable development objectives.*¹⁸¹²

*The discussion on these topics contributed to development of effective strategies and sharing of best practices in line with addressing contemporary challenges including evolving consumption trends, urbanization, rapid population growth, climate change, disruptions in food systems and livelihoods, and the continuous pursuit of collective recovery and growth amid the Covid-19 crisis.*¹⁸¹³

¹⁸⁰⁵ 66:104 p 5 in 052_Feb_25_21_EUFIC

¹⁸⁰⁶ 70:8 ¶ 20 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

¹⁸⁰⁷ 70:10 ¶ 18 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

¹⁸⁰⁸ 70:11 ¶ 20 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

¹⁸⁰⁹ 74:109 p 4 in 189a_April_16_21_Ateneo de Manila

¹⁸¹⁰ 74:113 p 12 in 189a_April_16_21_Ateneo de Manila

¹⁸¹¹ 74:115 p 37 in 189a_April_16_21_Ateneo de Manila

¹⁸¹² 75:67 ¶ 11 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

¹⁸¹³ 76:51 p 5 in 103_Apr_8_21_Carrara E_Multi

*Participants pointed out the urgent need to bridge all stakeholder of the food sector and to work together to ensure the supply of healthy, sustainable, affordable and nutritious diet for all, prevent food losses and foster better logistical planification.*¹⁸¹⁴

*As Covid-19 highlights, there is an urgent need to move towards resilient food systems and wholesale markets, as fresh food hubs, have an important role to play to reconnect humans with healthy food.*¹⁸¹⁵

*It is important to use investments in sustainable and resilient solutions in wholesale markets' operations and supply chain management so they can prepare for disruptions and crises since they are among the most resilient actors ensuring continuous supply of healthy diets.*¹⁸¹⁶

*The most important topics touched on, were linked to the COVID19 crisis, the concern for both the co-option of Agroecology and the Summit indicated by the powerful groups of digital agriculture and Big Data, the environmental, social and health impacts of agriculture industry, the change in the world and Argentine food diets, the role of public policies and the relevance of the peasantry in favor of AGROECOLOGY and the ECOAGROFOOD SYSTEM in towns and cities.*¹⁸¹⁷

*It was clearly highlighted that it is through Agroecology and a locally-based Eco-agri-food System where the most efficient and beneficial path is found not only for farmers but also for consumers, and the special role of these systems in crisis situations such as those that we have now.*¹⁸¹⁸

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*During the crisis, the close cooperation with all the actors of the food supply chain – from farmers to food business operators helped to save precious food resources from being wasted.*¹⁸²⁰

*While throwing many people into food insecurity overnight, this crisis has highlighted the importance of food security in Europe.*¹⁸²¹

Need of a continuous work at policy level with the EU and International institutions and also at national level underlining Food Banks' importance in the food system

¹⁸¹⁴ 76:54 p 7 in 103_Apr_8_21_Carrara E_Multi

¹⁸¹⁵ 78:46 p 7 in 110_Apr_14_21_Carrara E_Multi

¹⁸¹⁶ 78:47 p 8 in 110_Apr_14_21_Carrara E_Multi

¹⁸¹⁷ 80:12 p 3 in 128_May_14_21_Pengue W

¹⁸¹⁸ 80:13 p 3 in 128_May_14_21_Pengue W

¹⁸¹⁹ 80:15 p 5 in 128_May_14_21_Pengue W

¹⁸²⁰ 81:29 p 6 in 145_May_6_21_Vandenschrik J_Multi

¹⁸²¹ 81:39 p 5 in 145_May_6_21_Vandenschrik J_Multi

*transformation and the role they had during the crisis to have also a stronger voice with the private sectors and the food producers.*¹⁸²²

*There is an urgent need for the recognition of aquatic foods as a game-changing solution in the food systems agenda.*¹⁸²³

*This has become even more urgent since learning in April 2021, that the Amazon Basin is now no longer, solely a carbon sink (absorbs carbon dioxide out of the atmosphere) but now too is an emitter (releases Methane and Nitrous-Oxide).*¹⁸²⁴

*The same year that saw multiple social, environmental, and economic crises converge across the globe also saw record-breaking investments in alt proteins, which, not coincidentally, provide solutions to some of our most serious challenges—from climate change to global hunger.*¹⁸²⁵

*Topics covered at YLCCC provided information as the basis for the Independent Dialogue, including the climate crisis and its solutions, carbon foot print, farming and agricultural practices for selected commodities, climate smart eating, leadership and communications and youth activities.*¹⁸²⁶

*This has contributed to a global health crisis wherein food producers primarily struggle with having enough food to eat, while the principal consumers of that food struggle with overnutrition.*¹⁸²⁷

*The world is on a precipice of such a shift as more and more are becoming acutely aware of the climate crisis and the impacts of adding another 3 billion people by 2050.*¹⁸²⁸

*This has contributed to a global health crisis wherein food producers primarily struggle with having enough food to eat, while the principal consumers of that food struggle with overnutrition, NDCs, and other diet related health conditions not present until the introduction of processed foods.*¹⁸²⁹

*The world is on a precipice of such a shift as more and more are becoming acutely aware of the climate crisis and the impacts of adding another 3 billion people by 2050.*¹⁸³⁰

In their exchange, the participants were asked to think of Science Policy Interface(s)-related issues that need most urgent attention to support “food systems transition”, and to identify the principles of strengthened or new interface and propose concrete actions,

¹⁸²² 81:44 p 12 in 145_May_6_21_Vandenschrik J_Multi

¹⁸²³ 82:46 p 8 in 150_Apr_30_21_GANSFOIWFNS

¹⁸²⁴ 87:24 p 5 in 173_Mar_25_21_Mayne A

¹⁸²⁵ 88:34 p 3 in 174_Mar_20_21_Niode K

¹⁸²⁶ 88:36 p 3 in 174_Mar_20_21_Niode K

¹⁸²⁷ 91:24 p 8 in 217_May_6_21_Schwartz A

¹⁸²⁸ 91:42 p 4 in 217_May_6_21_Schwartz A

¹⁸²⁹ 91:43 p 5 in 217_May_6_21_Schwartz A

¹⁸³⁰ 92:42 p 4 in 225_May_13_21_Schwartz A

share models, templates or experiences allowing to reach the Sustainable Development Goals (SDG) by 2030.¹⁸³¹

There are several challenges that require urgent action in the food systems, such as climate change, unsustainable farming practices (impacting soil, water quality, and biodiversity), access to quality food and the complexity of food value chains, where sustainability issues are predominant.¹⁸³²

A continuing search for long-term sustainable solutions, therefore, is imperative, and since food security and sustainable food production, especially in the light of the climate crisis, are complex, and the engagement of a broad spectrum of experts, practitioners, researchers and leaders, is necessary.¹⁸³³

The economic crisis which is further aggravated by the pandemic and climate change being the biggest threat perhaps next to us, the way we behave as consumers, or the way we behave as eaters.¹⁸³⁴

The crisis highlighted the importance of access to data about food the food value chain in addressing food waste and food insecurity.¹⁸³⁵

Also, the urgent need to formulate and implement affirmative actions for youth in relation to access to knowledge, land, financial services, green jobs, and markets was highly recommended to be looked at in Africa's quest to harness the potential of its youth to participate in AR4D.¹⁸³⁶

With this background, the dialogue was opened to any stakeholder who recognizes the urgent need to improve the food system in Africa.¹⁸³⁷

There is an urgent need for verifiable, factual information for all stakeholders.¹⁸³⁸

In summary, the participants agreed that there is an urgent need for change, both from a production and an environmental perspective.¹⁸³⁹

There's also an urgent need to rethink and transform production models.¹⁸⁴⁰

It was agreed that there is an urgent need for promoting inter-sectoral cooperation through evidence based information to ensure water-food-energy security and environmental sustainability for food system transformation in Pakistan.¹⁸⁴¹

¹⁸³¹ 95:13 p 3 in 252_April_29_21_EU Commission

¹⁸³² 99:91 p 6 in 285_May_20_21_TFFF_Multi

¹⁸³³ 103:75 p 4 in 007a_Dec_18_20_NAAGD

¹⁸³⁴ 103:140 p 37 in 007a_Dec_18_20_NAAGD

¹⁸³⁵ 104:34 p 1 in 051a_Feb_24_21_Google

¹⁸³⁶ 111:2 p 7 in 070_Mar_09_21_Akinbamijo,O

¹⁸³⁷ 111:64 p 3 in 070_Mar_09_21_Akinbamijo,O

¹⁸³⁸ 112:94 p 14 in 074_May_18_21_O'Mara_Teagasc

¹⁸³⁹ 112:150 p 10 in 074_May_18_21_O'Mara_Teagasc

¹⁸⁴⁰ 116:34 p 7 in 093_Mar_25_21_Adeboye_T

¹⁸⁴¹ 127:120 p 7 in 159_Apr_21_21_Hafeez M

*It shifts responsibility for both the cause of the crises and the solutions.*¹⁸⁴²

*When our families, communities and organizations are facing a crisis then they too need to look back to rebuild their confidence and strength.*¹⁸⁴³

*However, a potential trade-off was identified between designing 'very lean' systems, and having systems that are efficient but also have capacity to flex, adapt and respond in a time of crisis.*¹⁸⁴⁴

*The dialogue also recognized that to address these issues, there is a need to engage stakeholders who realize the urgent need to increase investment in gender responsive approaches.*¹⁸⁴⁵

*The food crisis is gravely felt at local levels; at the same time remarkable resilience and solutions are also found at the local food systems level.*¹⁸⁴⁶

*Crises can create opportunities for multi-stakeholder collaboration.*¹⁸⁴⁷

*This has been motivated by the UN Food Systems Summit, and the urgent need to generate actions to be able to achieve the SDGs by 2030.*¹⁸⁴⁸

*In particular, it was highlighted that education for the following was urgent and critical: Action1 - Ingredients grown with respect for the earth its oceans - Chefs need to engage and learn from farmers, across the globe farmers work with different crops in different climates.*¹⁸⁴⁹

*No matter what a chefs circumstance, it was agreed that they all have a role to play to contextual the urgent message of fixing failed food systems, by striving to change: how consumers make choices about food (from sourcing, buying and variety); knowing where our food comes from (protecting livelihoods); how it impacts both people and planet; to advocating for all people to have access to affordable, good food.*¹⁸⁵⁰

*Urgent action required to reduce food-waste and value natural resources. Educating home cooks and other chefs about food processing as a way to preserve and keep the nutrition of ingredients, and also to tackle food waste.*¹⁸⁵¹

*And we face an extinction crisis.*¹⁸⁵²

¹⁸⁴² 129:24 p 5 in 179_Apr_01_21_Livingston_Way

¹⁸⁴³ 129:25 p 5 in 179_Apr_01_21_Livingston_Way

¹⁸⁴⁴ 131:40 p 11 in 190_Apr_16_21_Cullen N

¹⁸⁴⁵ 137:56 p 3 in 212_May_04_21_Akinbamijo Y

¹⁸⁴⁶ 140:80 p 5 in 223_May_12_21_Mushita A

¹⁸⁴⁷ 141:75 p 15 in 229_May_18_21_NFP_Rabobank_Multi

¹⁸⁴⁸ 142:36 p 5 in 230_May_19_21_Allen K

¹⁸⁴⁹ 142:37 p 6 in 230_May_19_21_Allen K

¹⁸⁵⁰ 142:38 p 6 in 230_May_19_21_Allen K

¹⁸⁵¹ 142:39 p 7 in 230_May_19_21_Allen K

¹⁸⁵² 144:41 p 6 in 232_May_20_21_Schwartz A

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No matter what a chefs circumstance, it was agreed that they all have a role to play to contextual the urgent message of fixing failed food systems, by striving to change: how consumers make choices about food (from sourcing, buying and variety); knowing where our food comes from (protecting livelihoods); how it impacts both people and planet; to advocating for all people to have access to affordable, good food.¹⁸⁵⁴

Urgent action required to reduce food-waste and value natural resources Educating home cooks and other chefs about food processing as a way to preserve and keep the nutrition of ingredients, and also to tackle food waste.¹⁸⁵⁵

The world is on the precipice of such a shift as more and more are becoming acutely aware of the climate crisis and the impacts of adding another 3 billion people to our population by 2050.¹⁸⁵⁶

To be able to feed a growing and more urbanized population, there is an urgent need to build fresh food-platforms to help to structure the sector.¹⁸⁵⁷

The COVID-19 health crisis had the potential to become a food crisis nationally, but decisions to keep borders open to goods and essential services and not impose trade restrictions maintained functional supply chains and mitigated impact.¹⁸⁵⁸

Key actions for discussion topic 1 were the promotion of farmers village saving loans during a crisis like COVI-19, enhancing food preservation like mangoes and fruits, reducing food wastage, promotion information sharing and collaboration and use of technologies, Strengthening agricultural extension services, improve roads networks and irrigation.¹⁸⁵⁹

The success of our actions will be measured by the level of urgency in acting before the next global challenge arrives - the Climate Crisis.¹⁸⁶⁰

The need to shift to more healthy and sustainable consumption patterns was presented as a call for action, as urgent changes need to be implemented.¹⁸⁶¹

¹⁸⁵³ 147:34 p 5 in 239_May_27_21_Allen K

¹⁸⁵⁴ 147:35 p 6 in 239_May_27_21_Allen K

¹⁸⁵⁵ 147:36 p 7 in 239_May_27_21_Allen K

¹⁸⁵⁶ 148:41 p 4 in 240_May_27_21_Schwartz A

¹⁸⁵⁷ 151:50 p 9 in 261_May_03_21_Carrara_Le More

¹⁸⁵⁸ 153:48 p 7 in 263_May_06_21_CCGA

¹⁸⁵⁹ 154:24 p 7 in 265_May_07_21_CSONA

¹⁸⁶⁰ 163:187 p 10 in 300_May_27_21_Alesso_Pommeret

¹⁸⁶¹ 168:21 p 3 in 322_June_03_21_Apicella_Machado

*There is an urgent need for more innovation to help future food systems meet the ever more complex set of expectations that society places on them – from food security and nutrition to livelihoods, ecosystem services and climate mitigation.*¹⁸⁶²

*The awareness that change is urgent was present in all those who took part and inspired the identification of common priorities.*¹⁸⁶³

*Of which are: 1) Need to invest in advanced technology in agriculture 2) Embed sustainable agricultural methods 3) Promote lifestyle education 4) Protect heritage 5) Address Yemen food crisis 6) Need to restructure food safety measures and implementations along the supply chain to protect consumers' health and to avoid wasting food and resources 7) Implement sustainable agricultural practices 8) Need for green entrepreneurship 9) Circular blue economy 10) Using fisheries (seaweed, seagrass, mangrove zones) can increase yield by 25% and reduce methane emissions by 90% if used as feed.*¹⁸⁶⁴

*Formulation of plans and policies cognisant to the current hindrances is urgent.*¹⁸⁶⁵

*The following considerations were made to ensure the UNFSS Principles of Engagement were reflected throughout the dialogue: Act with urgency: The focus of the dialogue was to generate outcomes and pathways to creating urgent change to reach the 2030 UN Sustainable Development Goals (SDGs).*¹⁸⁶⁶

*The awareness that change is urgent was present in all those who participated and inspired the identification of common priorities.*¹⁸⁶⁷

*The awareness that change is urgent was present in all those who participated and inspired the identification of common priorities.*¹⁸⁶⁸

*The group noted that Soil is the foundation of food systems and that there is an urgent need to rebuild soil health.*¹⁸⁶⁹

*Each group was enthusiastic about presenting how they have analysed there different priority areas in the food system, highlighting the urgent call for reforms and the need for players to commit to the transformation of the food system.*¹⁸⁷⁰

¹⁸⁶² 169:67 p 6 in 327_May_18_21_CropLife

¹⁸⁶³ 171:32 p 3 in 329_May_19_21_CI_WFO

¹⁸⁶⁴ 172:15 p 6 in 330_May_19_21_RYFP_UNMGCY

¹⁸⁶⁵ 173:183 p 15 in 331_May_24_21_LNFU

¹⁸⁶⁶ 175:54 p 3 in 333_May_25_21_GMA_Multi

¹⁸⁶⁷ 178:38 p 3 in 336_May_26_21_CI_WFO

¹⁸⁶⁸ 179:27 p 3 in 337_May_26_21_CI_WFO

¹⁸⁶⁹ 182:135 p 10 in 340_May_27_21_Mamba_L

¹⁸⁷⁰ 183:142 p 3 in 341_May_28_21_Sewraj_KS

*The price of crops is fixed by the middle right holder and farmers have no power to fix it and farmers are hostage by this middle exploiting class who also make the artificial crisis in the market.*¹⁸⁷¹

*There is an urgent need to leverage technology, diversity, and indigenous knowledge to restore the ecological sound food systems for healthy diets, sustainable living and planetary health.*¹⁸⁷²

*We truly believe that addressing communications, and aspects of inclusion and meaningful interaction is an urgent need when it comes to creating equitable food systems, and that communication, done right, will allow us to meet the 2030 SDGs.*¹⁸⁷³

*Particularly during the COVID-19 pandemic, which has shown a clear threat to food and nutrition security, malnutrition requires urgent prioritization to ensure that past nutrition gains are not lost.*¹⁸⁷⁴

*A child's food environment starts from home, school, and the school environment, there is therefore an urgent need for an appropriate nutrition education both at home for and by parents and the school environment.*¹⁸⁷⁵

*This is an urgent and unanswered question raised by elders in the dialogue, and suggested as one we all need to ask ourselves.*¹⁸⁷⁶

*Students recognized that urgent reforms are required to better food systems globally.*¹⁸⁷⁷

*Use of land in the global south for food and timber for global north should be stopped aiming for an equitable food systems across the global respecting traditional values in food systems - Promote agricultural diversity and indigenous crops as part of solutions to global food crisis.*¹⁸⁷⁸

*She stressed the importance of increasing the involvement of women in early prevention and response strategies to food crises, and increasing their representation in leadership positions.*¹⁸⁷⁹

*Of special importance is the involvement of women in early prevention and response strategies to food crises, and increasing their representation in leadership positions.*¹⁸⁸⁰

¹⁸⁷¹ 186:41 p 6 in 344_May_30_21_COAST

¹⁸⁷² 188:52 p 7 in 346_May_31_21_CANEUS_Multi

¹⁸⁷³ 192:49 p 3 in 350_June_02_21_Farm Radio Int

¹⁸⁷⁴ 193:74 p 5 in 351_June_03_21_CIF_Multi

¹⁸⁷⁵ 193:75 p 11 in 351_June_03_21_CIF_Multi

¹⁸⁷⁶ 197:23 p 8 in 356_Apr_08_21_Livingston_Way

¹⁸⁷⁷ 198:54 p 3 in 357_Apr 14_21_Harfouche S

¹⁸⁷⁸ 199:85 p 9 in 358_May_11_21_ILC_Multi

¹⁸⁷⁹ 200:21 p 6 in 359_May 17_21_FAO_IFAD

¹⁸⁸⁰ 200:22 p 9 in 359_May 17_21_FAO_IFAD

*As the population is rapidly expanding, there is an urgent need for the city to be innovative about how it is collaboratively working with key stakeholders to secure access to nutritious food and meaningful livelihoods for its citizens.*¹⁸⁸¹

*As environmental and social disparities are more evident than ever, there is an urgent need to find new ways of re-articulating and re-building food systems to become more resilient, inclusive, and sustainable.*¹⁸⁸²

*He called for a more concise and targeted destination of COVID-19 recovery funds to solve the urgent food crisis while laying the foundations for a long-term transformation of global financial architectures so that they may sustain resilient and inclusive food systems.*¹⁸⁸³

*More concise and targeted destination of COVID-19 recovery funds to solve the urgent food crisis while laying the foundations for a long-term transformation of global financial architectures so that they may sustain resilient and inclusive food systems.*¹⁸⁸⁴

*The Dialogue adopted a positive, if urgent tone on how we might approach how the world produces, consumes and thinks about food in a safe and sustainable fashion.*¹⁸⁸⁵

*Therefore, urgent actions have to be undertaken to increase sustainable production, ensure access of safe and nutritious aquatic foods, promotion of nutrition-sensitive aquaculture and fisheries policies, and measures to tackle malnutrition.*¹⁸⁸⁶

*There is urgent need to enrich open waters with aquatic biodiversity restoration and improve ecosystems management.*¹⁸⁸⁷

*There is urgent need to promote generation and adoption of climate resilient technologies in the aquatic food systems' value chain, generation of climate information, development of insurance products and safety nets to compensate fish farmers during disasters.*¹⁸⁸⁸

*There is urgent need to increase access of poor farmers including women, to public water bodies.*¹⁸⁸⁹

*There is urgent need to promote research on small scale or artisanal fisheries to promote low-trophic, diversified, environmental-friendly, economically viable, and socially acceptable aquatic foods.*¹⁸⁹⁰

¹⁸⁸¹ 201:32 p 6 in 360_May_18_21_ICLEI Africa_Multi

¹⁸⁸² 205:31 p 5 in 364_May_26_21_DPIHD

¹⁸⁸³ 205:32 p 6 in 364_May_26_21_DPIHD

¹⁸⁸⁴ 205:33 pp 9–10 in 364_May_26_21_DPIHD

¹⁸⁸⁵ 207:34 p 5 in 366_May_27_21_Cumbers S

¹⁸⁸⁶ 208:47 p 6 in 367_May_27_21_Kachulu_Thilsted

¹⁸⁸⁷ 208:48 p 6 in 367_May_27_21_Kachulu_Thilsted

¹⁸⁸⁸ 208:49 p 6 in 367_May_27_21_Kachulu_Thilsted

¹⁸⁸⁹ 208:50 p 6 in 367_May_27_21_Kachulu_Thilsted

¹⁸⁹⁰ 208:52 p 10 in 367_May_27_21_Kachulu_Thilsted

*There is urgent need to promote technologies for adoption and build capacity for planning and implementation of climate resilient interventions.*¹⁸⁹¹

*Concluding remarks were given by His Eminence Cardinal Pietro Parolin, Secretary of State of the Holy See, who reiterated the need for concrete action to transform food systems, especially in the wake of the pandemic, which has exacerbated all humanitarian crises.*¹⁸⁹²

*In our independent dialogue, significant progress has been made in providing the knowledge of the participants on food systems concept, the urgent need for transformation and also the need for continuous awareness rising among the stakeholders across the food systems.*¹⁸⁹³

*Those shocks include not only natural disasters, but also socio-economic stresses and health crisis.*¹⁸⁹⁴

*The seven principles of engagement were reflected as follows: Act with urgency: The HKH dialogue on ethnic cuisine highlighted urgent research, management and policy topics and underlined the need to explore innovative pathways to food systems transformation in the Hindu Kush Himalaya.*¹⁸⁹⁵

...and they aligned with our institutional mandate of promoting robust regional cooperation among the eight member countries, driving collective and urgent climate action, and strengthening incentives and means for mountain communities to conserve and manage ecosystems.

*Documentation and research of ethnic cuisines in urgent: The diversity of food and food habits in the HKH is immense, but there is poor documentation of this diversity and assessments of the nutritional values and efficiency of several non-conventional foods and cuisine ingredients, including aspects of food safety.*¹⁸⁹⁶

*If we are to succeed in addressing the interconnected crises of climate change, biodiversity loss, social inequities and human health, we need to bring the value provided by nature, people and society to the forefront of decision-making to transform food systems.*¹⁸⁹⁷

*This calls for considering sustainability, inclusivity and resilience of food systems an urgent matter which requires building existing systems and policies.*¹⁸⁹⁸

¹⁸⁹¹ 208:53 p 10 in 367_May_27_21_Kachulu_Thilsted

¹⁸⁹² 210:20 p 6 in 369_May_31_21_Holy See

¹⁸⁹³ 212:15 p 3 in 371_June 01_21_Güngören A

¹⁸⁹⁴ 212:16 p 6 in 371_June 01_21_Güngören A

¹⁸⁹⁵ 219:53 p 3 in 380_June_08_21_Shakya_Chettri

¹⁸⁹⁶ 219:55 p 7 in 380_June_08_21_Shakya_Chettri

¹⁸⁹⁷ 220:29 p 5 in 381_June_08_21_UNEP_Multi

¹⁸⁹⁸ 223:29 p 6 in 384_June_09_21_Ekwamu A

During the Dialogue, welcoming remarks from INOFO President Shamika Mone and others laid out the principles, stressing inclusiveness of ideas, the urgent need to change the food system, and the importance of organic principles in the plan.¹⁸⁹⁹

Urgent and necessary actions in the next three years: COVID 19 emergency plan – Vaccinations and food on the plate for all.¹⁹⁰⁰

Public policies with social participation – promote actions of civil society and strengthen the urgent and relevant debate of the social force, supported by public policies, to address social inequalities, taking into account human health and promoting access to food.¹⁹⁰¹

Urgent and necessary actions in the next three years: Awareness: The National School Meals Program is an important strategy for promoting healthy eating by offering food and Food and Nutrition Education activities linked to the program that foster healthy eating habits.¹⁹⁰²

Urgent and necessary actions in the next three years: Food emerges as a central theme in the pandemic, with the potential to impact local projects throughout the territory.¹⁹⁰³

It is urgent to ensure autonomy in the access to food, either by guaranteeing a minimum income or by encouraging local food production.¹⁹⁰⁴

Urgent and necessary actions in the next three years: Brazil was taken off the hunger map because it managed to design a cross-sector program.¹⁹⁰⁵

It is urgent to resume both the discontinued federal programs and the budgets of the programs that remained.¹⁹⁰⁶

It is also urgent to strengthen the following public policies: - Emergency income support for as long as the pandemic lasts.¹⁹⁰⁷

Urgent and necessary actions in the next three years: Communication actions: Publicize (a) the importance of councils, forums, and public policies on food and socio-environmental control; (b) the current dismantling that public policies have been suffering and the consequences in relation to assurances of the basic right to food provided in the Federal Constitution.¹⁹⁰⁸

¹⁸⁹⁹ 226:37 p 3 in 387_June_09_21_Mone S

¹⁹⁰⁰ 228:97 p 8 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰¹ 228:98 p 8 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰² 228:100 p 12 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰³ 228:102 p 14 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰⁴ 228:103 p 14 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰⁵ 228:104 p 16 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰⁶ 228:105 p 16 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰⁷ 228:106 p 16 in 222a_May_11_21_FTI_ZHI_English

¹⁹⁰⁸ 228:107 p 18 in 222a_May_11_21_FTI_ZHI_English

*Conservation of ancestral knowledge and recognition of its centrality in the context of ecological crisis and climate emergency to achieve the sustainable use of natural resources.*¹⁹⁰⁹

*Communication, Information and "Reputation" Crisis of Livestock-Meat Production It is absolutely necessary and urgent that the Livestock-Meat Food System transmit to society the mission it fulfills, its work, its contribution to the nutrition and health of consumers, and its efforts and achievements with regard to the environment and animal welfare.*¹⁹¹⁰

*Reflections highlighted the complexity of food systems and the urgent necessity of a common understanding that could lead to the development of a SFS conceptual framework specific to the Mediterranean context, also taking into consideration local specificities and cultural aspects.*¹⁹¹¹

*The urgent need of a change of paradigm for rethinking food systems in the Mediterranean was underlined, considering that the current one is mainly based on maximising productivity at the expenses of environment/health/social dimensions.*¹⁹¹²

*A concern was raised about the fact that the need of an urgent and profound rethinking of our cultures on food systems was still not sufficiently recognized within the Summit debate.*¹⁹¹³

*With our guest speaker being a Member of Parliament we were able to reassure participants that the topics we were discussing at the Dialogue were important, relevant, and urgent issues that government agencies are interested in and are discussing.*¹⁹¹⁴

*Design/test for - and commit to - scaling up, at speed, because the challenges are urgent, and we need rapid positive change at scale.*¹⁹¹⁵

*Urgent need to establishment of a national research fund.*¹⁹¹⁶

*By linking the Dialogue to the Food Systems Summit Action Track 4, and connecting to the other action tracks, we increased the awareness of aquatic foods as part of sustainable food systems, and highlighted the importance of system-based approaches to advance equitable livelihoods with aquatic foods. - We recognised the urgent topics being eliminating poverty, reducing risks for the world's poorest, and addressing inequitable access to resources, to improve resilience through social protection and seek to ensure that food systems 'leave no one behind'.*¹⁹¹⁷

¹⁹⁰⁹ 234:67 p 10 in 273_May_12_21_ILC_FILAC_Multi_Eng

¹⁹¹⁰ 237:36 p 6 in 284a_May_19_21_INTERPORC_English

¹⁹¹¹ 244:49 p 3 in 480_June_21_21_CiHEAM_Multi

¹⁹¹² 244:50 p 9 in 480_June_21_21_CiHEAM_Multi

¹⁹¹³ 244:51 p 9 in 480_June_21_21_CiHEAM_Multi

¹⁹¹⁴ 257:25 p 3 in 493_June_23_21_Kevany_Van

¹⁹¹⁵ 259:35 p 8 in 495_June_23_21_Forum for the Future

¹⁹¹⁶ 262:59 p 6 in 498_June_24_21_Danquah E

¹⁹¹⁷ 263:60 p 3 in 499_June_25_21_GANSF

*The participants agreed with the urgent issues mentioned by the panellists and identified several other issues to be addressed in the future.*¹⁹¹⁸

*In the Dialogue, international food system experts working in policy, research and innovation, provided key solutions to reduce existing inequalities in aquatic food systems. For scalability to happen, analysis is needed in order to match solutions with the most urgent needs.*¹⁹¹⁹

*For scalability to happen analysis is needed in order to match solutions with the most urgent needs.*¹⁹²⁰

*All these call for a urgent actions to promote a responsible production and a healthy consumption pathway striking a balance between animal and plant protein.*¹⁹²¹

*The dialogue was organized in respond to this urgent call.*¹⁹²²

*Exploring the current problems in our exploitation of oceans and given sustainable farming examples, suggest solutions to the crisis in our ocean.*¹⁹²³

*The topic requires to our understanding urgent attention, it is complex and matches to the SUMMIT's scope (i.e. commitment), experts from multiple disciplines and stakeholder groups participated allowing a systematic assessment required to develop evidence-based pathways for decision making.*¹⁹²⁴

*The Independent Dialogue was centred around the urgent need of a food system transformation.*¹⁹²⁵

*Funding and contracting frameworks in a food systems HDP nexus approach "In 2030 80% of donor funding to protracted crises is pooled, and inter-donor HDP nexus strategies are founded on and guided by food systems resilience analysis.*¹⁹²⁶

*Furthermore, there is an urgent need to update Africa's agricultural science, research and innovation systems to make them fit for purpose.*¹⁹²⁷

*Methodologies and technologies, such as objective feedback and coaching are crucial, but there is an urgent need to develop better, more objective dietary assessment methods to improve the self-reporting of diet.*¹⁹²⁸

¹⁹¹⁸ 263:61 p 5 in 499_June_25_21_GANSF

¹⁹¹⁹ 263:62 p 6 in 499_June_25_21_GANSF

¹⁹²⁰ 263:63 p 8 in 499_June_25_21_GANSF

¹⁹²¹ 266:27 p 3 in 502_June_28_21_Zhang_Basher

¹⁹²² 266:28 p 3 in 502_June_28_21_Zhang_Basher

¹⁹²³ 267:37 p 5 in 503_June_29_21_Schnyder_Boura

¹⁹²⁴ 269:8 p 3 in 505_June_29_21_Borchard_Unc

¹⁹²⁵ 272:46 p 5 in 508_June_30_21_GDPRD

¹⁹²⁶ 278:108 p 12 in 514_July_01_21_Bolling_Multi

¹⁹²⁷ 284:9 p 7 in 520_July_05_21_HE_Sacko_J_Multi

¹⁹²⁸ 285:15 p 14 in 521_July_05_21_BBSRC-UKRI

The proposed solutions are interdisciplinary and complementary, and urgent and directed action along these lines, achieved through clear roles and responsibilities and partnerships, could change the trajectory of our food system.¹⁹²⁹

For this, it is also necessary to understand that there are different realities within the scope of consumers, and that each of these solutions can be more applicable or more urgent for certain contexts.¹⁹³⁰

However, each of the opportunities offered by the state has a specific process to be accessed, so reducing bureaucracy in accessing these opportunities is urgent.¹⁹³¹

All participants reinforced the need for urgent action.¹⁹³²

Climate crisis and the status of health systems as been reflected at Covid19 Be Respectful-Participants in the Dialogues are expected to listen to each other and be open to the co-existence of divergent points of view.¹⁹³³

It is urgent to stop short term economic thinking and explore alternative financial incentives (slow money, municipal bonds geared to green infrastructure investments, ecosystem services payments etc.), seek inclusion and territoriality.¹⁹³⁴

The discussion topics and questions used in the thematic breakout groups challenged participants to think about urgent short-term actions (“Act with urgency”) to improve the state of food systems by 2030.¹⁹³⁵

The dialogue also highlighted importance of strengthening the resilience of local food production systems (essential for reducing vulnerability) while strengthening global systems to enable a global response to local crises.¹⁹³⁶

Participants raised questions about whether informal systems were more nimble than formal markets in times of crisis, and whether they might offer more environmentally sustainable approaches.¹⁹³⁷

While they are part of the problem, they offer false solutions they mask with a new face maybe mention one or two strategies pushed forward in this masked mode Conscious that the food systems transformation agenda is long overdue, and many social movements have been fighting for systemic and structural transformation of food systems, stressing

¹⁹²⁹ 290:36 p 7 in 526_July_06_21_WWF-Brazil

¹⁹³⁰ 290:37 p 7 in 526_July_06_21_WWF-Brazil

¹⁹³¹ 290:39 p 11 in 526_July_06_21_WWF-Brazil

¹⁹³² 291:8 p 3 in 527_July_06_21_LYPW_UNESCWA

¹⁹³³ 297:35 p 3 in 533_July_07_21_Gazit GS

¹⁹³⁴ 299:108 p 9 in 535_July_08_UNESCO Chair on Food

¹⁹³⁵ 301:72 p 3 in 537_July_08_21_ANP_WWF

¹⁹³⁶ 302:44 p 7 in 538_July_09_21_IDS_Multi

¹⁹³⁷ 302:46 p 12 in 538_July_09_21_IDS_Multi

*the urgent need for a radical shift from fossil fuel-based industrial agriculture and corporate monopolies of food and agriculture to food sovereignty and agroecology.*¹⁹³⁸

*While SDG 2, Target 2.5 calls for maintaining the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, we call for urgent attention to the critical role that indigenous seeds play in promoting and conserving our genetic resources.*¹⁹³⁹

*Urgent attention is required to address existing challenges, as well as new and evolving demands on our food systems.*¹⁹⁴⁰

*At the same time, our food system is highly vulnerable to climate change and land degradation, and the impacts of unsustainable consumption constitute an escalating health crisis in their own right.*¹⁹⁴¹

*As highlighted by the EAT Lancet Commission, there is an urgent imperative to move populations towards consuming largely plant-based diets.*¹⁹⁴²

*Urgent and collective action is required of all stakeholders across the system to ensure that it is able to build resilience to these changes and provide access to safe, nutritious and sustainably produced food for all.*¹⁹⁴³

*The hosting agencies payed particular attention to “acting with urgency” in relation to the growing levels of global hunger since before the start of the pandemic, the climate crisis, and the need to find sustainable solutions for Food Waste and Loss.*¹⁹⁴⁴

*Act with urgency: The Dialogue was framed within the context of an urgent need for action across the food supply chain to build and support a more sustainable and equitable food system, aiming to explore the role food businesses can play.*¹⁹⁴⁵

*With simultaneous and interconnected planetary crises, it’s not enough for companies to be less harmful; sustainability and equitability must be inherent in their core products or services -- not just side product lines -- and companies should find a way to include advocacy in their work.*¹⁹⁴⁶

*There is an urgent need to increase the number and effectiveness of agriculture innovation hubs and research centers across the nation.*¹⁹⁴⁷

¹⁹³⁸ 309:32 p 6 in 545_July_13_21_Mbenya R

¹⁹³⁹ 309:34 p 7 in 545_July_13_21_Mbenya R

¹⁹⁴⁰ 310:57 p 5 in 546_July_13_21_INDEP

¹⁹⁴¹ 312:32 p 5 in 548_July_14_21_Genoni A

¹⁹⁴² 312:33 p 5 in 548_July_14_21_Genoni A

¹⁹⁴³ 313:48 p 6 in 549_July_14_21_Meah N

¹⁹⁴⁴ 315:48 p 3 in 551_July_15_21_FAO_ESCAP_Multi

¹⁹⁴⁵ 316:37 p 3 in 553_July_15_21_Food Tank_Oatly

¹⁹⁴⁶ 316:39 p 9 in 553_July_15_21_Food Tank_Oatly

¹⁹⁴⁷ 318:27 pp 5–6 in 555_July_15_21_Zombe K

*For this to happen and for the evaluation community to fully release it's potential, the field of evaluation needs to keep up to and evolve as much as are the development challenges we are confronted to, which are becoming increasingly complex and urgent.*¹⁹⁴⁸

*In order to ensure that the principles were appropriately incorporated, reinforced and enhanced we invited internationally renowned experts and professionals on food systems, rural development and biodiversity to discuss this urgent and multidimensional issue as well as small farmers and members of civil society.*¹⁹⁴⁹

*There is a crisis of imagination - people cannot imagine another world where these identified issues and challenges have been overcome – therefore the majority of participants would like to see clear and substantive reforms that are good for small farmers and for the planet.*¹⁹⁵⁰

*However, it was also noted that this shift can only be affected by policy makers recognising the urgent need for swift and irreversible action towards more environmentally friendly policies and legislation that are targeted to incentive small farmers towards more sustainable methods and practices.*¹⁹⁵¹

*Participants views on areas that need urgent action.*¹⁹⁵²

*Lastly the nation needs to ensure that there is value addition to food produced as a way of reducing post-harvest food losses and there is an urgent need to build infrastructure for easy transportation of food products.*¹⁹⁵³

*Each level of “system” comes with pluses and minuses and many producers are recognizing a need to balance the food-for-the-masses approach that feeds millions every day, with a local-economy approach that allows rural communities to thrive with diversified employment paradigms that create a “backup” when unseen pressures to a larger system (such as the 2020 health crises and cyberattacks) affect the larger, often less nimble infrastructure of the agricultural economy.*¹⁹⁵⁴

*Urgent Actions In the challenges of returning there are actions that can be considered as a common denominator, regardless of the model applied.*¹⁹⁵⁵

Urgent actions Directly related to the public health measures to control the spread of the virus and applied continuously: Full and unrestricted vaccination against COVID-19 for management teams, teachers, students and others in the school community; Effective

¹⁹⁴⁸ 320:22 p 7 in 557_July_15_21_EvalForward_FSRD

¹⁹⁴⁹ 323:83 p 3 in 560_July_19_21_Arbuthnott_Multi

¹⁹⁵⁰ 323:84 p 7 in 560_July_19_21_Arbuthnott_Multi

¹⁹⁵¹ 323:86 p 10 in 560_July_19_21_Arbuthnott_Multi

¹⁹⁵² 325:32 p 7 in 562_July_19_21_Zombe K

¹⁹⁵³ 325:33 p 7 in 562_July_19_21_Zombe K

¹⁹⁵⁴ 336:4 p 3 in 494a_June_23_21_US Farmers

¹⁹⁵⁵ 339:97 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

*training on following the sanitary, human and food safety protocols, involving access to PPE on a large scale.*¹⁹⁵⁶

*The Government is responsible for the most urgent actions, especially for improving public policies for health and school meals: full and general vaccination against COVID-19 and implementation of the program.*¹⁹⁵⁷

*Unfortunately, it was not possible to hold the 3 tables separately, which would have allowed for greater participation of the attendees, although the notes collected by those in charge of the roundtables express very diverse and relevant opinions, visions, and proposals that demonstrate knowledge, years of experience on the related topics, and a clear interest in participating in the in the creation of a different vision, contributing to finding solutions to a problem so deeply felt, even more so in the current health and environmental crisis.*¹⁹⁵⁸

*Analysis of these results is associated with the food and health crisis, which depends on logistics affected by the pandemic.*¹⁹⁵⁹

*This in turn involves the creation of a comprehensive plan that boosts the resilience of small producers for recovery, prevention of future crises and transformation to sustainable and healthy food systems.*¹⁹⁶⁰

*From this situation new opportunities arose, and it's urgent that we recover the agri-food chain through food sovereignty, mainstream and integral agrarian reform, and agroecology.*¹⁹⁶¹

*It is urgent to recover the agri-food chain through food sovereignty, and mainstream and integral agrarian reform.*¹⁹⁶²

*There is an urgent need to create a global fund managed by indigenous peoples themselves with adequate funding for the successful and effective protection and support of the food systems of indigenous peoples and local communities.*¹⁹⁶³

*Progress on reducing diet related NCDs (a form of malnutrition) is off track to achieve targets due to decades of neglect and de-prioritization – this summit is an opportunity to elevate and accelerate action for this and other urgent issues.*¹⁹⁶⁴

¹⁹⁵⁶ 339:98 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

¹⁹⁵⁷ 339:99 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

¹⁹⁵⁸ 342:26 p 5 in 416a_June_16_21_Mone S_Spanish_Eng

¹⁹⁵⁹ 344:12 p 5 in 418a_June_18_21_CLOC_Eng

¹⁹⁶⁰ 344:13 p 6 in 418a_June_18_21_CLOC_Eng

¹⁹⁶¹ 345:15 p 5 in 419a_June_08_21_CLOC_Eng

¹⁹⁶² 346:21 p 6 in 420a_June_19_21_CLOC_Eng

¹⁹⁶³ 354:8 p 6 in 407_June_10_21_CSIPN_Aborigin Forum

¹⁹⁶⁴ 361:4 p 3 in 405_June_10_21_NCD Alliance

*There is an urgent need to create an environment that assures technology and its accompanying knowledge can be used in transforming agri-food systems in a sustainable way.*¹⁹⁶⁵

*In this way, they were able to embrace the principles of engagement and to highlight the urgent need of concrete actions and strategies to achieve the transformation of food systems in Italy and in the Mediterranean.*¹⁹⁶⁶

*The reduction of agri-food losses, the recovery of surpluses for a better availability of food, the prevention of waste at home and outside the home, the adoption of a healthy diet, sustainable and accessible to all, such as the MD represent a challenge for Italy and for the whole world, made particularly urgent by the pandemic crisis.*¹⁹⁶⁷

*From Action Track 2 - there was acknowledgement that disruption of Indigenous Peoples' food systems has caused for a nutritional crisis and epidemic of malnourishment related diseases for high percentages of Indigenous Peoples, and that returning to traditional foods and diets is a multi-factored and critical solution to reestablish/safeguard sustainable consumption patterns for Indigenous Peoples; further noting the world has much to learn from Indigenous Peoples about "no waste" and using only what we need as central values in Indigenous Peoples' food systems.*¹⁹⁶⁸

*The emphasis on making the safety nets more nutrition and gender sensitive will allow the country to ensure access to nutritious food at an affordable rate for the poor whose livelihood strategies have been disrupted either by climate related shocks or due to COVID-19 crisis.*¹⁹⁶⁹

*This critical function of small holders had become particularly clear during the COVID-19 crisis.*¹⁹⁷⁰

*Most policies are sectoral, and there is an urgent need to move away from working in silos towards more integrated policies that deliver simultaneously on economic, environmental, health, climate mitigation adaptation, social and cultural objectives.*¹⁹⁷¹

*Declare anti-black racism as a public health crisis.*¹⁹⁷²

*Panellists believe that an urgent change needed is the dismantling of silos.*¹⁹⁷³

We organized the virtual forum as an urgent response to the need for a dialogue that would focus on wild foods and the role of indigenous peoples and local communities,

¹⁹⁶⁵ 366:46 p 3 in 410_June_14_21_Gregorio_Tan

¹⁹⁶⁶ 386:3 p 3 in 429_July_05_21-CIHEAM Bari

¹⁹⁶⁷ 386:4 p 6 in 429_July_05_21-CIHEAM Bari

¹⁹⁶⁸ 390:2 p 6 in 432_Dec_15_20_UNPFII_FAO

¹⁹⁶⁹ 392:5 p 8 in 434_June_02_21_Hanan_KA

¹⁹⁷⁰ 396:22 p 12 in 438_June_16_21_Caballero_Multi

¹⁹⁷¹ 401:22 p 13 in 442_Apr_08_21_Mizenko B

¹⁹⁷² 404:6 p 8 in 445_May_26_21_ICLEI USA

¹⁹⁷³ 407:5 p 7 in 448_Feb_25_21_IFAD_Multi

*highlighting their unique and important perspectives often not heard or given adequate space in policy discussions about food security, eradicating hunger and poverty.*¹⁹⁷⁴

*Challenges to wild foods and biodiversity - decline in knowledge on wild foods and harvest practices at the local level - missing data on the nutritional aspect of wild foods and its conservation at the regional/global level - the lack of data also means that contributions of wild foods are not counted and are at best, mere estimates - conservation exclusion affecting IPLCs' access to territories - blanket bans on wildlife consumption, for example, undermine cultural practices - There is a need for a deeper dialogue to consider various perspectives on the issue - development aggression has led to conversion of forests at a massive scale and has encouraged monocultures, affecting habitats of species and biodiversity - Corporate farming has marginalized smallholder farmers and IPLCs - an orientation towards foreign markets for production and overreliance on cheap imports has undermined self-sufficiency of nations/localities, putting them at greater risk of food insecurity during times of crisis, such as pandemics - food production and diets as well are not diverse and are concentrated only on major crops - mainstream or popular food, which are usually processed and unhealthy, is preferred over traditional diets, which are more nutritious.*¹⁹⁷⁵

*The COVID-19 pandemic was a wake-up call to the glaring fragility and inequalities of the global, regional, and national agri-food systems, thus making the resolve for sustainable, inclusive, and resilient food systems extremely urgent.*¹⁹⁷⁶

*Urban poor families have also struggled to cope with the food crisis more than health crisis caused by COVID-19 outbreak.*¹⁹⁷⁷

*Investing in women's agency is now urgent, as despite considerable global awareness and progress on gender equality, several challenges remain to the exercise of women's agency in food systems.*¹⁹⁷⁸

*The Dialogue was organized with the intention that there is an urgent need to address the flaws in our current global food system and that this needs to be addressed in the way development and humanitarian aid is conducted.*¹⁹⁷⁹

Real change needs happen at the local level especially in conflict areas- component of basic start up support as well as education - Need to move from basic caloric intake needed to live to providing full/balanced nutrition and diverse diets with fruits and vegetable - Protracted crisis and conflict change food systems fundamentally, but we treat them as temporary; development is possible in areas experiencing protracted conflict, but local leadership is critical - Should adapt weather-related risk management

¹⁹⁷⁴ 408:6 p 3 in 449_March_08_21_Wild Foods_Multi

¹⁹⁷⁵ 408:7 p 11 in 449_March_08_21_Wild Foods_Multi

¹⁹⁷⁶ 416:5 p 6 in 457_May_20_21_Ekwamu_A

¹⁹⁷⁷ 418:7 p 5 in 459_June_01_21_Rashid Md J

¹⁹⁷⁸ 421:14 p 5 in 462_June_10_21_NISD_RySS_Multi

¹⁹⁷⁹ 424:7 p 3 in 465_June_16_21_Congressional Hunger

*systems to conflict and have financial services that can work where there is a lot of uncertainty.*¹⁹⁸⁰

*The Principles were implicitly incorporated in the organisation of the Dialogue, by highlighting the urgent need for commitments and investments in women nutrition and enhancing women abilities to play their roles in the food system, especially as the Covid-19 pandemic has exacerbated health and nutrition status of women and their children.*¹⁹⁸¹

*If existing channels do not work for them, alternative models of capital distribution must be given urgent attention.*¹⁹⁸²

*This means paying particular attention to vulnerable populations, and, going beyond, actively supporting those who suffer the most from systemic shocks such as the COVID-19 crisis.*¹⁹⁸³

*Some key areas of interest for our participants included a) collaborating and supporting existing BIPOC food sovereignty initiatives, b) building the capacity of our “Food Corps,” which helps provides labour for small-scale agro-ecological farmers and healthy food for hungry food insecure communities, c) the creation of a farm training curriculum for our volunteers, d) calling for urgent action from our government regarding the current food crisis in the form of an open letter (see attached).*¹⁹⁸⁴

*Despite the government’s perceived eagerness to address our current climate crisis, the group felt that their local representatives were not doing enough to address the real needs of their constituents.*¹⁹⁸⁵

*The regional policy group discussed strategies for working with our municipal and provincial governments to address our urgent food crisis, through such means as our open letter (attached).*¹⁹⁸⁶

*Some participants felt strongly that action oriented solutions, such as our “Food Corps,” were best suited to tackling the current food crisis.*¹⁹⁸⁷

*What transformations are necessary / urgent in the Chilean food system to make it more sustainable and inclusive?*¹⁹⁸⁸

Along with an economic contraction, there is always a social crisis and the one that originated with the Covid-19 Pandemic will certainly be the strongest in the last 100

¹⁹⁸⁰ 424:8 p 10 in 465_June_16_21_Congressional Hunger

¹⁹⁸¹ 430:4 p 3 in 471_June_08_21_van Liere M

¹⁹⁸² 460:66 p 16 in 131_May_25_21_IISLA Ventures

¹⁹⁸³ 463:23 p 10 in 155_Apr_27_21_FCDO_Multi

¹⁹⁸⁴ 464:8 p 6 in 185_Apr_14_21_Local Farm_Multi

¹⁹⁸⁵ 464:9 p 15 in 185_Apr_14_21_Local Farm_Multi

¹⁹⁸⁶ 464:10 p 16 in 185_Apr_14_21_Local Farm_Multi

¹⁹⁸⁷ 464:11 p 17 in 185_Apr_14_21_Local Farm_Multi

¹⁹⁸⁸ 474:15 p 5 in 246_June_09_21_Boza_Kanter

*years, raising the number of people in poverty to more than 190 million from which 72 million are in extreme poverty in our region.*¹⁹⁸⁹

*Also in this context, international commitments, such as the Milan Urban Food Policy Pact and the Glasgow Food and Climate Declaration are prescribed, setting important global milestones and pointing out urgent practical actions.*¹⁹⁹⁰

*Along with an economic contraction, there is always a social crisis and the one that originated with the Covid-19 pandemic will certainly be the strongest in the last 100 years, raising the number of people in poverty to more than 190 million from which 72 million are in extreme poverty.*¹⁹⁹¹

*Therefore, we highlight the following recommendations: - Propose that the final declaration of the conference encourages member states to include local governments in their national policies, especially cities, providing them with financial and technical resources, as well as guidelines for the formulation of their local public policies; (impact indicator related to the corresponding SDG and at least 5% increase in the budget transferred to the municipalities for this purpose until 2030); - Creation of a cooperation program between cities, with the aim of highlighting best practices and disseminating replicable examples of local policies; (biennial program, covering at least 15 cities in the region per year, with impact indicators linked to the corresponding SDGs); - Include the healthy eating and sustainable food production agenda as a mandatory criterion for allocating funds related to the fight against climate crisis.*¹⁹⁹²

*The participants agreed with the urgent issues mentioned by the panellists and identified several other issues to be addressed in the future.*¹⁹⁹³

*We need to see the climate crisis in terms of crisis management and use learnings from how we deal with man-made conflicts- and realise that we are indeed at war- and get smart fast.*¹⁹⁹⁴

*A community emergency response approach was favored as opposed to having government officials navigating and managing a crisis response.*¹⁹⁹⁵

*Creating an inclusive network of farmers, local food vendors, community health workers, community/faith-based organizations, city departments and academic institutions to response to a crisis is key to ensuring food is distributed to those in need.*¹⁹⁹⁶

¹⁹⁸⁹ 483:2 p 5 in 283_May_18_21_ICLEI_FAO

¹⁹⁹⁰ 483:3 p 5 in 283_May_18_21_ICLEI_FAO

¹⁹⁹¹ 483:5 p 6 in 283_May_18_21_ICLEI_FAO

¹⁹⁹² 483:6 p 6 in 283_May_18_21_ICLEI_FAO

¹⁹⁹³ 485:11 p 5 in 288_May_20_21_GAN_Multi

¹⁹⁹⁴ 486:23 p 14 in 291_May_21_21_Polman_Prabha

¹⁹⁹⁵ 487:5 p 9 in 293_May_22_21_City of San Antonio

¹⁹⁹⁶ 487:6 p 9 in 293_May_22_21_City of San Antonio

*Progress on reducing diet related NCDs (a form of malnutrition) is off track to achieve targets due to decades of neglect and de-prioritization – this summit is an opportunity to elevate and accelerate action for this and other urgent issues.*¹⁹⁹⁷

*Small fishers are facing worst crises today.*¹⁹⁹⁸

Guiding Theme 20. Facilitate Conflict Resolution and Negotiate Trade-Offs

*Increase transparency about what the trade-offs are when discussing these policies over the short and long term.*¹⁹⁹⁹

*The trade-off between developing value-added food products and improving the access of foods to low and lower-middle income consumers demands attention, and the focus should be on increasing the access to healthy foods since the per capita consumption of fruits and vegetables in Brazil is less than half of the amounts suggested by the World Health Organization.*²⁰⁰⁰

*Trade-offs are inevitable, and not well understood. It is important to recognize and follow or measure them, but be careful trying to always minimize them. For example, given some current estimates of the externalities associated with food, internalising these costs could hypothetically double the price of food. Some of the necessary transformations of food systems may similarly create negative effects on people's employment and livelihoods. But the fact that trade-offs exist should not become a reason for inaction. Some policies may indeed make some people worse, but may still be what is needed.*²⁰⁰¹

*During discussions, the trade-offs came out clear in the multiple criteria that the participants at different levels and from different sectors applied to select foods and the farm enterprises for making the selected foods available. The criteria included: used to food type, nutrients availability, easy to produce/rear, availability / accessibility, multiple benefits, provision of farm inputs, seasonality, productivity, income/for sale. The criteria vary across sites and across stakeholders. Observations of the discussions within the sectors and between the sectors revealed that reaching a consensus on the criteria was an uphill task.*²⁰⁰²

Strong and efficient value chain coordination might result in the control of, and agreement on, volumes, which have an impact on prices. This can be considered in

¹⁹⁹⁷ 502:3 p 3 in 398_June_07_21_NCD Alliance

¹⁹⁹⁸ 503:19 p 5 in 399_June_9_21_AFA_Multi

¹⁹⁹⁹ 361:66 p 10 in 405_June_10_21_NCD Alliance

²⁰⁰⁰ 389:25 p 7 in 431_June_22_21_CEBOS_EMBRAPA

²⁰⁰¹ 434:11 p 8 in 475_June_18_21_Kadiresan K_Multi

²⁰⁰² 448:26 p 9 in 388_May_03_21_Kambewa_D

*certain countries a breach of competition laws. Studies could be developed to demonstrate the advantages of such practices over the risks.*²⁰⁰³

*Areas that need further exploration include trade-offs with other systems. Participants indeed questioned the extent to which innovations will be accepted in the market – as most of them will require trade-offs. Building on this, it will be crucial to create innovation ecosystems that can be easily deployed and scaled up – which will require overcoming existing barriers in the system. The debate then lies in identifying what the systemic barriers are, and agreeing on how to overcome them.*²⁰⁰⁴

*Trade in inputs should be lucrative to encourage investors into that market.*²⁰⁰⁵

*Those who attribute importance to physical and financial productivity targets (everyone from industry leaders and financiers to small farm owners) need to be engaged in order to appreciate that what might seem like “losses” to output (such as time invested in training and social activities) will, in the longer term, improve gender diversity and softer productivity measures in parallel. Ultimately this will lead to improved physical and financial performance.*²⁰⁰⁶

*Need to address trade-offs among different sustainability dimensions and also among different food systems actors.*²⁰⁰⁷

*Need to address trade-offs among different sustainability dimensions and also among different food systems actors...*²⁰⁰⁸

*Discussions on actions are driven by political concepts, preventing their translation into on-the-ground actions, and not shaped to real priorities and challenges specific to the Mediterranean context.*²⁰⁰⁹

*The challenge of the diversity of Mediterranean countries, the variety of their food cultures and systems, and how dietary patterns differ across dimensions (environmental, economic, socio-cultural, health) and countries emerged strongly. Devising a single, common label that addresses all sustainability dimensions was also acknowledged to be a challenge.*²⁰¹⁰

Decision-making processes were felt to not always be inclusive of all stakeholders, in particular the most vulnerable. For example, it was noted that while sustainable development is linked to innovation and there is a general need for new ideas, there are possible trade-offs in terms of social inclusion. We need to be vigilant in order to avoid that technology fosters exclusion in the most fragile parts of society. Women can lead on

²⁰⁰³ 462:31 p 11 in 133_May_27_21_CIRAD_Multi

²⁰⁰⁴ 463:72 p 14 in 155_Apr_27_21_FCDO_Multi

²⁰⁰⁵ 499:41 p 9 in 394_June_01_21_Egyir I

²⁰⁰⁶ 6:17 p 10 in 166_Apr_14_21_Meat Business Women

²⁰⁰⁷ 23:27 p 7 in 205_Apr_27_21_CIHEAM_Multi

²⁰⁰⁸ 23:28 p 7 in 205_Apr_27_21_CIHEAM_Multi

²⁰⁰⁹ 23:60 p 16 in 205_Apr_27_21_CIHEAM_Multi

²⁰¹⁰ 23:61 p 16 in 205_Apr_27_21_CIHEAM_Multi

*this process. Exchanges and peer to peer interactions were recognised as providing a way to bridge the skill gap in this regard.*²⁰¹¹

*How to overcome the limited interaction between SMEs and R&I Centres was debated. To manage this aspect, it was recognized that it would be useful to promote innovation-transfer pathways, co-creation experiences (e.g. living labs), knowledge-exchanges, and greater recognition of different professional development for researchers and academics.*²⁰¹²

*According to the participants, the assumption is that producers and consumers present differences that must be taken into account when it comes to trading. In this regard, it is important to find a balance between the needs of both and to avoid the loss of traceability in trade. In fact, traceability also serves to increase consumer awareness and explain to them what are the impact on the environment, on the health, on their own well-being, and try to make the trade in the supply chain less harmful as possible and leaving no one behind.*²⁰¹³

*Most Irish produce is targeted at the export market. What effect is Irish produce having on consumers and producers in our target markets?” • “Will promoting local and organic provide the economic returns for Irish farmers who rely on exporting 90% of what they produce”.*²⁰¹⁴

*“Should we tax highly processed low nutrient foods and if so, would this disproportionately affect consumers with lower incomes? Is this equitable?”*²⁰¹⁵

*Is decreasing the national herd the only way to simultaneously reduce emissions, increase biodiversity, improve water quality and ensure food security, both in Ireland and globally and if so, how can this be reconciled with the current agri-food growth strategy?” • “Most funding goes towards the ‘traditional’ sectors of dairy and meat. Building expertise and capacity in other sectors will take time and money.” • “Can legislation and regulation stay ahead of new product development?”*²⁰¹⁶

*Develop a process to manage the trade-offs to ensure progress and avoid unintended consequences.*²⁰¹⁷

*Having to compete with imports prices A farmer or company that has decided to export its product or service to a new market or to buy from a new supplier in a different country cannot take for granted that the transactions will be expensive, and competitive. An exporter must ensure acceptable and timely returns on their financial investment in proportion to the associated costs and risks.*²⁰¹⁸

²⁰¹¹ 23:62 p 16 in 205_Apr_27_21_CIHEAM_Multi

²⁰¹² 23:63 p 16 in 205_Apr_27_21_CIHEAM_Multi

²⁰¹³ 24:6 p 8 in 323_Apr_28_21_Giuliodori A

²⁰¹⁴ 34:12 p 8 in 089_Mar_22_21_Gee S

²⁰¹⁵ 34:18 p 8 in 089_Mar_22_21_Gee S

²⁰¹⁶ 34:19 p 8 in 089_Mar_22_21_Gee S

²⁰¹⁷ 34:23 p 9 in 089_Mar_22_21_Gee S

²⁰¹⁸ 35:82 p 11 in 095_Mar_27_21_Chinapoo C_Multi

*We can advance equitable livelihoods in the food system by supporting local markets for local farmers to earn quality incomes; by marketing agriculture and creating more enticing jobs within the agriculture industry, and; utilizing more homemade products to support Caribbean food sustainability rather than depending on imported food.*²⁰¹⁹

*Our dialogue highlighted the existing tradeoffs which present 'sticking points' in the progress of food systems transformation. One such issue is finding the balance between the desire to reduce trade restricting non-tariff barriers (such as SPS and TBT measures) to allow developing countries greater access to more lucrative export markets and the need for such barriers to safeguard against harmful foods and prioritize food safety.*²⁰²⁰

*Farmers' preference for selling off raw farm produce after harvest rather than engaging in value-addition.*²⁰²¹

*The trade-off between tailored diets and its implication or interference with the personalized diets of others and the costs both in economic and environmental terms that such diets could have.*²⁰²²

*The point was reiterated that students should not have to make trade-offs between food and education.*²⁰²³

*Areas that need further exploration are addressing trade-offs and developing ways to measure progress. Moreover, the different stakeholders should be linked to specific actions to pin down responsibilities.*²⁰²⁴

*They emphasized the importance of collecting data and evidence about trade-offs and what works, leveraging technology for sharing real-time information, and being inclusive.*²⁰²⁵

*The trade-offs between consumers' access (buying capability) and producers' income. A lot of capital available in developing markets is restricted, time-bound, philanthropic aid – need to work with donors to create an understanding of the impact on business, provide funding in a way that enables SMEs to thrive while not undercutting traditional charitable efforts.*²⁰²⁶

*The trade-offs between production and export need to be re-examined, as Irish agriculture is focused on dairy and meat exports, very little land is used for crops (human consumption) and most grain (60%) is grown to feed animals.*²⁰²⁷

²⁰¹⁹ 35:85 p 11 in 095_Mar_27_21_Chinapoo C_Multi

²⁰²⁰ 38:3 p 8 in 101_Apr_1_21_Doaa A

²⁰²¹ 44:36 p 13 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

²⁰²² 45:16 p 10 in 043_Feb_17_21_Donati L_Multi

²⁰²³ 48:6 p 6 in 078_Mar_11_21_Cadogan T

²⁰²⁴ 53:27 p 8 in 001_Nov_5_20_CGIAR

²⁰²⁵ 54:36 p 9 in 002_Nov_19_20_CGIAR

²⁰²⁶ 63:61 p 13 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁰²⁷ 65:19 p 9 in 050_Feb_23_21_World Vision Ireland

*Reconciling local and global food systems - Tradeoffs between local and global food systems need to be reached.*²⁰²⁸

*Presently, Dr. Cuyegkeng noted that the challenge is how to strike a balance between creating sustainable food systems to meet the basic needs of the people while minimizing the use of natural resources and toxic materials.*²⁰²⁹

*In this system, people are able to access food for a cost that is not artificially raised because of the desire to protect only the producers, as the interest of consumers are also protected. Dr. Habito added that while it is possible to be both self-sufficient and competitive in the production of certain products and crops, there are other products that can never achieve 100% self-sufficiency, and for which it has to be more open to supplementing competitive domestic production with imports.*²⁰³⁰

*Local and nature positive production should be favored but some products will still need to be imported because it's impossible to produce everything locally and export revenues are important for many countries.*²⁰³¹

*The discussion started with the question on how to find balance between safe and nutritious food and environmental planetary capacity. The group discussed how enough protein can be secured in diets, especially in poorer countries, where diets are more plant-based. Increasing vegetables in diets might be easier and more accepted as a narrative than requesting people to reduce meat. Both malnourishment and obesity need action.*²⁰³²

*The group noted that local production is generally more sustainable than importing products but it is difficult to produce everything locally. Some crops and food items will still need to be imported due to local conditions not being suitable for some crops. It has to be borne in mind that local production doesn't always equal sustainability and in many countries it has led to soil impoverishment. Nevertheless, local production and food systems have a key role in many regions. Effects of developed countries' consumption in developing countries were recognized and the group thought about how we can ensure global environmental sustainability and food safety.*²⁰³³

*Unfortunately, many innovative practices are cost prohibitive.*²⁰³⁴

*Of note, participants flagged that not all sustainable opportunities require trade-offs (i.e. food waste) but where trade-offs exist, there is a role for government in reducing them by ensuring policies are created through a holistic 'food-system' lens.*²⁰³⁵

²⁰²⁸ 66:66 p 12 in 052_Feb_25_21_EUFIC

²⁰²⁹ 74:20 p 16 in 189a_April_16_21_Ateneo de Manila

²⁰³⁰ 74:31 pp 33 – 34 in 189a_April_16_21_Ateneo de Manila

²⁰³¹ 79:7 p 6 in 118_Apr_21_21_Huvio T

²⁰³² 79:20 p 8 in 118_Apr_21_21_Huvio T

²⁰³³ 79:27 p 9 in 118_Apr_21_21_Huvio T

²⁰³⁴ 84:23 p 10 in 153_Apr_28_21_GCNF_Multi

²⁰³⁵ 90:12 p 8 in 206_Apr_27_21_CCANCC

When companies focus more on making profits and communities are disconnected from the food, trade-offs are made that compromise the health of the land (e.g, destructive farming practices) and the health of people (e.g, increase in non-communicable diseases).²⁰³⁶

Trade-offs must be considered, and incentives adjusted to take account of environmental as well as economic gains.²⁰³⁷

Do a better job thinking through the hard trade-offs in livestock issues—figure out who pays, how and how much. Do not underestimate the challenges the sector needs to face.²⁰³⁸

All stakeholders are thus challenged to do a better job addressing the hard trade-offs in livestock issues—and to figure out who pays, how and how much.²⁰³⁹

There were different views among participants as to whether communication should be less based around science, and instead the opportunities presented in ruminant systems to convert forage to protein should be highlighted.²⁰⁴⁰

The key area of divergence and trade-off was between using agroecological methods and guaranteeing yields for crops. Most farmers recognize that Nigeria is not producing enough food for its population and want to change that. Farmers consider tradeoffs between farming methods tested and tried via their families or newer methods. There needs to be more communication between scholars and researchers involved in biodynamic food production and the actual farmers and cultivators.²⁰⁴¹

However, it is also important to think through potential trade-offs. Balancing food production and nature conservation may result in trade-offs, and these could occur at different scales. On the other hand, we need to move beyond the false dichotomy of either prioritizing conservation OR food production – we can and should do both.²⁰⁴²

How to balance promotion of Agri-tourism versus maximizing the use of land to scale up organic crop and animal production.²⁰⁴³

The challenge remains on how to balance the economic and ecological dimensions of organic agriculture for sustainable food production. Costly 3rd party certification remains a challenge. The new law on Participatory Guarantee Systems should be supported and studied closely how best it will serve organic farmers, animal raisers and small-medium processors and enterprises.²⁰⁴⁴

²⁰³⁶ 92:29 p 5 in 225_May_13_21_Schwartz A

²⁰³⁷ 93:43 p 12 in 227_May_18_21_Tarawali S

²⁰³⁸ 93:49 p 12 in 227_May_18_21_Tarawali S

²⁰³⁹ 93:63 p 15 in 227_May_18_21_Tarawali S

²⁰⁴⁰ 112:89 p 14 in 074_May_18_21_O'Mara Teagasc

²⁰⁴¹ 116:18 p 10 in 093_Mar_25_21_Adeboye T

²⁰⁴² 117:63 p 15 in 109_Apr_13_21_Jacobs-Mata I

²⁰⁴³ 122:49 p 10 in 135_June_08_21_Calub_Gregorio

²⁰⁴⁴ 122:50 p 10 in 135_June_08_21_Calub_Gregorio

How to make agriculture profitable without sacrificing the principles of organic agriculture (care, health, ecology and fairness).²⁰⁴⁵

There are tradeoffs between the use of water and the use of energy for agriculture and other purposes. It is important to bring in biodiversity and ecosystem in this challenge and try to improve the resilience of productivity of irrigated agriculture through water energy and food Nexus.²⁰⁴⁶

Moreover, a systematic approach is needed with much more information for balancing trade-offs. While making a decision, consider a link between managing the canal and groundwater, and determine the impacts and implications of canal risk management. Canal management is an intervention tool, for recharging groundwater. Conservative water management is important that is already happening in Pakistan however, there is a need to further improve the traditional water management to adopt a water balancing system approach and to understand the availability of resources to be used efficiently.²⁰⁴⁷

There were no strong areas of divergence but there was clear recognition of the potential trade-offs between affordability and other economic, social and environmental issues. In particular it was recognised that affordability should not be achieved at the expense of poor social conditions (low wages, low remuneration to producers), poor environmental conditions (excessive land clearance, over-use of chemical inputs, intensive animal production), or adverse economic conditions (trade protectionism).²⁰⁴⁸

However, a potential trade-off was identified between designing 'very lean' systems, and having systems that are efficient but also have capacity to sex, adapt and respond in a time of crisis.²⁰⁴⁹

There was a general consensus surrounding the issues of women's empowerment and nutrition, however the approaches to address these did differ. Some could argue that using women's empowerment as a method to improve households or child malnutrition, as successful as that has been in the past, could also lead to the over burden of women and in some cases and ignore the needs of the individual women themselves.²⁰⁵⁰

Collaboration, conversation, and trade-offs must enter every level of our actions, from the cattle ranchers to the personal work we do with the land, as it all has an impact on the environment and on our food systems. Create a sense of community by working together while cooking together creating a complex web of community connections and trust of each other.²⁰⁵¹

Trade-off between international and local markets. Market diversification activities (local, regional, international) can be pursued with little or no trade-off. Many

²⁰⁴⁵ 122:51 p 10 in 135_June_08_21_Calub_Gregorio

²⁰⁴⁶ 127:52 p 15 in 159_Apr_21_21_Hafeez M

²⁰⁴⁷ 127:56 p 15 in 159_Apr_21_21_Hafeez M

²⁰⁴⁸ 131:30 p 11 in 190_Apr_16_21_Cullen N

²⁰⁴⁹ 131:34 p 11 in 190_Apr_16_21_Cullen N

²⁰⁵⁰ 136:15 p 10 in 211_Apr_30_21_Chisholm N_Multi

²⁰⁵¹ 149:18 p 8 in 243_June_03_21_Schwartz A

*interlinkages and synergies already exist and can be leveraged to strengthen and enhance our food system. An enabling policy and regulatory environment can protect food safety and enable sustainable consumption while encouraging private sector involvement.*²⁰⁵²

*International trade will play a central role in addressing some of the challenges experienced by our food systems. The COVID-19 health crisis had the potential to become a food crisis nationally, but decisions to keep borders open to goods and essential services and not impose trade restrictions maintained functional supply chains and mitigated impact.*²⁰⁵³

*Many of the solutions focused on regulatory improvements such as reducing barriers to inter-provincial trade, improving Canada's processing competitiveness, addressing labour shortages, and bringing more technologies to farmers.*²⁰⁵⁴

*Participants were asked to consider the trade-offs between different markets. From a Canadian context, viewing markets separately was seen as myopic as it fails to account for interlinkages, existing barriers and necessities related to size and geography.*²⁰⁵⁵

*Trade barriers need to be further broken down and regulatory environments harmonized.*²⁰⁵⁶

*Trade has been recognised as a beneficial resource for both consumers and farmers. In fact, through trade, competition facilitates an increase in quality at affordable prices for consumers.*²⁰⁵⁷

*Participants recognized a need for further efforts towards fair trade and rapprochement between producers and final consumers to result in fair prices to contribute to the resilience and sustainability of food systems.*²⁰⁵⁸

*In order to minimize trade-offs between ensuring universal access to food and caring for our common home, multi-stakeholder dialogue, coordination across sectors and among policy arenas are required to articulate concrete and holistic measures capable of rebuilding food systems from the grassroot-level, up. She praised the centrality of human dignity, fairness and justice in the webinar, as they are often absent in global dialogues on the topic.*²⁰⁵⁹

*Identifying multi-win solutions is important. Potential trade-offs need to be analyzed carefully but action with speed is required.*²⁰⁶⁰

²⁰⁵² 153:4 p 6 in 263_May_06_21_CCGA

²⁰⁵³ 153:10 p 7 in 263_May_06_21_CCGA

²⁰⁵⁴ 153:22 p 9 in 263_May_06_21_CCGA

²⁰⁵⁵ 153:35 p 8 in 263_May_06_21_CCGA

²⁰⁵⁶ 169:41 p 12 in 327_May_18_21_CropLife

²⁰⁵⁷ 179:9 p 8 in 337_May_26_21_CI_WFO

²⁰⁵⁸ 184:34 p 8 in 342_May_28_21_Peralta T

²⁰⁵⁹ 205:8 p 6 in 364_May_26_21_DPIHD

²⁰⁶⁰ 212:2 p 6 in 371_June_01_21_Güngören A

The discussion was focused on the trade offs between human and planetary health to show how transforming food systems is necessary in order to (i) meet the goals of the Paris Agreement, (ii) ensure that diets are no longer a major risk factor for disease and death, and (iii) avoid increasing zoonotic diseases spillover.²⁰⁶¹

Making trade-offs and synergies visible was highlighted as a crucial contribution of comprehensive food systems evaluations. Trade-offs between: Nature and people; Food for profitable crops versus food for healthy consumers; Choices that consumers/producers make, and the results in terms of consequences to human health, planetary health, livelihoods and equity; Types of value and capital, between stakeholders and with different priorities and values; Countries; Mono-crop and multi-crop; agriculture and biodiversity; Increasing producer prices and keeping healthy food affordable for vulnerable populations globally. Synergies between: Health and environmental outcomes of just and sustainable production; And around agroecological practices and positive outcomes for environment, livelihood and the economy.²⁰⁶²

In relation to trade-offs and synergies, participants expressed various key elements to take into account when conducting True Cost Accounting: i) the utility of TCA to reveal the web of interactions, allowing decision makers to reduce trade-offs and increase synergies, ii) the importance to consider and analyse distributional impacts of trade-offs between different stakeholders including smallholder farmers, iii) the need to consider spatial scales (e.g. beyond the farm gate) and temporal scales (e.g. short-term and long-term impacts), iv) the need to understand the local context and role of local actors in negotiating the prioritization of trade-offs, for example in development planning processes, v) to illuminate the interconnectedness of SDGs and potential trade-offs and synergies between those, particularly linked to poverty reduction, climate action and food security, vi) and the dependence of trade-offs on national government priorities across the food systems value chains.²⁰⁶³

In considering the least favourable activities to be phased out, the participants were in agreement that the most obvious was the phase-out of the medically important antibiotics in meat production. They however emphasised the importance of phasing these out in a holistic way that is mindful of negative trade-offs.²⁰⁶⁴

Trade-offs on certain imported foods. The private sector have large role in understanding this. For example the importation of canned and plastic-packaged foods from Asia needs to be in English not just on the outside package but in the inner smaller packages as well as in ingredients for noodle salts and oils. Those food staff not meeting this requirement will be banned from the country.²⁰⁶⁵

Local governments are best placed to integrate economic, environmental and social dimensions, bring together public actors, private sector and civil society and mediate

²⁰⁶¹ 215:2 p 6 in 376_June_04_21_IFAD_Multi

²⁰⁶² 220:5 p 6 in 381_June_08_21_UNEP_Multi

²⁰⁶³ 220:12 p 12 in 381_June_08_21_UNEP_Multi

²⁰⁶⁴ 245:11 p 7 in 481_June_23_21_Global Counsel

²⁰⁶⁵ 265:39 p 8 in 501_June_28_21_Kairo K

*trade-offs. They can help integrate sectors (e.g. restaurants and producers, promote local food hubs, facilitate access to digital technologies for aggregation) and ensure balance between food trade and local food systems.*²⁰⁶⁶

*Territorial governance can help reduce tradeoffs of national policies that lack inclusion. Territorial governance, then, becomes a space for interaction between different cultures, which is essential to move towards reducing pervasive discrimination.*²⁰⁶⁷

*The dialogue also highlighted importance of strengthening the resilience of local food production systems (essential for reducing vulnerability) while strengthening global systems to enable a global response to local crises. The coexistence of local systems/strengthening of local production systems while strengthening global production is an important challenge that we face in reforming and transforming food systems. In the past, changes were made to the benefit of some, and to the detriment of others.*²⁰⁶⁸

*Livelihood impacts along the value chain and increasing food insecurity among the broader population due to disruptions to food systems highlights the need to balance containment measures and public health concerns with food systems impacts, ensuring access to both inputs for production and markets. Moving goods between countries became challenging due to containment measures in place (food security was more impacted in countries that adopted more drastic health measures), and uncertainty around border closures impacted millions of animals ready to be slaughtered that could no longer cross borders due to border restrictions. Food distribution was particularly a challenge for communities with limited capacity to transport food. Mobility constraints were an aggravating factor for large facilities which depended on workforce and labour coming from abroad which was restrained, but also affected small scale producers relying on external labour at critical moment in the farming season.*²⁰⁶⁹

*Scaling up the availability of technologies, information and innovative solutions is significant to accelerating the transformation of food systems, while ensuring that possible trade-offs are minimized as a consequence of the transformative process.*²⁰⁷⁰

*The U.S. beef and dairy sectors can be climate neutral. The question is: How soon? Answering that question will depend on how we choose to assess and measure. There will always be trade-offs when it comes to reducing or offsetting greenhouse gas emissions. How we choose to evaluate these trade-offs will affect the time it takes to achieve climate neutrality.*²⁰⁷¹

Scalability, or the potential for scale, is often a key driver and metric for investors. At times this can conflict with food security goals if/when the “solution” or investable product/service is one that increases the potential for food loss and/or waste, rather than

²⁰⁶⁶ 299:35 p 9 in 535_July_08_UNESCO Chair on Food

²⁰⁶⁷ 299:83 p 13 in 535_July_08_UNESCO Chair on Food

²⁰⁶⁸ 302:9 p 7 in 538_July_09_21_IDS_Multi

²⁰⁶⁹ 302:12 p 8 in 538_July_09_21_IDS_Multi

²⁰⁷⁰ 315:10 p 6 in 551_July_15_21_FAO_ESCAP_Multi

²⁰⁷¹ 328:4 p 7 in 565_July_20_21_Mitloehner_Kebreab

*reduces it. Sustainability and ESG metrics need to be better integrated into investment decision-making in order to avoid this potential negative consequence or scenario.*²⁰⁷²

*Each level of “system” comes with pluses and minuses and many producers are recognizing a need to balance the food-for-the masses approach that feeds millions every day, with a local-economy approach that allows rural communities to thrive with diversified employment paradigms that create a “backup” when unseen pressures to a larger system (such as the 2020 health crises and cyberattacks) affect the larger, often less nimble infrastructure of the agricultural economy.*²⁰⁷³

Agricultural practices

*For example, there was constructive debate over the feasibility of widespread renewable energy implementation in agriculture (initial and long-term costs).*²⁰⁷⁴

*It was noted that there is a difference in opinion and experience about the suitability of much of the country for different agricultural systems, specifically whether horticulture and cereal growing are viable activities for most of Wales, or whether livestock is really the only option.*²⁰⁷⁵

*There are also many misconceptions and flawed perceptions affecting many of the stakeholder institutions and groups, which can lead to problems with trust between elements of the food system and wider society. These include the perceived ability and willingness of some institutions, particularly local and national governments, to change policy and practice, sometimes leading to suspicions of “greenwash” and insincerity in their desire to change. Similarly, many farmers feel unfairly attacked or blamed for causing environmental and health problems. The need for a discussion about sustainable livestock farming is recognized, but sensitivity is urged.*²⁰⁷⁶

*The necessity of fertilizer use.*²⁰⁷⁷

*By design, the dialogue’s virtual room of experts ensured a critical look at what Canada’s grazing livestock industry is doing now and how it can do better. That said, areas of divergence came from how such improvements could be achieved. It was recognized that not all grazing livestock practices are shining examples of best management, and that there is room for improvement.*²⁰⁷⁸

²⁰⁷² 331:2 p 2 in 139a_May_27_21_WBCSD

²⁰⁷³ 336:4 p 3 in 494a_June_23_21_US Farmers

²⁰⁷⁴ 17:47 p 14 in 164_Apr_15_21_Anarbekov_Akramov

²⁰⁷⁵ 20:35 p 11 in 116_Apr_21_21_Hein JR

²⁰⁷⁶ 20:37 p 11 in 116_Apr_21_21_Hein JR

²⁰⁷⁷ 35:94 p 13 in 095_Mar_27_21_Chinapoo C_Multi

²⁰⁷⁸ 90:21 p 11 in 206_Apr_27_21_CCANCC

Regarding livestock and the environment, participants again highlighted contrasting narratives, between the damage livestock production inflicts on the environment and the positive benefits that must be harnessed.²⁰⁷⁹

While livestock production can have negative effects on nature and the environment, properly managed, it offers many benefits and advantages to land, soils and landscapes.²⁰⁸⁰

How to best deal with irrigation issues was an exciting field of divergence. Although for most of the dialogue, farmers and food producers spoke about modernizing practices, they also acknowledged the high cost of modern farming.²⁰⁸¹

The key area of divergence and trade-off was between using agroecological methods and guaranteeing yields for crops.²⁰⁸²

The second disagreement was over the suggestion of increasing the cost of synthetic fertiliser to make it less economical to overuse. Making fertiliser more expensive will encourage farmers to generate their own free Nitrogen (better crop rotations, cover cropping etc.) which will in itself have numerous benefits and be cheaper anyway for the same Nitrogen production. Counter points focused on instead making diagnostics cheaper to reduce indiscriminate and over-application.²⁰⁸³

The extent to which farmers and agricultural producers are responsible for the degradation of Florida's Everglades and the emergence of "toxic" blue-green algae blooms following discharges of water from Lake Okeechobee. Participants agree that nutrients found in fertilizer and septic tanks contribute to the blue-green algae; however, there was debate over whether these nutrients come from agricultural producers or if they're mainly the result of leaking septic and sewer tanks. This discussion gets at a broader debate over what amount of Florida's resources - especially water and land - ought to be used to support human populations. How much land should be urbanized vs. used for agriculture vs. restored or conserved in its "natural" state? What amount of nutrients, if any, is permissible in water? Who should be held responsible for the excess, and should they be made to compensate in some way?²⁰⁸⁴

So called "modernized" approaches, including increased mechanization and chemical inputs, have not always had positive long-term benefits. Some participants fear the same trajectory will be followed in Bangladesh as it seeks to graduate from its Least Developed Country status, and urged for caution. On the other hand, other participants pointed out that mechanization should continue to be promoted, not limited, as part of the

²⁰⁷⁹ 93:83 p 6 in 227_May_18_21_Tarawali S

²⁰⁸⁰ 93:84 p 11 in 227_May_18_21_Tarawali S

²⁰⁸¹ 109:21 p 8 in 061_Mar_02_21_Adeboye T

²⁰⁸² 116:18 p 10 in 093_Mar_25_21_Adeboye_T

²⁰⁸³ 124:26 p 10 in 142_May_11_21_Carter L_Dennis S

²⁰⁸⁴ 163:156 p 20 in 300_May_27_21_Alesso_Pommeret

longer-term solution. Agricultural industries have been good for creating new businesses and jobs (spare parts, repairs) in the private sector.²⁰⁸⁵

*The only points of friction and disagreement concerned the use of pesticides during cultivation and the perspective regarding the production/consumption of animal proteins. In this case, consumers expressed concern about the health and environmental consequences of these practices. However, farmers have articulated forcefully the reasons behind such a choice. First of all, getting rid of animal protein from the human diet, especially in Africa or also in certain areas of Latin America and South-East Asia, where there is a challenge of stunting growth would be detrimental. Conversely, in food systems such as the European one, the challenge is to produce more with fewer resources. However, this is not achievable by getting rid of fertilisers or agrochemicals. Instead, what should be discussed is a smarter and more effective use of available resources to reduce the use of agricultural land. If there is a desire for greater equality along the food value chain, the entrepreneurial dimension of agricultural production must be recognised and dignified. Producing food is what farmers make their living from, and like any business it is profit-driven. If there was no profit in food production, nobody would do it. However, it is vital to be able to make that profit every year. For this reason, no one is more concerned about protecting the environment and aware of the risks of climate change than farmers.*²⁰⁸⁶

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Precision livestock breeding should also be included in the discussion, not just crops. This is to recognize the challenge that the Philippines continues to import livestock animals for 25 years now from temperate countries that are not suitable for the tropical environment of the country. The government should also invest its funds towards establishing an infrastructure for tropical dairy breeding, especially for water buffalos, cattle, and other livestock animals. There are local researchers and experts in the

²⁰⁸⁵ 174:42 p 9 in 332_May_24_21_FAO_UNDP

²⁰⁸⁶ 178:26 p 11 in 336_May_26_21_CI_WFO

²⁰⁸⁷ 179:16 p 10 in 337_May_26_21_CI_WFO

*Philippine Carabao Center who are currently tropicalizing the imported animals whose expertise should be maximized.*²⁰⁸⁸

*It was emphasized that smallholder farmers does not need chemical fertilizers, pesticides and GMO seeds while others said it needs time to undergo transition.*²⁰⁸⁹

*Shifting to nature based fertilizers is not an option right now while others said it depends on the willingness of the farmer to decide whether to use chemical based fertilizers or nature based fertilizers.*²⁰⁹⁰

*Agro ecology has been recommended as the best way to assist smallholder farmers especially regenerative agriculture and permaculture while others said farmers should be trained in modernized agriculture.*²⁰⁹¹

*A major area of divergence was the perceived conflict between traditional livestock production (especially ruminants) in terms of its large environmental footprint and the health implications of high levels of meat consumption. There was a high level of advocacy for a more plant-based diet and for cell- cultured meat.*²⁰⁹²

*IP traditional agriculture (i.e. Jhum/rotational) respect resource regeneration, biodiversity conservation and the rights to food and livelihoods of the future generation vs Prohibited or criminalized in state forest, protected area and conservation policies ...*²⁰⁹³

*1. Use of GMOs vs no use 2. Large-scale farming systems vs. family farming 3. Access to finance, markets: still a challenge.*²⁰⁹⁴

*There was disagreement over how valuable carbon markets will be for the growth of appropriate practices and policies in regenerative agriculture. Carbon markets can be seen as a reductionist method to put all impacts into one measurement when there is a risk of little long term benefits and carbon accounting does not include enough of the measurements of the additional benefits, e.g. around water. That is why there needs to be a greater linkage of carbon to other impact areas, such as nutrition.*²⁰⁹⁵

*These mainly focused issues related to the benefits of regenerative agriculture, how to measure these, who captures or shares in the value, and how to ensure that the grower is both at centre of the movement and is fully supported during the transition process. All of these elements reveal how complex it is to make regenerative agriculture mainstream and scalable.*²⁰⁹⁶

²⁰⁸⁸ 181:42 p 10 in 339_May_27_21_Sayoc_Multi

²⁰⁸⁹ 187:17 p 8 in 345_May_31_21_Buzingo J

²⁰⁹⁰ 187:18 p 8 in 345_May_31_21_Buzingo J

²⁰⁹¹ 187:19 p 8 in 345_May_31_21_Buzingo J

²⁰⁹² 198:16 p 12 in 357_Apr 14_21_Harfouche S

²⁰⁹³ 221:28 p 12 in 382_June_08_21_AIPP_Multi

²⁰⁹⁴ 238:4 p 11 in 306a_June_05_21_Zamarano Uni_English

²⁰⁹⁵ 249:40 p 17 in 485_June_22_21_Levesque_SD

²⁰⁹⁶ 273:95 p 14 in 509_June_30_21_FFA_Nestlé

One of the key areas of divergence lay in the definition and evaluation of the benefits. Some participants felt that the primary benefit of making regenerative agriculture mainstream and scalable lies in the acceleration of low environmental impact farming with a specific focus on the greater adoption of biological inputs and processes like precision farming. Others saw the primary benefit in regenerative agriculture as supporting a systemic transformation based on the principles of circular economy but also encompassing carbon farming or the recycling of raw materials. In addition, there was a view that the benefit actually lays in the creation of increased value for regenerative agriculture production techniques which could be shared across the food chain although, not surprisingly, there was a question about how much would filter back to the primary producer – the farmer. Finally, there was a question about whether regenerative agricultural practices should solely focus on improvements in soil health when monitoring progress, or whether it should be broadened to embrace biodiversity, livestock and sustainable water use.²⁰⁹⁷

Measurement The divergence on benefit was subsequently reflected in the discussion about what and how to measure outcomes both to understand impact and drive continuous improvement. Most of the criteria mentioned in order to measure progress were oriented towards environmental measurement and even social impacts but it was impossible to ignore the economic dimension given the important role it plays in incentivising and sustaining behaviour change.²⁰⁹⁸

The question of benefit and what and how to measure progress was clearly linked to the role of the farmer. There were, at times, passionate exchanges between participants who felt that growers were being asked to respond to the latest protocol from public and private sector actors who may not fully understand what works at the farm level. And, inevitably, this catalyzed a further discussion about the extent to which the farmer (bearing all of the transition risk over an extended period of time) would be rewarded for making and sustaining changes by public or private actors (who may only be interested in one or two aspects of the benefit matrix). This clearly showed up in relation to soil protection where some participants argued that an exclusive focus in one area could lead to a negative impact in others (e.g. yield). There was a very strong view, articulated by some participants, that mainstreaming and scaling regenerative agriculture needs to start with the farmer at the centre of this. Several participants argued that only lip-service is being paid to this and that the change or innovation model still serves the interests of the established agri-businesses.²⁰⁹⁹

Divergent views were observed where those advocating for some level of chemical inputs for agriculture noted that given the food demand of the future, the approach would need to be a balanced one, where integrated approaches need to be taken forward (such as integrated plant nutrient systems and integrated pest management) with chemical inputs (more advanced slow release versions - 2nd and 3rd generation fertilizer) being supplemented with soil organic matter. The need to promote Sri Lanka Good Agricultural

²⁰⁹⁷ 273:96 p 14 in 509_June_30_21_FFA_Nestlé

²⁰⁹⁸ 273:97 p 14 in 509_June_30_21_FFA_Nestlé

²⁰⁹⁹ 273:98 p 14 in 509_June_30_21_FFA_Nestlé

*Practices (SLGAP) was seen as a more pragmatic solution than attempting to go completely chemical free.*²¹⁰⁰

*The other school of thought was that it is possible to transform agriculture system to be completely chemical free and given the perilous state we are in with the planetary boundaries being crossed (especially due to the chemical based monoculture farming practices), priority should be towards food safety and restoring of ecosystems, since it is clear that the chemical systems are increasingly becoming unsustainable. The need to be bold and innovative in tackling this issue was highlighted.*²¹⁰¹

*Some expressed the opinion that much of the small holder farmers in Sri Lanka were part time farmers, where they were also engaged in other livelihoods to supplement their income. They argued that techniques like zero budget natural farming that require more labour intensive practices, will carry externalities that need to be factored in.*²¹⁰²

*To some degree, participants had disputes about whether or not there should be an emphasis on the use of industrial/chemical inputs to farmers.*²¹⁰³

*Technology as an important factor for the future of food production Another important discussion revolves around the use of technology in food production and the food supply chain. New technologies are acknowledged as important drivers of the future of agriculture. Some have raised important questions on how technologies may not yield the promised greater productivity - where methods such as agroecology argue that these more natural methods are better. Others raised the issue that while new technologies are better, the cost of using new technologies can be prohibitive and raises the cost. For older farmers, learning to use new technologies may be a significant barrier to adoption. Before these technologies can be introduced, basic digital infrastructures, such as internet and mobile connection needs to be established. This is on top of transportation infrastructures such as road network and irrigation network. Therefore, even if new technologies can benefit the farmer, basic infrastructures must be in place beforehand.*²¹⁰⁴

*Technology vs traditional farming There were debates over whether the use of technology will truly change productivity. Traditional farming, or its more recent agroecology methods have argued that this is a way forward - reducing the reliance on pesticides etc to build a production system that includes diversity, human and social values. However, others have argued that traditional farming methods will not be able to increase productivity.*²¹⁰⁵

Monocropping and Multi-cropping Research, Academia and the Department of Extension of the state and Central Governments suggest farmers do intensive monocropping of millets, oilseeds and pulses for better yields and economic returns. Mono cropping has

²¹⁰⁰ 281:11 p 9 in 517_July_03_21_Perera A

²¹⁰¹ 281:12 p 9 in 517_July_03_21_Perera A

²¹⁰² 281:13 p 9 in 517_July_03_21_Perera A

²¹⁰³ 305:30 p 9 in 541_July_12_21_AEHT

²¹⁰⁴ 319:8 p 6 in 556_July_15_21_Von Goh_GenTan

²¹⁰⁵ 319:14 p 11 in 556_July_15_21_Von Goh_GenTan

*brought better returns, by compromising nutrition. A millet farmer has to purchase pulses from fellow farmers or the local shops. In multiple cropping systems, dryland farmers sow pulses, oilseed and millets and use them for family consumption and sell the marketable surplus. Multi-cropping system not only helps in maintaining and improving the nutritional status of dryland farmers but also makes the dryland food systems, capable of supporting more people.*²¹⁰⁶

*The debate on chemical use versus regenerative practices was raised in the Dialogue, with diverse views around the ongoing role of chemicals (e.g. to support minimum or no-tillage) as well as the application of suitable regenerative practices at large scales, including increasing soil carbon, maintaining ground cover and restoring biodiversity. This highlighted a theme of divergence around the role of various solutions (both on-ground practices and regulatory and policy responses) to achieve sustainable food and land use systems.*²¹⁰⁷

*There is uncertainty about whether grass-based livestock (ruminants) production 114 is a more viable option for the north than cropping systems. Further, there is lack 115 of consensus between the use of crop breeding to create new suitable cultivars 116 and the use of existing appropriate cultivars as the focus for expanding northern 117 cropping.*²¹⁰⁸

Consumer trends

*These polls revealed split opinions regarding a range of issues including consumer attitudes towards sustainability...*²¹⁰⁹

*While participants agreed that more needs to be done to provide consumers with accurate, balanced information about sustainable food systems, there was some disagreement about who is responsible for leading that charge and what level of responsibility food brands and retailers have in communicating information about animal agriculture to consumers. The animal agriculture community will need to work to become more unified in its efforts to communicate about sustainability in order to be more effective in ensuring public understanding.*²¹¹⁰

*Stigma associated with traditional crops and food – people think it is not ‘modern’ enough.*²¹¹¹

*The need to reduce beef consumption vs. making better decisions.*²¹¹²

²¹⁰⁶ 321:26 p 17 in 558_July_16_21_RICH_ICRISAT

²¹⁰⁷ 326:22 p 13 in 563_July_20_21_ClimateWorksAustralia

²¹⁰⁸ 353:22 p 3 in 505a_June_29_21_Borchard_UNC

²¹⁰⁹ 2:16 p 12 in 081_Mar_15_21_CRC

²¹¹⁰ 4:32 p 13 in 104_Apr_8_21_Animal Agriculture Alliance

²¹¹¹ 7:14 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

²¹¹² 11:10 p 9 in 184_Apr_14_21_Genever_Multi

How to reach kiwi palates/taste buds (especially due to today's easily accessible high fat, salt and sugary foods).²¹¹³

First, some participants suggested that the narrative of reducing meat consumption in order to have a more sustainable impact on food systems is a western narrative mostly related to urban areas, while some others considered it to be interesting and feasible on a global scale.²¹¹⁴

Within the group, we felt a feeling of opposition between the social and health elements of food. Potentially we can overcome it and have both. We need to dismantle these dichotomies to build our Manifesto as diversity does not imply confusion and fear, but rather the opposite.²¹¹⁵

A tension in the definition of the terms: "healthy diets" and "personalized diets", how they should be determined and by whom. Participants had different understandings on the definition of these two expressions with stricter interpretations implying new technologies and DNA editing on the one side, and much larger interpretations implying eating what makes you feel good on the other.²¹¹⁶

Within the group, we felt a feeling of opposition between the social and health elements of food. Innovation and personalized diets were considered by some participants as a mere response to health necessities, somehow taking away the human and social part of nutrition, and therefore the celebration of food and its anchorage to cultural narratives and traditions. e) The risk of over-romanticize the "celebrative power" of food, as for participants food - in some some circumstances -can be a source of conflicts (when it is limited) and of mental stress with a particular focus on eating disorders such as anorexia and bulimia.²¹¹⁷

When talking about the social and health aspects of food, and the prospect of moving towards more personalized diets in the future, the topic of pills (i.e. vitamins, supplements, etc.) came up. Some of the participants highlighted that pills were not the solution nor were desirable, as food is strongly linked to culture and traditions. Other participants, however, stressed that this is fast becoming a reality for industries and companies are investing in it.²¹¹⁸

Some participants suggested the idea to associate strict personalized diets (as the one adopted by professional athletes for example) with some sorts of rewards in the form of "cheat meals". However, others stressed out the idea that "cheat meals" can be perceived as a punishment and could therefore increase some negative consequences for mental and physical health (feelings of guilt). Furthermore, many pointed out that a "cheat

²¹¹³ 18:30 p 13 in 114_Apr_19_21_Maurer H_Roskrug N

²¹¹⁴ 39:21 p 10 in 175_Mar_16_21_Donati L

²¹¹⁵ 45:6 p 6 in 043_Feb_17_21_Donati L_Multi

²¹¹⁶ 45:15 p 10 in 043_Feb_17_21_Donati L_Multi

²¹¹⁷ 45:17 p 10 in 043_Feb_17_21_Donati L_Multi

²¹¹⁸ 45:18 p 10 in 043_Feb_17_21_Donati L_Multi

*meal" should not be necessary, as we should be eating food we like every day in a balanced way.*²¹¹⁹

*Divergence related to meat consumption reduction, focused on respectfully manage the topic. There was an opinion that today there is a tendency to "shaming" of meat consumption. Representatives of the meat alternative industry expressed this opinion. On the other hand, the necessity to reduce meat consumption, especially in Israel, one of the world leaders in meat consumption per person, was expressed as an urgent and robust solution that must be adapted for the population's health and the globe.*²¹²⁰

*A critical area of divergence revolved around to what extent synthetic protein can be an alternative to reduce the pressure of livestock systems on resources. On the one hand, some consider that a broader offer of plant-based alternatives may be essential to be able to deal with the increase in demand. Others consider that there are factors that might make this inappropriate in certain contexts including cultural factors, access and knock-on impacts on livelihoods, environment, human health and so on.*²¹²¹

*The discussion can become too focused on farmers and agriculture and not enough connection to food processing and consumer behaviour.*²¹²²

*Consumer preferences and actions are contradicting each other: Two examples would be wanting to eat only local food, but have it available all year round, as well as asking for the highest quality food, but not willing to pay a premium for it.*²¹²³

*There was divergence of opinion among the participants as to (i) how to measure and communicate the nutritiousness and sustainability of livestock products, (ii) whether we should adopt a more plant-based diet and minimise livestock or not and (iii) whether increased consumption of animal production should be promoted from a nutritional perspective.*²¹²⁴

Another area of divergence related to empowering consumers with the information needed to make sustainable and nutritious decisions. Participants differed on how to measure and communicate the nutritiousness and sustainability of livestock products and also whether increased consumption of animal production should be promoted from a nutritional perspective. There was also some discussion as to whether we should adopt a more plant-based diet and minimise livestock or not. It was agreed that efforts are needed to educate consumers on the true cost of sustainable/welfare-friendly food, however, some participants felt that consumers don't necessarily have much power to make change – it depends what is available for them to buy. While it was agreed that trust in science had increased, in particular during the pandemic, some participants felt

²¹¹⁹ 45:19 p 10 in 043_Feb_17_21_Donati L_Multi

²¹²⁰ 64:79 p 14 in 041_Feb_17_21_Adler D

²¹²¹ 93:67 p 15 in 227_May_18_21_Tarawali S

²¹²² 99:55 p 14 in 285_May_20_21_TFFF_Multi

²¹²³ 99:56 p 14 in 285_May_20_21_TFFF_Multi

²¹²⁴ 112:19 p 7 in 074_May_18_21_O'Mara_Teagasc

*that other factors come into play in relation to food and that consumers tend to rely on other sources of information that may not be underpinned by scientific evidence.*²¹²⁵

*Consumers as the main driver of agriculture production can be seen as a divergence, since the consumer can dictate the abilities of a food producer to be able to move to more sustainable practices. This insight comes from an example of the agroecology industry, where we often hear calls to reduce chemical inputs. However, the reduction of chemical inputs often results in an increase in labour costs. If consumers are not willing to absorb the increase in costs, it restricts the producers' ability to reduce reliance on chemicals. The complexity of consumer choice also brought the group to think about the plausibility and justice implications of the consumers driving change. For instance, paying higher prices for sustainably produced food might be more possible in developed countries, where consumers may have better access to information and are more likely to be able to absorb the price differences. But in response, it was raised that it is even more important that consumers drive change in developing regions such as southern Africa, where the loss of diversity and nutrition in diets is leading to poorer health and well-being outcomes, especially amongst the poor. Putting nature back in the WEF nexus therefore has the potential to improve not just people's well-being, but also address socio-economic inequalities. Change is therefore essential, and both consumers and producers face some responsibility in building more nature-based food systems.*²¹²⁶

*There were mixed opinions when it came to integrating seaweed into diets globally. For example, some participants believed that although there are some paths to introducing seaweed to more regions that do not traditionally consume it, it will be difficult to change dietary norms on a large scale. Some felt that would be particularly challenging for Africa, despite its great potential, because it does not have the cultural or traditional background in seaweed farming or consumption to immediately become an industry leader. Another area of divergence revolved around food safety. Some felt toxicants that can be found in seaweed present a serious issue for human consumption. On the other hand, it was noted that although seaweed does absorb substances from the sea, so does everything else that we consume from the ocean, including fish and other sea vegetables. Most participants in these discussions agreed that further research was necessary to truly understand this dimension of seaweed.*²¹²⁷

*There was a tension between the dairy industry and consumers around the topic of trust. From one side, the dairy industry needed consumers to trust the industry so that legitimate sustainable products and services can be recognised and purchased encouraging more sustainable practice. On the other side, consumers remain wary of food industries, on the lookout for greenwashing and illegitimate claims, and seeking greater transparency.*²¹²⁸

²¹²⁵ 112:106 p 17 in 074_May_18_21_O'Mara_Teagasc

²¹²⁶ 117:75 p 17 in 109_Apr_13_21_Jacobs-Mata I

²¹²⁷ 119:68 p 17 in 121_Apr_28_21_Doumeizel V

²¹²⁸ 156:70 p 13 in 275_May_13_21_Dornom H

Several regional breakouts flagged the disconnect that exists between consumers' stated preferences and their actual behavior. (Most consumers still purchase based on affordability, access and habit more than any other factor.²¹²⁹

Activities proposed as business solutions by some of the participants focused on promoting plant-based diets, while others emphasized meat consumption. It was agreed that it is important to focus on sustainable livestock rearing and agricultural practices, education and awareness on food nutrition and benefits, and to allow consumers free choice.²¹³⁰

People varied on the pace of change they were calling for and the methods of shifting food systems. Some advocated for all public institutions switching to plant-based as the default. Others wanted to see this happen in private sector as well. And still others felt more education was needed to aid individuals in voluntarily making the shift themselves. Some wanted a more active role of government to provide taxation and incentives, while others felt the demand side and market place might play a more substantial role in helping society to shift to more low carbon, higher nutrient foods.²¹³¹

Consumer choice vs other influences on diets: Is the question really about changing the healthy, sustainable options available to people, or about addressing the incentives for eating unhealthy, unsustainable options?²¹³²

Also, in response to several participants who mentioned consumer education and awareness as essential steps for a transformation, as well as the implementation of voluntary agreements, some said that such measures were not effective and that it was imperative to create legislation that forces a change in consumer behavior by limiting non-sustainable choices.²¹³³

Participants also advocated for more educational campaigns on the food waste issue. We arrive at the gap between knowing and doing here. There is already a lot of information out there, even on social media, food waste reduction tips are readily available. But how can we efficiently convince people that knowing is not enough?²¹³⁴

There was some divergence among participants about how ambitious the guidelines should be. Some felt that they should aim for consensus-building that doesn't imply radical changes. Others emphasised the urgency of dietary transitions and the need for stronger messaging given the short timeframes remaining to bring diets in line with the Sustainable Development Goals, climate commitments and agenda on noncommunicable disease. Overall, however, there was consensus that prioritising plants and reducing

²¹²⁹ 169:44 p 13 in 327_May_18_21_CropLife

²¹³⁰ 225:8 p 8 in 386_June_09_21_Sutherland J

²¹³¹ 257:19 p 12 in 493_June_23_21_Kevany_Van

²¹³² 259:22 p 11 in 495_June_23_21_Forum for the Future

²¹³³ 301:66 p 10 in 537_July_08_21_ANP_WWF

²¹³⁴ 311:28 p 11 in 547_July_14_21_Heillinger K

*intake of animal-sourced and highly-processed products are essential messages, supported by abundant and conclusive evidence, that everyone can agree on.*²¹³⁵

*Some participants felt that the agriculture sector is mainstreaming nutrition at a slow pace and that there was need to improve synergies so that the sector plans with a nutrition lens. Other participants highlighted that farmers choices to plant food crops is normally guided by demand and market prices. They felt that prices for nutritious foods are usually associated with low demand and very high prices which many of the citizens cannot afford resulting in farmers not preferring to plant them. Some stressed out that food preparation methods influence food prices, methods used in preparing junk foods lead to them fetching low prices and the unregulated marketing of junk food is greatly influencing their food preferences.*²¹³⁶

*Consumers play a powerful role in farmers' choices, and the pressure on farmers to produce sustainable products is increasingly difficult. In our Dialogue, divergence emerged around consumer willingness to pay, with the view that consumers are demanding ever-lower prices (for instance, in the 1960s, expenditure on food was 16% of income, now down to 6%) contrasted with the view that consumers are increasingly concerned with product provenance, and prepared to pay a premium for quality, sustainable and locally produced food. In the Australian context, this also relates to a particular cultural value around supporting local farmers. Further, participants noted similarities around this topic in the New Zealand context, where some farmers are resisting the consequences of government climate policy on the cost of production (acknowledging that Australia and New Zealand have some of the lowest levels of agricultural subsidies), and in the European context, where there is a challenge to square the demand for ever-cheaper food with a demand for a sustainable agriculture sector.*²¹³⁷

*The Agrodiversity group were not convinced about the possibility of erasing meat completely from our diet. They were uncertain about the environmental impact of a vegan diet, citing the social economic hurdle to be a vegan for the poor.*²¹³⁸

Agency

The dialogue emphasized on shifting one's consciousness and becoming aware of the interconnections in the food systems. With regard to this the speakers held different perspectives. One of the speakers expressed that they are in line with the idea that understanding the system, how it works and that we have an influence on that just as that has on us means that there are choices we have to make about how we interact with the food and food systems. The other speaker held that its only through a shift in our consciousness and coming back to the awareness of one family that we are able to say

²¹³⁵ 312:24 p 11 in 548_July_14_21_Genoni A

²¹³⁶ 325:21 p 8 in 562_July_19_21_Zombe K

²¹³⁷ 326:18 p 13 in 563_July_20_21_ClimateWorksAustralia

²¹³⁸ 332:13 p 4 in 156a_Apr_27_21_Dong_Quyang

*that we cannot continue, we have to make a change and we are the ones who can do it.*²¹³⁹

*Who has the most important role to make a change? Some think that consumers have the most significant role: they should change their habits. But most of the participants thought that politics and businesses have more power and they should use it to make consumers choices more sustainable.*²¹⁴⁰

*Controversies on which group should take leading role as an agent of change; individuals, women, youth, indigenous groups or community-based Organizations.*²¹⁴¹

*Issue of social justice: Mountain people have the right to decide their own development trajectory. It is necessary to give voice to mountain people so that they can express their idea of development. This can create divergences, for example, with how mountain indigenous food systems could change: will they have a market driven trajectory, or will other elements (conservation of identity, cultural-based decisions, etc.) be considered?*²¹⁴²

*There was a fundamental tension between decent farmer income and the affordability of healthy diets for consumers. Making the food system more sustainable would increase costs of production, but who should pay the higher costs. While some noted that consumers should bear the costs, it was highlighted that 30% of Australians cannot afford a healthy diet with current prices. Most attendees agreed that farmers could not afford to bear the costs. Other suggestions included government, retailers, and dairy processors.*²¹⁴³

*There is a disconnect among different key players in the food system, such as among HEI research and extension to the actual needs of farmers. These gaps need to be addressed by involving all the key players in the food systems. Consider farmers as partners and key players, not beneficiaries. Farmers have to be involved as they possess valuable knowledge in agricultural research and development.*²¹⁴⁴

*While some participants felt that high-profile individuals or young professionals would be best equipped to elevate these issues, others felt that youth working at the grassroots level, or “authentic” youth could better speak to the reality of the burden of malnutrition in all its forms, and should be encouraged and equipped to become champions for their own cause.*²¹⁴⁵

Diverse opinions emerged on who should drive change. Some participants stated the need to educate families about growing healthier food crops and cooking nutritious foods at home, and that children should be the drivers of change via education through school

²¹³⁹ 247:10 p 8 in 483_June_24_21_Mandal_Goodman

²¹⁴⁰ 13:7 p 8 in 207_Apr_28_21_WWF Finland Youth

²¹⁴¹ 29:17 p 8 in 066_Mar_5_21_Nkenglefac T

²¹⁴² 98:38 p 11 in 282_May_18_21_Romeo R

²¹⁴³ 156:68 p 13 in 275_May_13_21_Dornom H

²¹⁴⁴ 157:86 p 12 in 278_May_18_21_Gregorio B

²¹⁴⁵ 167:71 p 14 in 311_June_14_21_NCD Child

*or health clubs. However, other participants stated that industries should be educated and incentivized to produce and provide nutritious foods that are affordable.*²¹⁴⁶

*There were also opposing views on the stakeholders who should be prioritized. Some participants felt that local farmers should be given priority over mass producers within the food system, however, arguments were put forth for both stakeholders. Participants reasoned that supporting local farmers could reduce the carbon footprint of the food supply chain, and also minimize barriers from farm-to-table. However, participants also stated that the costs of local produce from small-scale farms might be higher, and that small farms may not be able to sufficiently support entire communities. Alternatively, mass producers were said to be capable of providing greater quantities of food and at lower cost, but the environmental costs and risks associated with supply-chain breakdown were said to be higher.*²¹⁴⁷

*Discussions mainly focused on the roles and responsibilities of different players, especially from government, industry and research sectors, agreeing on the need of a professional figure linking them all in order to make the process efficient and connected.*²¹⁴⁸

*Different breakouts discussed where the locus of decision-making actually existed within the agri-food chain, but many flagged both consumers and farmers are the most important stakeholders.*²¹⁴⁹

*Governments, Financial institutions and Companies should work together to assist farmers in creating friendly infrastructure to make them flourish. While others stressed that government and policy makers has upper hand in making these dreams come true.*²¹⁵⁰

*Many participants agreed that we must revalue the role of food in our daily lives and create healthier relationships with the food system. However, there was divergence on which actors create the value we place on food. Some participants agreed that it is the way we price food that determines its value. They asked questions such as "which externalities are considered in the price of food?" and "can we start valuing food by its nutritional value?" Other participants believed it is the influence of chefs and food systems leaders that create the standards people use to value food in their daily lives and the global system.*²¹⁵¹

*Where responsibility for food safety sits between consumers, public health bodies, food safety authorities and regulation.*²¹⁵²

²¹⁴⁶ 167:74 p 14 in 311_June_14_21_NCD Child

²¹⁴⁷ 167:75 p 14 in 311_June_14_21_NCD Child

²¹⁴⁸ 168:18 p 8 in 322_June_03_21_Apicella_Machado

²¹⁴⁹ 169:48 p 13 in 327_May_18_21_CropLife

²¹⁵⁰ 187:20 p 8 in 345_May_31_21_Buzingo J

²¹⁵¹ 204:32 p 11 in 363_May_26_21_Mehta_Bautista

²¹⁵² 207:1 p 13 in 366_May_27_21_Cumbers S

*What the level of knowledge is that regulators need in order to better regulate and who holds ownership for communicating about food safety.*²¹⁵³

*Some participants identified industry and farmers as being most responsible for causing and having to solve the issue whereas many participants thought politicians and institutions have the biggest responsibility as policy drives consumers' and producers' behaviour. The participants were however unanimous in considering that all actors, including consumers, have a share of responsibility and power to change the situation.*²¹⁵⁴

*The private sector actors believe that they are doing their best to contribute to research and development whilst academia and researchers believe that the private sector has a lot more role to play in food systems transformation when it comes to setting the agenda for research and in funding research.*²¹⁵⁵

*There is the challenge of making sure that all voices are represented in the face of power structures. This requires trust-building which often takes time, and such an issue can't necessarily be solved with money.*²¹⁵⁶

*Participants also questioned the ability of organizations to always be in alignment. In some areas it is possible to align and determine the response, but in other areas of crisis this is not the case due to the severity of the crisis (for instance conflict).*²¹⁵⁷

*In the field of sustainable production, there were different opinions whether the promotion of healthy food, and organic food should be done through state mechanisms such as fiscal incentives, taxes, etc., or through market economy instruments, i.e. through the promotion of demand by raising awareness and increasing purchasing power in general.*²¹⁵⁸

*There were different, but also complementary opinions regarding the role of citizens' awareness. There were opinions that the doctors' association should be involved to encourage sustainable consumption while also taking into account the fact that food safety should not be confused with food quality and that the state can work on raising citizens' awareness of food quality but that the demand for sustainably produced-food must come from the bottom-up.*²¹⁵⁹

Local investments in strengthening social protection delivery systems including shock responsiveness and livelihood opportunities for the poor and vulnerable groups' remains very low. Disaster Risk Reduction Committees remain underfunded and even in natural disasters they fail to effectively respond and assist victims because they do not have adequate resources. It was argued that DRR committees in many parts of the country do

²¹⁵³ 207:5 p 13 in 366_May_27_21_Cumbers S

²¹⁵⁴ 224:20 p 11 in 385_June_09_21_Lazzaris S

²¹⁵⁵ 262:48 p 8 in 498_June_24_21_Danquah E

²¹⁵⁶ 278:29 p 9 in 514_July_01_21_Bolling_Multi

²¹⁵⁷ 278:75 p 14 in 514_July_01_21_Bolling_Multi

²¹⁵⁸ 310:40 p 10 in 546_July_13_21_INDEP

²¹⁵⁹ 310:42 p 10 in 546_July_13_21_INDEP

*not need much resources because disasters are not a common phenomenon in the country instead the country needs to invest in early warning systems so that victims are evacuated early and response teams are equipped ahead of time.*²¹⁶⁰

*Stakeholders to spearhead the effort of transformation While everyone agreed that evolving the food system will require a multi-stakeholder approach, there are differing views of who should take the lead. Some believe that government and politicians should stay out from taking the lead as they do not have the incentive to ensure sustainable food systems, others believe that government play a crucial role in defining policies. Experts in nutrition should have a bigger role in advising NGOs etc on how to be more nutrition-sensitive in their action.*²¹⁶¹

*Policy advocacy-Single institution and Multistakeholder Policy interventions are essential for increasing technology adoption and faster reach of government support. Policy advocacy has been done by each stakeholder individually (research, academia, industry, development agencies and industry associations), which gives minimal results. To bring in a big change, it is necessary for all the stakeholders to join hands and propose development schemes for dryland regions. Multi stakeholders could plan periodical and sustained policy efforts.*²¹⁶²

*Some participants felt that women with ownership and control over agriculture assets including land are not as productive as their male counterparts. Others felt that lines of credit mainly favor males hence it may seem as if they are productive when in fact it is because of the support they receive from government and other lines of credit. It was agreed that there is need for the government to continue mainstreaming gender in the agriculture sector.*²¹⁶³

*While there was broad consensus on the need to align with more sustainable land and food systems, there are divergences around how to achieve this transformation including what role markets, regulation and particular on-farm solutions should play.*²¹⁶⁴

*The role of climate change policy and how it translates to sustainable food and agriculture policies, including impacts on farming businesses, provoked divergent views with participants commenting that farmers are rarely seen as part of the solution, and views that most policy treats farmers as unaware of broader environmental issues and/or opposed to supporting solutions.*²¹⁶⁵

The role of financial markets and government subsidies sparked debate, including how to approach these instruments in combination and at what scale, for example, combining private natural capital markets with ecosystem service subsidies, at a state-level prior to

²¹⁶⁰ 318:13 p 8 in 555_July_15_21_Zombe K

²¹⁶¹ 319:15 p 11 in 556_July_15_21_Von Goh_GenTan

²¹⁶² 321:27 p 17 in 558_July_16_21_RICH_ICRISAT

²¹⁶³ 325:23 p 8 in 562_July_19_21_Zombe K

²¹⁶⁴ 326:11 p 6 in 563_July_20_21_ClimateWorksAustralia

²¹⁶⁵ 326:20 p 13 in 563_July_20_21_ClimateWorksAustralia

*a federal approach, and at different paces for large scale enterprises versus small-to-medium farm businesses.*²¹⁶⁶

*Stakeholders whose interests should be prioritized are the farmers and ranchers, both large and small. A common theme in each of the discussions was it cannot be on farmers and ranchers alone to achieve neutrality because they still have a bottom line and not all solutions can be adopted across all operations.*²¹⁶⁷

*...the members of the group expressed differences of opinion on the amount of coordination of the planorms, some believing that the coordination needs to originate from the Administration which ensures its sovereign organizational and monitoring role of the sector, whereas other participants favor giving responsibility to private stakeholders, first among these the producers and the representa6ve agencies, the state playing a role as observer and supporter.*²¹⁶⁸

Data

*Everyone also agrees that “we manage what we measure”, but disagree on the terminology, metrics, and methods to collecting, formatting, analyzing, validating and sharing food data associated with the SDGs.*²¹⁶⁹

*On the question of who is in charge of collecting data? Two strong opposing views were advanced. One was that Leadership/government is responsible for overall strategy for data collection, data protection, and the financing of it. Governments have to buy into the vision and be held accountable to it. They have to put policies in place across different levels of their countries. They are ultimately responsible. The second view on the contrary indicated that private sector is also responsible for collection of data. Government sector alone cannot do it.*²¹⁷⁰

*How the gap between science, academia and the consumer is best bridged and how the sciences is made understandable.*²¹⁷¹

*To have this analysis will be one thing, how to ensure the analysis is also shared and utilized by different stakeholders at different levels. Complexity of data collection and possibility of too abstract findings may be a trade-off to participation, even though we need all different stakeholders to contribute and act based on information/data collected.*²¹⁷²

²¹⁶⁶ 326:21 p 13 in 563_July_20_21_ClimateWorksAustralia

²¹⁶⁷ 328:9 p 10 in 565_July_20_21_Mitloehner_Kebreaab

²¹⁶⁸ 338:28 p 10 in 392a_June_01_21_Sidibe_Remy_Eng

²¹⁶⁹ 104:27 p 2 in 051a_Feb_24_21_Google

²¹⁷⁰ 177:75 p 14 in 335_May_26_21_Laar_Multi

²¹⁷¹ 207:4 p 13 in 366_May_27_21_Cumbers S

²¹⁷² 278:59 p 12 in 514_July_01_21_Bolling_Multi

*Ideology versus reality. Coordination issues, side effects and insufficient information may make flexibility difficult in practice. Working in parallel and embedding M&E throughout the process rather than at the end could help with this.*²¹⁷³

*Some of the government representatives present held a view that they were implementing programs that were sufficient enough to address hunger in their cities. They shared some initiatives they were leading which aligned with what was shared by the speakers. However, this is contrary to the statistics that we shared at the beginning of the dialogue where 1/5 Filipinos in Metro Manila are hungry.*²¹⁷⁴

*There was a slight divergence in discussing how the food system measures the environmental impact of producing food. Some points of divergence occurred around: ● Carbon sequestration and the greenwashing of regenerative agriculture ● Need for further scientific evidence of the impacts of animal welfare and regeneratively raised beef ● Carbon credit systems and carbon farming.*²¹⁷⁵

*The role of climate change policy and how it translates to sustainable food and agriculture policies, including impacts on farming businesses, provoked divergent views with participants commenting that farmers are rarely seen as part of the solution, and views that most policy treats farmers as unaware of broader environmental issues and/or opposed to supporting solutions.*²¹⁷⁶

*The question of coordination was the subject of discussions: some participants proposed a ministerial redesign with the creation of a department grouping all the services dedicated to small local agriculture and a re-orientation of the subsidies to the agricultural sector with a priority toward it. If...coordination of the stakeholders of the food systems is judged to be indispensable by the group, some participants expressed their doubts about the creation of new coordination...; in fact, numerous...of this type have already been implemented in Tunisia in different areas and have always had difficulties in functioning effectively.*²¹⁷⁷

Finance

*Unsustainable support system to farmers.*²¹⁷⁸

*While many emphasized that involving finance in the right ways can be a solution, others saw financial actors as a threat, especially coming from extractive (i.e. palm oil growers) industries that will drive a different agenda.*²¹⁷⁹

²¹⁷³ 278:70 p 13 in 514_July_01_21_Bolling_Multi

²¹⁷⁴ 304:5 p 8 in 540_July_10_21_Global Shapers

²¹⁷⁵ 316:27 p 10 in 553_July_15_21_Food Tank_Oatly

²¹⁷⁶ 326:20 p 13 in 563_July_20_21_ClimateWorksAustralia

²¹⁷⁷ 338:27 p 10 in 392a_June_01_21_Sidibe_Remy_Eng

²¹⁷⁸ 33:37 p 14 in 084_Mar_17_21_UnyimeAbasi B

²¹⁷⁹ 37:18 p 9 in 097_Mar_30_21_EcoAgriculture Partners

Wages for those working on the farm must be balanced against investments in farm infrastructure and trainings.²¹⁸⁰

Financial interests vs sustainability - sustainability but at what cost? 'If I can't make payroll I need to cut corners somewhere...'²¹⁸¹

Farmers need to see the value to their farm, and be financially compensated to account for additional time, cost, and resource burden. Farmers cannot pass on the costs, as they have little to no influence on price. Many of the farmer participants raised the trade-off between regulatory and incentive levers and the importance of transparency and showcasing the value of the proposed approach before deciding on a path forward.²¹⁸²

Related to this last point, it will be critical to find balance between the ability of a country to have foreign exchange reserves and to keep certain aquatic nutrient sources accessible to the people who need them locally/ within the country. This balance will likely be different in each country.²¹⁸³

The prospective funding mechanisms for the development of the underutilised species also attracted wide divergence of stakeholder's opinion. While a segment opted for funding from taxes from industries and corporate businesses. A handful are averse to technology tax of one percent from farmers income when the environment is suitable for their profitability.²¹⁸⁴

Finally, there was the question of why the private sector is not engaging as expected, and yet they have too much data that they cannot even manage. They should be more open in sharing data. However, others noted that the private sector actors are business minded; they are interested in the bottom lines, or their profits and so if engaging will not lead to this why should they? Others felt that was their responsibility to engage and serve not just their board of directors, but their clients- all humans. The participant mooted the idea of decolonialization of data and destabilization of information asymmetries if we need to truly transform our food systems.²¹⁸⁵

The area of discussion that appeared to have raised many voices were the current financial aids conferred by the government in sustaining farmers in the blue & green economies respectively. Subsidies, smart loans, bankable lands have been commonly agreed to motivate farmers to grow their domestic agri-enterprises or even motivate the aspiring young & women agri-preneurs to engage in farming-related activities.²¹⁸⁶

It was highlighted that school feeding is a global intervention to improve the nutrition of school children and is being implemented in 161 countries across all income levels.

²¹⁸⁰ 84:35 p 12 in 153_Apr_28_21_GCNEF_Multi

²¹⁸¹ 147:17 p 9 in 239_May_27_21_Allen K

²¹⁸² 153:31 p 11 in 263_May_06_21_CCGA

²¹⁸³ 155:44 p 10 in 272_May_12_21_Battista W

²¹⁸⁴ 159:31 p 8 in 287_May_20_21_Akinbamijo_Y

²¹⁸⁵ 177:78 p 14 in 335_May_26_21_Laar_Multi

²¹⁸⁶ 183:112 p 18 in 341_May_28_21_Sewraj_KS

*Hence, the government should identify innovative financing to sustain the programme and improve the quality of meals.*²¹⁸⁷

*How to put public health and food safety in a position where it is not seen as being in opposition to commerce and trade, as the private sector has a key role to play and carries investment and development costs.*²¹⁸⁸

*1. Use of GMOs vs no use 2. Large-scale farming systems vs. family farming 3. Access to finance, markets: still a challenge.*²¹⁸⁹

*There was some potential divergence in the PASS purchasing program when considering where funds should be allocated, to support small versus large growers and what is the most beneficial to the regional and state economy, in a sustainable manner, in the long run.*²¹⁹⁰

*Private sector actors intimated that researcher do not know how to deal with private sector or businesses and that research cannot be funded without profit generation as the ultimate goal in the short-medium term. Therefore, researchers must know how to work closely with the private sector in order to attract funding.*²¹⁹¹

*Participants questioned how realistic it really is to have donors commit their funding in a pooled fashion to such a level. It was done in Myanmar through the multi-donor LIFT Fund, which was set up during the previous military regime due countries willingness to engage in development without setting up diplomatic ties with Myanmar's military. In other countries there are similar funds. However, there will may always be individual countries with own interests, relations and history that lead them to set up their own initiatives.*²¹⁹²

*The question of what should be the role of the Government in promoting sustainable production was answered in various forms by representatives of different sectors. While farmers saw subsidies as the best way, the food processing industry and policymakers considered other fiscal and indirect mechanisms to be equally important.*²¹⁹³

Local investments in strengthening social protection delivery systems including shock responsiveness and livelihood opportunities for the poor and vulnerable groups' remains very low. Disaster Risk Reduction Committees remain underfunded and even in natural disasters they fail to effectively respond and assist victims because they do not have adequate resources. It was argued that DRR committees in many parts of the country do not need much resources because disasters are not a common phenomenon in the country

²¹⁸⁷ 193:65 p 12 in 351_June_03_21_CIF_Multi

²¹⁸⁸ 207:2 p 13 in 366_May_27_21_Cumbers S

²¹⁸⁹ 238:4 p 11 in 306a_June_05_21_Zamarano Uni_English

²¹⁹⁰ 252:7 p 8 in 488_June_22_21_Harrison_CC

²¹⁹¹ 262:49 p 8 in 498_June_24_21_Danquah E

²¹⁹² 278:56 p 12 in 514_July_01_21_Bolling_Multi

²¹⁹³ 310:41 p 10 in 546_July_13_21_INDEP

*instead the country needs to invest in early warning systems so that victims are evacuated early and response teams are equipped ahead of time.*²¹⁹⁴

*On domestic investments in agriculture most of the participants felt that government investment in the agriculture sector is more than enough for the country to produce sufficient food for the nation. Previous experience has shown that the ministry of finance invested a significant amount of the national budget in agriculture but the sector failed to produce sufficient nutritious food. Other participants hinted that the investment is being placed in old agriculture models and that there was need to conduct more research and ensure agriculture models have more benefits compared to investment being made by the government.*²¹⁹⁵

*The Fake Meat group disagreed on whether the government should subsidize the fake meat industry. Currently, the fake meats just take 1% of the world market share, without the help from the government, and it cannot be the mainstream of the food system only if accepting the help from the government.*²¹⁹⁶

Food access

*Finally, in the third panel the contradiction of food being a Human Right in theoretical ad practical terms became evident, since the experts felt that food cannot be a public good due to its non-rival and non-excludable nature. Indeed, during the discussion, Maximo Torero underlined many times that, even though food should be a public good (since everyone has the right to food), it is impossible to understand it as such on a practical level because we are unable to provide it to everyone because of the resources' quantity limits.*²¹⁹⁷

*School meals: While participants agreed on the important role of schools for mitigating food insecurity and supporting growth and development, there were differing opinions and perspectives on the nutritional value and quality of the meals.*²¹⁹⁸

*We found in the dialogue from the 15th participant's opinion that "- It takes a lot of action from various parties if you want to apply for global food", initially refused and it was not possible to propose Sundanese food as global food and he said it was a waste of time. This can only be solved by the village government and the central government in social programs for socialization, because it requires the commitment and willingness of all parties.*²¹⁹⁹

²¹⁹⁴ 318:13 p 8 in 555_July_15_21_Zombe K

²¹⁹⁵ 325:22 p 8 in 562_July_19_21_Zombe K

²¹⁹⁶ 332:14 p 4 in 156a_Apr_27_21_Dong_Quyang

²¹⁹⁷ 22:28 p 11 in 191_Apr_16_21_Donati L

²¹⁹⁸ 84:32 p 12 in 153_Apr_28_21_GCNEF_Multi

²¹⁹⁹ 106:17 p 8 in 004_Nov_30_21_Kustipia R

IP Perspective vs. "other" 1) Food and health are basic rights vs. Food and health are becoming commodities and a privilege which IPs, generally, cannot afford.²²⁰⁰

Some participants felt that the agriculture sector is mainstreaming nutrition at a slow pace and that there was need to improve synergies so that the sector plans with a nutrition lens. Other participants highlighted that farmers choices to plant food crops is normally guided by demand and market prices. They felt that prices for nutritious foods are usually associated with low demand and very high prices which many of the citizens cannot afford resulting in farmers not preferring to plant them. Some stressed out that food preparation methods influence food prices, methods used in preparing junk foods lead to them fetching low prices and the unregulated marketing of junk food is greatly influencing their food preferences.²²⁰¹

In discussing nutrition as the focus of food security in Liberia, participants in one group held divergent views on whether men's (HH head) household consumption is prioritized over women's household consumption in rural, remote areas - particularly poor households sharing meagre amounts of food. Some participants held the view that the consumption amounts for men are always higher - given the most nutritious foods available (eg: protein) rather than offering them to children or women in home to improve their nutrition outcomes. Other participants held the view that there is no discrepancy in household consumption and that men and women have access to the same amounts of food in the home as evidenced by weight gain in women.²²⁰²

Food costs

The true cost of food has to be recognized and rewarded, while making healthy and sustainable food available and affordable to all.²²⁰³

Divergent views included: 1) labelling the actual cost of food (in relation to health effects, carbon foot print) to inform consumers of what they are buying.²²⁰⁴

This illustrates the final issue of balancing multiple considerations when making decisions. For example, farming is still seen as having to compromise for environment protection, while making the price of food reflect its true cost must be balanced with a lack of access to quality, nutritious food for many people. In addressing these, sensitivity to national context is important. Food poverty – or insecurity – should not excuse poor nutritional and agricultural standards.²²⁰⁵

²²⁰⁰ 221:25 p 12 in 382_June_08_21_AIIPP_Multi

²²⁰¹ 325:21 p 8 in 562_July_19_21_Zombe K

²²⁰² 330:86 p 15 in 568_July_21_21_Cooper-Liverpool M

²²⁰³ 13:8 p 8 in 207_Apr_28_21_WWF Finland Youth

²²⁰⁴ 19:24 p 9 in 115_Apr_24_21_Foronda_Multi

²²⁰⁵ 20:39 p 11 in 116_Apr_21_21_Hein JR

*For example, farming is still seen as having to compromise for environment protection, while making the price of food reflect its true cost must be balanced with a lack of access to quality, nutritious food for many people.*²²⁰⁶

*Moreover, the challengers considered that, even though conceptually there is the right to food for everyone, there is a difficulty of applying the characteristics of a public good to food. Finally, even though the approach differed from the one proposed by the young changemakers, the experts agreed on the importance of changing the whole system to make it more sustainable and inclusive.*²²⁰⁷

*This dispute about true value and affordability of food and diversity of food systems often encountered some points of divergence, such as the difficulty of scaling-up small-holder realities to supply the 55% of people living in urban areas, the contradiction of food being a Human Right in theoretical and practical terms, and the divergence in choosing the appropriate approach to tackle current food systems.*²²⁰⁸

*The tension between resiliency and affordability in order to scale food systems especially in light of population growth.*²²⁰⁹

*The trade-offs between consumers' access (buying capability) and producers' income.*²²¹⁰

*Cost v. Value of sustainable food Does sustainable food need to be more expensive? What do we need to do to ensure producers get a fair price? What value do consumers place on food and will they be willing to pay more for sustainable food? Will the cost of sustainable food place unfair barriers to access for less well off households?*²²¹¹

*Local v Global The majority of economic output from Irish farms is for the export market, yet there was a recognition that local production of safe and nutritious food for local consumption also needs to be addressed. Balancing trade-offs in the local v. global debate is a real challenge for Irish stakeholders.*²²¹²

*Second, about affordability and true value, the group highlighted the need not only to account for the true value of food in the consumption price but also at each stage of the chain, redistributing at the same time accountability and positive side-effects across the chain in a fairer manner.*²²¹³

Temporarily stopping the import of fruits vegetables and foods that we could create effective supply chains for 1 group of products at a time. This would ensure we build

²²⁰⁶ 20:41 p 11 in 116_Apr_21_21_Hein JR

²²⁰⁷ 22:16 p 9 in 191_Apr_16_21_Donati L

²²⁰⁸ 22:17 p 9 in 191_Apr_16_21_Donati L

²²⁰⁹ 32:6 p 11 in 082_Mar_15_21_Yoovatana M

²²¹⁰ 32:8 p 11 in 082_Mar_15_21_Yoovatana M

²²¹¹ 34:36 p 10 in 089_Mar_22_21_Gee S

²²¹² 34:37 p 10 in 089_Mar_22_21_Gee S

²²¹³ 39:18 p 9 in 175_Mar_16_21_Donati L

local capacity (we understood that effort must also be put in by every actor along that supply chain to make sure it becomes effective as was done with chicken in Trinidad).²²¹⁴

The tension between locality/resiliency and affordability in order to scale virtuous food systems especially in light of population growth.²²¹⁵

The trade-offs in terms of what are most important issues to tackle in terms of distribution practices: the competitiveness of low-cost imports versus local production versus the need to ensure efficient and nutritious food distribution...²²¹⁶

The trade-offs between consumers' access (buying capability) and producers' income.²²¹⁷

The true cost of food has to be recognized and rewarded, while making food available and affordable to all.²²¹⁸

Pricing: - the environmental costs are insufficiently reflected in food prices; - food price should ensure that the producer gets a fair value; - poverty is not to be overlooked, however, as higher prices might increase inequity, as people of a low socioeconomic status cannot necessarily afford choices better for health and planet.²²¹⁹

Divergences were raised during the discussion on ensuring access to nutritious food for all, regarding the reason of the current low consumption of fresh fruits and vegetables in Latin America. If most of the participants explained that this was due to lack of knowledge, others noted that people were actually aware about the importance to consume this type of food, but were hindered by their high costs and the aggressive marketing of high-processed- high in fat/sugar food industry.²²²⁰

Domains of sustainable food systems: Additional questions were raised by participants around the inherent tensions that exist amongst the four domains of sustainable food systems. While consumers may want more environmentally friendly foods, they may not be willing to pay more for those foods.²²²¹

While animal welfare is a priority for farmers, it was noted that actual legislation or mandates around welfare can be challenging and prevent farmers from responding quickly to changing science that would allow them to provide better care for their animals.²²²²

And finally, another participant noted that salmon isn't the most affordable protein option, and accessibility and affordability must be key considerations for food systems transformation. Yet, as a highly innovative and young sector there are many learnings

²²¹⁴ 50:31 p 12 in 087_Mar_20_21_Chinapoo C_Multi

²²¹⁵ 60:27 p 9 in 021_Jan_27_21_Donati L

²²¹⁶ 60:28 p 9 in 021_Jan_27_21_Donati L

²²¹⁷ 60:30 p 9 in 021_Jan_27_21_Donati L

²²¹⁸ 65:24 p 11 in 050_Feb_23_21_World Vision Ireland

²²¹⁹ 66:81 p 14 in 052_Feb_25_21_EUFIC

²²²⁰ 76:26 p 11 in 103_Apr_8_21_Carrara E_Multi

²²²¹ 84:34 p 12 in 153_Apr_28_21_GCNF_Multi

²²²² 84:39 p 12 in 153_Apr_28_21_GCNF_Multi

which could be shared with developing sectors to support global food system transformation.²²²³

...Conflict between “true price of food” and “accessibility”.²²²⁴

*The main area of divergence that emerged during our Dialogue was the opposition Producers/Consumers → While producers’ interests should be more taken into account with fair prices, we cannot forget that some consumers’ categories are not able to make sustainable and healthy food choices. We need as well a better taxation of food products as subsidies enabling both producers and consumers to be treated fairly.*²²²⁵

*Cooperation between academia and industry aims to bring new innovative solutions for healthier nutrition. However, “good food” is still associated with high costs and wealthy consumers. The issue requires government support and intervention for higher inclusivity and success of the initiatives.*²²²⁶

*Several regional breakouts flagged the disconnect that exists between consumers’ stated preferences and their actual behavior. (Most consumers still purchase based on affordability, access and habit more than any other factor.*²²²⁷

*The cost of doing business in Nigeria has a direct implication on the cost of nutritious foods. Compliance with food and labelling standards can increase the costs of doing business and make products more expensive, leading to reduced demand, consequent defaulting by the private sector in a bid to reduce costs, and conflicts between the private sector and regulatory agencies. Costs associated with compliance with improved standards can be managed if most of the raw materials used by the private sector are locally sourced at lower costs. Hence, more efficient production and backward integration need to be prioritized, the responsibility of parents to their children.*²²²⁸

While the “True Cost of Food” narrative has shown effectiveness in awareness raising and exemplifying a systems perspective, further steps are required to lead to policy change. The risk was voiced that the word ‘cost’ in many people’s mind relate to the costs that consumers pay (ie. price), as opposed to the value provided by nature and society to food systems. As such, this narrative may be wrongly interpreted as making food more expensive/less affordable and not the ongoing but unaccounted for costs to society (e.g diminished health) and the environment (e.g. pollution). To respond to this, participants voiced the need to create a positive (value-based) decision-making narrative (ie. identifying, valuing and accounting for positive impacts) and to shift incentives to support and enhance these positive impacts. Concern was raised that True Cost Accounting could be linked to higher food prices, raising equity issues and excluding vulnerable populations. Participants suggested a ‘true value’ approach to True Cost Accounting, as well as focusing not only on pricing externalities (taxing the ‘bad’ instead

²²²³ 85:18 p 13 in 160_20_Apr_21_GSI

²²²⁴ 147:19 p 9 in 239_May_27_21_Allen K

²²²⁵ 160:50 p 13 in 292_May_21_21_ProVeg_Multi

²²²⁶ 168:17 p 8 in 322_June_03_21_Apicella_Machado

²²²⁷ 169:44 p 13 in 327_May_18_21_CropLife

²²²⁸ 193:64 p 12 in 351_June_03_21_CIF_Multi

of the 'good') but also on public investment and regulations. The core assertion was reiterated that prices have failed to reflect the true value of the natural world, and the economic systems that we are using are broken. It is therefore about addressing the economic invisibility of important things that we value. The important difference between price (the quantity of one thing that is exchanged in sale for another) and value (relative importance or worth) was highlighted in this context. Even though we may seek where possible to monetize changes in capital stocks, it was recognized that in some cases it is neither appropriate nor possible to do so.²²²⁹

Participants disagreed sometimes about whether the consumer should have to pay for more ethically sourced food from the oceans or not!²²³⁰

Food gardens, safety, staples and funding

The area of divergence that emerged during the discussion is whether urban farming initiatives are significant enough to support food security in the city.²²³¹

Another area of divergence revolved around food safety. Some felt toxicants that can be found in seaweed present a serious issue for human consumption. On the other hand, it was noted that although seaweed does absorb substances from the sea, so does everything else that we consume from the ocean, including fish and other sea vegetables. Most participants in these discussions agreed that further research was necessary to truly understand this dimension of seaweed.²²³²

There was one area of divergence where participants had opposing views on "Fortifying Staples" under Action Track 1. Two perspective, one is that to allow fortifying staple to ensure healthier intake of food. However, another perspective disagrees on fortifying, arguing that the vitamins and minerals needed by our body should be grown naturally. These needs further debate and exploration but time was limited. The participants agreed to continue the discussion within their constituents and will be a topic in the succeeding Independent Dialogues.²²³³

Funding instruments that have been created to facilitate public-private collaboration in the agrifood sector are considered innovative and helpful by some, whereas others find them too bureaucratic or hard to work with.²²³⁴

There was divergence between participants who promoted economic incentives and those who see them as being very difficult to obtain at this time in the country, or at least that it would be something that would happen over a longer term.²²³⁵

²²²⁹ 220:14 p 14 in 381_June_08_21_UNEP_Multi

²²³⁰ 267:28 p 9 in 503_June_29_21_Schnyder_Boura

²²³¹ 10:16 p 11 in 181_Apr_8_21_Miranda

²²³² 119:70 p 17 in 121_Apr_28_21_Doumeizel V

²²³³ 218:20 p 8 in 379_June_08_21_KAMMPIL

²²³⁴ 141:57 p 18 in 229_May_18_21_NFP_Rabobank_Multi

²²³⁵ 352:12 p 10 in 567a_July_21_21_FLWRN_FBN_Eng

Governance

*Mechanism for monitoring and evaluation of government policies.*²²³⁶

*This confusion leads to another potential opposition between personal responsibility and collectivity rights related to food habits in the future.*²²³⁷

*Protectionist policies may affect other critical partners ability to eradicate poverty and achieve SDG. Such practices need to be carefully analyzed for their systemic effects on Nations and the region.*²²³⁸

*There was an opinion of some participants putting the blames on government for the low level of adoption of ICT in the farming system. They strongly believe that government should show high level of commitment in handling issues associated with food systems. While others argue that farmer should not depend on the Government for everything and that the Government has little or nothing to do with a farmer not making use of a smartphone and not having access to agro information already available on the internet.*²²³⁹

*Many were of the view that the vulnerabilities in food systems is due to bad governance whereas others also stated otherwise it is due to non-existent policies of what actually a food systems is.*²²⁴⁰

*Some would like their activities to be regulated by prohibiting fishing at certain times of the year while financing secondary activities such as livestock and subsistence agriculture. Others can't envision another activity besides fishing.*²²⁴¹

*Conflicts of interest between institutions: Ministry of Environment vs. Ministry of Agriculture, vs mining rights etc.*²²⁴²

*The role of governments was also an important topic in this breakout room, one which led to some divergence in opinion. Some participants felt that too much "red tape" was stifling the seaweed industry and making it unnecessarily hard for small producers to compete. They felt that unfair regulations in the industry resulted in the success of only big businesses, leaving little room for innovation or scientific discoveries. Others felt that the issue of government regulations and policies was a delicate one with much complexity. While they agreed that too many harsh regulations could stifle a fairly new industry, they felt that some regulation was needed, for example to avoid possible environmental harm on ocean ecosystems. They cited cautionary tales from other aquaculture industries and shared lessons learned, and ultimately circled back to the need for more data to overcome fear and uncertainty in the industry.*²²⁴³

²²³⁶ 33:35 p 14 in 084_Mar_17_21_UnyimeAbasi B

²²³⁷ 45:4 p 6 in 043_Feb_17_21_Donati L_Multi

²²³⁸ 50:32 p 12 in 087_Mar_20_21_Chinapoo C_Multi

²²³⁹ 51:9 p 8 in 137_Mar_24_21_Ejezie J

²²⁴⁰ 55:11 p 5 in 005_Dec_11_20_Aggrey J

²²⁴¹ 71:27 ¶ 37 in 033a_Feb_6_21_Serge BDS_ENG

²²⁴² 98:41 p 11 in 282_May_18_21_Romeo R

²²⁴³ 119:16 p 7 in 121_Apr_28_21_Doumeizel V

An unresolved divergence of views concerned whether or not to create a new international agency focused on seaweed...Most participants expressed that there is no need to form a new organization, rather to strengthen existing UN organizations, especially FAO, to better incorporate seaweed into its work, through its clear linkages to multiple SDGs.²²⁴⁴

Diverging viewpoints on whether farmers are receiving the right signal from government and the market.²²⁴⁵

Government initiatives are more intended to recycle rather than prevention, while international organizations are mostly working with the private sector to accelerate the attention shift through new technologies. However, in a top-down country stronger action of the government in terms of regulations is needed to guide consumers' behavior.²²⁴⁶

Fishermen and fisherwomen are facing violent attacks when exercising their treaty rights: Some of our brothers and sisters who fish and catch lobster, especially along the Atlantic coast of Canada, are facing violent attacks and targeted destruction of their fishing equipment and warehouses for exercising our treaty rights. They are being attacked by non-Indigenous fishers who are not able to fish at the same times as Indigenous fishers due to the differences and rights stated in our treaties. This conflict has caused great danger and destruction for the Indigenous fishers of the Atlantic coast of Canada. Impacts of commercial industries and government endorsed activity on traditional harvesting: Indigenous food/subsistence fisheries are seeing the impact of commercial fisheries on their food fisheries and rivers. According to Indigenous fishers from Canada in the dialogue, there are a number of court cases endorsed by the Canadian government that continue to mitigate and entice commercial and recreational fishing. This also goes for government leased lands that are permitting the clear cuts of forests for pulp mills. The clear cut areas are affecting the ecosystems of the forests and health of the wildlife, including the moose that Indigenous communities traditionally harvest in the area as a main source of protein.²²⁴⁷

Some participants felt that there should be a lowering of standards regulating food products/agricultural produce, particularly for those operating in the informal economy. Acknowledging challenges faced by small-scale producers with standards compliance, emphasis should be placed on facilitating these stakeholders to comply. The impact of lowering of standards on South African agribusinesses to competitively engage in regional, global value chains and to assure consumers of food safety (particularly after COVID-19) needs to be carefully considered.²²⁴⁸

People varied on the pace of change they were calling for and the methods of shifting food systems. Some advocated for all public institutions switching to plant-based as the default. Others wanted to see this happen in private sector as well. And still others felt

²²⁴⁴ 119:71 p 17 in 121_Apr_28_21_Doumeizel V

²²⁴⁵ 153:30 p 11 in 263_May_06_21_CCGA

²²⁴⁶ 168:16 p 8 in 322_June_03_21_Apicella_Machado

²²⁴⁷ 197:16 p 11 in 356_Apr_08_21_Livingston_Way

²²⁴⁸ 225:7 p 8 in 386_June_09_21_Sutherland J

*more education was needed to aid individuals in voluntarily making the shift themselves. Some wanted a more active role of government to provide taxation and incentives, while others felt the demand side and market place might play a more substantial role in helping society to shift to more low carbon, higher nutrient foods.*²²⁴⁹

*The issues of leadership in the delivery of extension services (dissemination of innovation) was also a point of divergence as stakeholders intimated that the private sector can play the leadership role as the public extension services are woefully inadequate.*²²⁵⁰

*Also, in response to several participants who mentioned consumer education and awareness as essential steps for a transformation, as well as the implementation of voluntary agreements, some said that such measures were not effective and that it was imperative to create legislation that forces a change in consumer behavior by limiting non-sustainable choices.*²²⁵¹

*While the need for greater collaboration between civil society actors and government was echoed by many, the impact of the pandemic on these linkages varied across contexts. Some noted that pandemic responses strengthened linkages between civil society and governments, particularly when it came to sensitization of COVID-19 information, while others pointed to increasingly fragmented food aid with civil society attempting to fill gaps in an uncoordinated way.*²²⁵²

*Divergence emerged around the role of regulation, with discussion around the fact that resistance to over-regulation is not limited to large scale farming enterprises, but exists in small-to-medium businesses as well. Divergent views around the appropriate level of regulation, access to natural resources and instruments for supporting and enabling positive change were discussed, and supported by participant commentary including the fact that farmers often feel dictated to and misunderstood in regulatory discussions, versus the view that self-regulation has not been effective in shifting behaviour.*²²⁵³

*The question of coordination was the subject of discussions: some participants proposed a ministerial redesign with the creation of a department grouping all the services dedicated to small local agriculture and a re-orientation of the subsidies to the agricultural sector with a priority toward it.*²²⁵⁴

the members of the group expressed differences of opinion on the amount of coordination...some believing that the coordination needs to originate from the Administration which ensures its sovereign organizational and monitoring role of the sector, whereas other participants favor giving responsibility to private stakeholders,

²²⁴⁹ 257:19 p 12 in 493_June_23_21_Kevany_Van

²²⁵⁰ 262:50 p 8 in 498_June_24_21_Danquah E

²²⁵¹ 301:66 p 10 in 537_July_08_21_ANP_WWF

²²⁵² 302:32 p 12 in 538_July_09_21_IDS_Multi

²²⁵³ 326:19 p 13 in 563_July_20_21_ClimateWorksAustralia

²²⁵⁴ 338:27 p 10 in 392a_June_01_21_Sidibe_Remy_Eng

*first among these the producers and the representative agencies, the state playing a role as observer and supporter.*²²⁵⁵

Inclusion

*The main area of divergence was related to how to understand the role of women in food systems. Some people posed a traditional role for women, for example: educating women so that they feed other people well. That is, planning a nutritional education so that women make good decisions, taking 100% responsibility for their reality and the reality of their family, when the conditions in which they daily live do not allow them. On the other hand, some people brought a more transformative view of the role of women in food systems.*²²⁵⁶

*On the day the dialogue was to be convened, we noticed a gender disparity caused by tradition and culture in the coastal communities on arrival. The dialogue date coincided with the community fishing day; they are in their fishing season. All the men and youth were out in the thick forests leaving only the women at home. This calls for advocacy, awareness creation and sensitization on gender equality and inclusion of the indigenous women for a sustainable food system.*²²⁵⁷

*While working to stop production chains which are harmful for the environment and global health, such as large-scale meat production, we must distinguish between actors responsible for the problem and Indigenous Peoples who are not part of the problem, rather the opposite.*²²⁵⁸

*In the third group, dealing with renewed traditions, empowered culture, affordability and true value, the group did not have any sharp contention. Slight divergences (which were then settled through a common understanding) included the importance of intergenerational discussions versus the importance of strengthening the voice of the youth and the understanding of true value as inherently spanning across the chain or not.*²²⁵⁹

*Stakeholders whose interests should be prioritized: There was a great deal of concern about: Prioritizing farmers, including small holder farmers and including women.*²²⁶⁰

*Stakeholders whose interests should be prioritized According to some participants, Youth must be the first prioritized while others made cases for Farmers as the first to be considered as without farmers, no food production.*²²⁶¹

²²⁵⁵ 338:28 p 10 in 392a_June_01_21_Sidibe_Remy_Eng

²²⁵⁶ 3:23 p 12 in 099_Mar_31_21_FAO_IFPRI

²²⁵⁷ 12:12 p 9 in 192_Apr_19_21_Okafor_A

²²⁵⁸ 21:9 p 6 in 180_Apr_7_21_GHIPFS

²²⁵⁹ 39:24 p 10 in 175_Mar_16_21_Donati L

²²⁶⁰ 54:37 p 9 in 002_Nov_19_20_CGIAR

²²⁶¹ 55:13 p 5 in 005_Dec_11_20_Aggrey J

*Additionally, there must be special attention paid to gender equality in food systems, including the need to provide more opportunities for women in agricultural value chains.*²²⁶²

*Commercial agricultural production is a mainly male task and this concept is maintained despite the increasing participation of women, the contributions of women in production, food and nutrition are not properly recognized, the potential / capabilities of women to produce food, women have much less access to land ownership than men, women do not have the same time as men to engage in productive activities, women are not significantly empowered, perpetuation of machismo, exclusion of women in decision-making, loss of opportunity to improve biodiversity, nutrition and resilience to external factors, and the decline in the health of people and ecosystems.*²²⁶³

*One solution provided for youth and women to better engage in the food system was the lowering of standards or the contextualization of standards for food products / agricultural produce. Some felt this would limit the ability of agribusinesses from the country to effectively engage in regional and global food systems that have set standards that all must adhere to in order to have their goods enter those markets.*²²⁶⁴

*While there was much agreement on the topic of education, there was less agreement regarding who should be the target of the education efforts. As discussed above, audiences may need to be prioritized due to limited funding and resources as consumers, policymakers, children and health care professionals cannot all be top priority.*²²⁶⁵

*Role of High Level Panel of Experts on Food Security and Nutrition (HLPE) (many important learnings, strengths and weaknesses). Also: need to distinguish between HLPE/ UN Committee on World Food Security (CFS, which is a political body, while HLPE is a small scientific panel). Importantly, HLPE has a 15-person steering committee and also has a mandate to explore disagreements. Cons of CFS/HLPE: Small high-level group is 'ne but cannot have the level of representation needed; silos between HLPE, civil society, private sector. Pros of CFS/HLPE: It is the only legitimate-UN embedded body. However, there are different interpretations of "legitimacy" as some argue that this comes through local participation.*²²⁶⁶

*Social protection for mountain women: The issue of social protection and gender equality is locality and context specific. There cannot be a blanket approach to addressing access to resources, women's agency, decision-making regarding the use resources, and creating advantageous economic opportunities.*²²⁶⁷

²²⁶² 56:10 p 6 in 006_Dec_16_20_UNDESA

²²⁶³ 67:15 p 11 in 054_Feb_25_21_Guzman HS

²²⁶⁴ 68:28 p 10 in 057_Feb_26_21_YES

²²⁶⁵ 84:38 p 12 in 153_Apr_28_21_GCNF_Multi

²²⁶⁶ 95:4 p 8 in 252_Apr_29_21_EU Commission

²²⁶⁷ 98:37 p 11 in 282_May_18_21_Romeo R

*Market development: Developing markets does not automatically mean that the most vulnerable will benefit, and it can compromise authenticity and diversity.*²²⁶⁸

*Small farmers, SMEs and consumers are often missing from the discussion (we all talk on their behalf, but they are not ‘in the system’ to join these sorts of discussions. They also do not have time!).*²²⁶⁹

*Also, the youth/gender group and the farmers group had divergent views on how to harness the potentials of the youth to participate in AR4D equitably and gainfully. While the youth/gender group recommended increased investment in capacity development and business incubation for the youth in agriculture and food, the farmer group recommended the formulation and implementation of affirmative actions for youth in relation to access to knowledge, land, financial services, green jobs, and markets as the approach to achieve the objective.*²²⁷⁰

*Another divergence that emerged from a breakout session was who would take on the leading role and responsibilities needed to implement and monitor the solutions proposed in the Food System Summit. Whether it should be the UN agencies or Governments while NGOs act as watchdogs. No clear conclusion was met but UN agencies were emphasized to have more of an active and leading role although the lack of power from the UN was recognized.*²²⁷¹

*How to reach all farmers is a significant challenge. Many farmers are clients of public advisory services (i.e. Teagasc), while more are clients of private advisors, and more have little or no engagement with any advisor. More collaboration and coordination of the public and private advisory services is needed, as is more inclusivity of a wider pool of advisors. The potential role of other actors (e.g. veterinarians) in providing advice to farmers can also be overlooked and should be considered more within the challenge of how all farmers can be reached with information.*²²⁷²

*The difference between designing something for farmers, rather than with farmers. There was plenty of discussion on how to involve farmers/reach farmers, but more work needs to be done into including them to begin with, from design and identification of challenges, throughout interventions to place them and value their own knowledge.*²²⁷³

*The issue of young peoples’ involvement in the food system noting that most of the communication platforms target generally adult audiences hence there is need to ensure the balance in targeting between the youth and the adult farmers who are becoming fewer in sub saharan than the burgeoning youth population.*²²⁷⁴

²²⁶⁸ 98:42 p 11 in 282_May_18_21_Romeo R

²²⁶⁹ 99:54 p 14 in 285_May_20_21_TFFF_Multi

²²⁷⁰ 111:47 p 8 in 070_Mar_09_21_AkinbamiJO

²²⁷¹ 138:32 p 13 in 214_May_05_21_50by40

²²⁷² 170:98 p 18 in 328_May_19_21_Lalor_Teagasc

²²⁷³ 192:22 p 9 in 350_June_02_21_Farm Radio Int

²²⁷⁴ 192:23 p 9 in 350_June_02_21_Farm Radio Int

*How to define scope of food resilience analysis: how to balance level of detail needed at local level with larger national and international dynamics, and how to let local stakeholders actively play a role in this analysis and feel capacitated to contribute.*²²⁷⁵

*A first group, discussing the need for evidence-based, adaptive approaches noted that to do this right long-term, trust-based, local involvement is necessary. This is necessary for all voices to be included in the face of power structures, which cannot be just solved by spending larger amounts of money as the statement may suggest. Often learning agendas are also set by donors, while local partners should be given a chance to set the agenda. Moreover, learning based approaches are also difficult to implement if (humanitarian) access is restricted in conflict areas.*²²⁷⁶

*A second group discussed the need for investment in protracted crises to be guided by food systems resilience analysis, co-created with local actors. Some participants agreed that communities are best placed to articulate their own resilience strategies, that true localization is very important, that a clear structure for the analysis should be in place and funding available. Other participants questioned whether there really is an interest locally to build resilient food systems, asking who sets this agenda? It may also be difficult for communities to fully have the system perspective for which they will need to rely partly on research organizations. This could simplify complex realities. Another risk seen was that a food systems resilience approach was not clear enough yet, which may result in repackaged old ways in new approaches. Furthermore, taking very flexible approaches may not be possible for donors to support due to restrictions they face with funding.*²²⁷⁷

*The third group discussed the need for pooled funding and inter-donor HDP nexus strategies through food systems resilience analysis. On the one hand participants agreed because this would help improve the enabling environment, to better meet the demand of communities - as long as such an analysis does not lead to a one-size-fits-all approach. If this is a national level analysis, how does this balance with need for detail at local level, and the need to let local actors contribute?*²²⁷⁸

*Some participants felt that women with ownership and control over agriculture assets including land are not as productive as their male counterparts. Others felt that lines of credit mainly favor males hence it may seem as if they are productive when in fact it is because of the support they receive from government and other lines of credit. It was agreed that there is need for the government to continue mainstreaming gender in the agriculture sector.*²²⁷⁹

²²⁷⁵ 278:58 p 12 in 514_July_01_21_Bolling_Multi

²²⁷⁶ 278:80 p 15 in 514_July_01_21_Bolling_Multi

²²⁷⁷ 278:81 p 15 in 514_July_01_21_Bolling_Multi

²²⁷⁸ 278:82 p 15 in 514_July_01_21_Bolling_Multi

²²⁷⁹ 325:23 p 8 in 562_July_19_21_Zombe K

Innovation

*Perspectives on influence of supply chains, with some warning of lack of resiliency of food systems and being over-exposed to the market disrupts, while others emphasized potential innovations in supply chain processes supporting sustainable landscapes.*²²⁸⁰

*Moreover, some participants were more convinced than others about the importance of data in the transformative process: some considered that data are a “must” to tackle the major structural challenges of current food systems, while others believed that change must also originate from traditional knowledge sharing (school, education, workshops, etc.)*²²⁸¹

*Traditions, and food traditions in particular, were perceived as nourishing a sense of belonging, as one of the only things that make you feel like a human being anchored in a societal environment. On the contrary, innovation and personalized diets were considered as a mere response to health necessities, somehow taking away the human and social part of nutrition, and therefore the pleasure and celebration of food.*²²⁸²

*The risk of over-romanticize certain professions linked to agricultural production and farming as this over-romantization risks to impede connecting traditions which are revitalized by innovative approaches.*²²⁸³

*One area of divergence that was identified during the dialogue concerns the situation of women in the Mérida food system. It was acknowledged that the role of women has changed a lot in recent years. Women were not given their place in agriculture before. Today, women are excelling in different roles, both in the field and in food marketing and processing. But it was discovered that the situation of women, and the perceptions about them vary a lot according to their place in the food system. For some, women do not face any disadvantage compared to men. There are several examples in particular, women producers who have been very successful in marketing their products through the Mérida City Council’s Circle 47 Program. Other participants commented that many women still face situations that limit their development and impact (low education level, do not have land to farm and operate informally, etc.).*²²⁸⁴

*Digestors: It was also suggested by some participants that the use of digestors as a potential opportunity for food waste reduction has been done before and isn’t always successful, so greater research and experimentation was needed to make this a more effectively scaled solution.*²²⁸⁵

²²⁸⁰ 37:17 p 9 in 097_Mar_30_21_EcoAgriculture Partners

²²⁸¹ 39:22 p 10 in 175_Mar_16_21_Donati L

²²⁸² 45:5 p 6 in 043_Feb_17_21_Donati L_Multi

²²⁸³ 60:29 p 9 in 021_Jan_27_21_Donati L

²²⁸⁴ 75:46 ¶ 135 – 138 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

²²⁸⁵ 84:33 p 12 in 153_Apr_28_21_GCNEF_Multi

*There are also contrasting views in relation to environmental and human health externalities (e.g. AMR) as well as towards efficiency vs resilience (do these complement or antagonize one another?).*²²⁸⁶

*Existing vs. new SPIs: some argue the use of existing entities, others argue the need for something new.*²²⁸⁷

*Increasing access to technology: There is uncertainty whether the introduction of technology is compatible with maintaining traditional values and cultures, and whether this is feasible in rural mountain areas where all young people have left. Traditional knowledge is not static and not necessarily manifesting the same way in young people, who are intermittently migrating to cities and collecting other types of knowledge. Technologies and infrastructural developments may also not be coherent with local needs. For example, afforestation in mountains with drones spreading one species could be in conflict with local biodiversity needs.*²²⁸⁸

*What role the growth of plant-based products has, the need for novel proteins and increased production of ultra-processed foods might play in triggering new food safety challenges in the future.*²²⁸⁹

*In response to several participants indicating that it is important to have more information available to consumers through food labels, some pointed out the difficulty of gathering all the necessary information on a single label.*²²⁹⁰

Innovations versus traditions

*Moreover, some participants were more convinced than others about the importance of data in the transformative process: some considered that data are a “must” to tackle the major structural challenges of current food systems, while others believed that change must also originate from traditional knowledge sharing (school, education, workshops, etc.).*²²⁹¹

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²²⁸⁶ 93:65 p 15 in 227_May_18_21_Tarawali S

²²⁸⁷ 95:6 p 8 in 252_Apri_29_21_EU Commission

²²⁸⁸ 98:36 p 11 in 282_May_18_21_Romeo R

²²⁸⁹ 207:3 p 13 in 366_May_27_21_Cumbers S

²²⁹⁰ 301:65 p 10 in 537_July_08_21_ANP_WWF

²²⁹¹ 39:22 p 10 in 175_Mar_16_21_Donati L

²²⁹² 45:5 p 6 in 043_Feb_17_21_Donati L_Multi

*The risk of over-romanticize certain professions linked to agricultural production and farming as this over-romantization risks to impede connecting traditions which are revitalized by innovative approaches.*²²⁹³

*Old habits vs new ideas and philosophies.*²²⁹⁴

*Some participants disagreed that innovation and technology is the best way to improve irrigation practices. They felt instead that we should look back to traditional forms of farming, where farmers were able to use resources efficiently without having to rely on high-tech solutions. Others believed that even traditional techniques would need modernisation to work on a large scale. There was also some divergence on the importance of certifications like “organic” or “bio”, because these agricultural practices can be more sustainable, but they are not affordable if farmers have to pay large amounts to get the certification.*²²⁹⁵

*Technology vs traditional farming There were debates over whether the use of technology will truly change productivity. Traditional farming, or its more recent agroecology methods have argued that this is a way forward - reducing the reliance on pesticides etc to build a production system that includes diversity, human and social values. However, others have argued that traditional farming methods will not be able to increase productivity.*²²⁹⁶

Labelling practices

*It should be pointed out that in one of the rooms, when talking about labeling, several of those present strongly criticized the NutriScore system, as a frontal nutritional labeling scheme, but there were also those who defended it, saying that its mission is to help consumers so that they can compare food, always, of the same category. It is not for comparing different foods (Coca-Cola and oil were quoted, for example, saying that the NutriScore system is not for comparing them with each other).*²²⁹⁷

*Some participants mentioned the need of a multidimensional labelling to clarify whether products are sustainable at the social, environmental level or both. Other participants pointed out that such certifications would make the products more expensive, and less accessible. Certifications also create a binary choice between what product is more sustainable and less sustainable (even if both options may not be sustainable). Some participants believe this is necessary to progress the food system towards more sustainable products, while others believe that the burden should not be with the consumer to choose between sustainable/unsustainable products, but that all products should have a sustainable baseline.*²²⁹⁸

²²⁹³ 60:29 p 9 in 021_Jan_27_21_Donati L

²²⁹⁴ 147:20 p 9 in 239_May_27_21_Allen K

²²⁹⁵ 224:19 p 11 in 385_June_09_21_Lazzaris S

²²⁹⁶ 319:14 p 11 in 556_July_15_21_Von Goh_GenTan

²²⁹⁷ 237:18 p 16 in 284a_May_19_21_INTERPORC_English

²²⁹⁸ 256:36 p 13 in 492_June_23_21_Liu JA

Land use

*There was also much focus on poor water and irrigation use/management as a main source of agricultural emissions, but some participants put more emphasis than others on the need for land-use changes.*²²⁹⁹

*Industry and the public have different perceptions of the fresh produce industry resource usage of land, water, and related materials.*²³⁰⁰

*Also at a societal level, there is an issue about allowing new entrants access to land, while maintaining existing family farms.*²³⁰¹

*There were some differences in considering which stakeholder interests should be prioritized: the need of integrating more farmers and indigenous rights i.e., Land tenure/rights of returning land to indigenous people based on historical treaties vs Integrating land use and public/private partnerships in the current system.*²³⁰²

*There were some differences in considering which stakeholder interests should be prioritized: the need of integrating more farmers and indigenous rights i.e., Land tenure/rights of returning land to indigenous people based on historical treaties vs Integrating land use and public/private partnerships in the current system.*²³⁰³

*4. Support healthy and sustainable climate-friendly diets. 5. Ensure that high nutrient foods are accessible and affordable to underserved communities. 6. Ensure equitable livelihoods for farmers, including smallholder farmers, women, youth, and underserved groups. 7. Provide equal access to capital, technology, and land tenure to smallholder farmers, women, and underserved groups. 8. Strengthen capacity to provide actionable and real-time information and advisory services to farmers. 9. Scale innovative solutions. To advance progress in achieving the SDGs, stakeholders will need to measure, evaluate, and report the data and evidence that is required to iteratively improve food systems. This will include ongoing assessments to balance food security, public health, the environment and climate change, farmer livelihoods, and the needs of women, youth, and underserved groups. Explore: Further explore food systems by drawing on data and evidence to guide: 1. Public policy—including subsidies, taxing, and food labeling—with regard to food security, public health, climate change and the environment, farmer livelihoods, and the needs of women, youth, and underserved groups. 2. Businesses, including financial investments, research and development, and innovation. 3. Research, education, and civil society to advance the SDGs.*²³⁰⁴

Another divergence reflected the tension between the agricultural and environmental issues. Israel is a small and very populated country with scarce natural resources,

²²⁹⁹ 17:48 p 14 in 164_Apr_15_21_Anarbekov_Akramov

²³⁰⁰ 18:29 p 13 in 114_Apr_19_21_Maurer H_Roskrug N

²³⁰¹ 20:38 p 11 in 116_Apr_21_21_Hein JR

²³⁰² 37:20 p 9 in 097_Mar_30_21_EcoAgriculture Partners

²³⁰³ 37:23 p 9 in 097_Mar_30_21_EcoAgriculture Partners

²³⁰⁴ 54:43 p 5 in 002_Nov_19_20_OGIAR

*especially land. The struggle to grow the major healthy and sustainable food basket and at the same time to reserve natural land creates conflict of interest that must be addressed.*²³⁰⁵

*The issue of herders' and farmers' clashes in Nigeria has created a lot of tension within the nation bringing to bear the realities of ethno-religious disparity alongside the fragility of our food systems. The panelists and participants had differing opinions on this with no one-size-fit all solution to arrest the situation. Some opinions bothered on the government providing ranching facilities for herders while others leaned towards tackling the problem from a policy point of view and taking more bolder climate actions.*²³⁰⁶

*Divergences of opinion emerged as to whether the land-use ratio should be employed more when evaluating ruminant production. This ratio could examine if a livestock system contributes to feed-food competition by comparing the current animal protein against the potential plant protein production from that land area and provide insights into how to optimise land-use management.*²³⁰⁷

*So while there were not areas of divergence in our dialogue, we touched upon topics such as commercial industries, recreational 'shing, pulp mills, coastal developments for tourism, and private landowner access issues that might raise points of divergence with a larger audience with different stakeholders. Private landowners have revoked access to lands and waters of traditional harvesting sites: An additional challenge that many Indigenous Peoples' communities are facing is reduced and diminishing access to harvesting grounds, 'shing rivers and coastal areas due to private property owners revoking our [Indigenous] historical access, and more development that destroys harvesting areas or limits our access.*²³⁰⁸

*IPs maintain a sacred relationship with nature because it supports their lives and wellbeing. IP territories are the primary factors in food production. This includes not only the land but all the resources and the services they provide that supports food production and regeneration vs. Land and resources are economic commodities that can be procured for profit-oriented development and/or best interest of the state/majority like extractive industries and monocrop palm oil plantations, etc. in the name of addressing local employment and poverty among others...Land is a community property for the common good vs. Land is an individual/private property.*²³⁰⁹

²³⁰⁵ 64:80 p 14 in 041_Feb_17_21_Adler D

²³⁰⁶ 73:18 p 14 in 204_Apr_27_21_YASIF_UYSG

²³⁰⁷ 112:85 p 14 in 074_May_18_21_O'Mara_Teagasc

²³⁰⁸ 197:1 p 11 in 356_Apr_08_21_Livingston_Way

²³⁰⁹ 221:26 p 12 in 382_June_08_21_AIIPP_Multi

Open

*Food systems affect us all, and it is important to create a fully accessible virtual space where all actors across the agri-food value chain feel comfortable sharing their priorities, aspirations and challenges in an open manner.*²³¹⁰

*Food systems affect us all, and it is important to create a virtual space where all actors across the agri-food value chain feel comfortable sharing their priorities, aspirations and challenges in an open, discursive manner.*²³¹¹

*We need to bring people together on these innovations, their ideas, talk about complex issues that we might have because only by talking and having an open dialogue can we move forward.*²³¹²

*We wanted to begin an open discussion between students who are working on grassroots initiatives and leaders and decision makers in the field of global food security to create a food security environment for university students.*²³¹³

*This requires human and financial investments and therefore should also bring economic returns. o Increased fairness and equity along the chain is required to succeed in transitioning towards sustainable food systems. o A fair and transparent policy (open communication, fair prices, risk sharing) promoting more transparency along supply chains and better distribution of value is needed. o Capacity development is key, especially for farmers groups and MSMEs, providing support to operators in meeting required economic, social and environmental standards...*²³¹⁴

*In light of climate change, the problems of food insecurity and malnutrition, sustainable consumption and equitable livelihoods need to be re-examined with open minds and reason using the advances in science and technology towards Sustainable Agriculture.*²³¹⁵

*He explained that economists advocate for a more open-trade environment where it allows external competition and that it is able to assert that homegrown producers can be as productive and competitive as external producers.*²³¹⁶

*Being open to difference.*²³¹⁷

*Open mindsets to new solutions.*²³¹⁸

²³¹⁰ 6:24 p 3 in 166_Apr_14_21_Meat Business Women

²³¹¹ 28:21 p 3 in 064_Mar_4_21_Farming First

²³¹² 32:14 p 10 in 082_Mar_15_21_Yoovatana M

²³¹³ 48:7 p 5 in 078_Mar_11_21_Cadogan T

²³¹⁴ 66:95 p 12 in 052_Feb_25_21_EUFIC

²³¹⁵ 74:56 p 6 in 189a_April_16_21_Ateneo de Manila

²³¹⁶ 74:60 p 33 in 189a_April_16_21_Ateneo de Manila

²³¹⁷ 92:37 p 3 in 225_May_13_21_Schwartz A

²³¹⁸ 99:76 p 13 in 285_May_20_21_TFFF_Multi

*In light of climate change, the problems of food insecurity and malnutrition, sustainable consumption and equitable livelihoods need to be re-examined with open minds and reason using the advances in science and technology towards Sustainable Agriculture.*²³¹⁹

*Information sharing was highlighted as a strong entry point for improved coordination, especially to address conflicts of priority. A common problem is that the policy environment is not well understood by all stakeholders. Thus, at implementation, opportunities to collaborate and improve program design are missed. The SADC regional knowledge hub presents an opportunity to overcome this, by providing a platform to highlight and map different policies, which sectors they impact, and where opportunities for collaboration exist.*²³²⁰

*Community group discussion: Marginalized groups, primarily women are often ignored in the WEF nexus due to its top-down approach. Women and other minority groups are usually left out from the decision-making processes at the community/provincial/national level. While at the household level, women are responsible for managing food, energy and the water supply, their representation on decision-making bodies such as the village council is very limited. The deeply ingrained patriarchal social norms act as barriers for women and other groups to participate in the bureaucratic system that is responsible for making decisions related to the WEF nexus. This fact is verified from the low levels of representation of women and other minority groups on political bodies. The inadequate representation of these groups on such forums limits their ability to effectively voice their concerns, and thus, they are neglected in the management of the WEF nexus actions.*²³²¹

*The third segment provided the Conclusions and Recommendations, emphasizing seven Guiding Principles that came out as essential for building Food Systems Resilience in the face of shocks and stresses. These principles were: i) Maintain diversity and redundancy, ii) Manage connectivity, iii) Manage slow variables and feedbacks, iv) Foster complex adaptive system thinking, v) Encourage learning, vi) Broaden participation, and vii) Promote polycentric governance systems.*²³²²

*Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change).*²³²³

*Honor indigenous food systems and knowledge by returning land to be managed by indigenous communities and fostering an integrated approach to cultivating food that allows biodiversity to flourish.*²³²⁴

*Stronger mechanisms for political accountability for hunger and food insecurity.*²³²⁵

²³¹⁹ 103:81 p 6 in 007a_Dec_18_20_NAAGD

²³²⁰ 117:89 p 12 in 109_Apr_13_21_Jacobs-Mata I

²³²¹ 127:99 p 18 in 159_Apr_21_21_Hafeez M

²³²² 133:26 p 5 in 196_Apr_20_21_Attah-Krah K

²³²³ 138:35 p 7 in 214_May_05_21_50by40

²³²⁴ 144:28 p 8 in 232_May_20_21_Schwartz A

²³²⁵ 150:2 p 7 in 253_Apr_29_21_AFDB_Multi

*A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases. The focus of the discussion, therefore, was on the proper use and structure of labels. Labels cannot be the solution. They often report information in a partial or extremely superficial way, failing to reflect the complexity of certain realities such as the issue of sustainability. A feasible solution would be to develop technologies that support both producers and consumers, such as QR codes.*²³²⁶

*We need to be open and optimistic and co-create; we need to be together, unite in the fight. There are so many communities working towards a change, predominantly indigenous populations, if we talk about the future, let's make sure they are included, and their knowledge- amplified.*²³²⁷

*Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*²³²⁸

Policy

*Most of these divergent views arise because of differences between objectives for different regions (and wealth categories) in different parts of the world. For example, at present, in LMICs livestock play multiple roles, whereas in HICs the focus is much more on only the provision of food products.*²³²⁹

*Nature of evidence and role of science (Values versus evidence). One camp suggests that food is different from country to country as there are many more cultural/value-based elements in food systems so roll of a Science Policy Interface(s) for food systems must balance the need to create a space for debate and make clear recommendations. One camp suggests science needs to be “objective” and value-free. Relevance of science is the scientific evidence used to drive/inform change? If not, then it's likely not fit for purpose.*²³³⁰

*Conflicts also exist between policy makers and local farmers. Mountain people can be considered a burden to governments because it is expensive to support them. Mountain people and ecosystems, however, should be viewed as a positive value. If mountain farmers are given the necessary tools, they could scale up their agriculture production.*²³³¹

²³²⁶ 178:1 p 7 in 336_May_26_21_CI_WFO

²³²⁷ 204:10 p 8 in 363_May_26_21_Mehta_Bautista

²³²⁸ 207:32 p 11 in 366_May_27_21_Cumbers S

²³²⁹ 93:66 p 15 in 227_May_18_21_Tarawali S

²³³⁰ 95:5 p 8 in 252_Apri_29_21_EU Commission

²³³¹ 98:39 p 11 in 282_May_18_21_Romeo R

*Outmigration: There was not agreement on whether outmigration should be opposed or organized and structured, as – for example – from a young mountain farmer’s perspective, migrating could be the best option.*²³³²

*The role of governments was also an important topic in this breakout room, one which led to some divergence in opinion. Some participants felt that too much “red tape” was stifling the seaweed industry and making it unnecessarily hard for small producers to compete. They felt that unfair regulations in the industry resulted in the success of only big businesses, leaving little room for innovation or scientific discoveries. Others felt that the issue of government regulations and policies was a delicate one with much complexity. While they agreed that too many harsh regulations could stifle a fairly new industry, they felt that some regulation was needed, for example to avoid possible environmental harm on ocean ecosystems. They cited cautionary tales from other aquaculture industries and shared lessons learned, and ultimately circled back to the need for more data to overcome fear and uncertainty in the industry.*²³³³

*Some divergence also came around the topic of regulations and the role of the private sector versus governments in creating these regulations. Some participants felt that governments needed to play a strong role in creating safe regulatory environments to prevent unintended harm to ecosystems and consumers from lack of information. Others felt that the current state of regulations, particularly in Europe, were already too restrictive and not conducive to small scale producers being able to compete. They also felt a strict regulatory environment stifled innovation, and that a kinder environment, led by the private sector, would encourage increased innovations in seaweed usage and applications.*²³³⁴

*Incentive policy is important to motivate and attract researchers, and to work for productive research. Support from government and industry is also important as well as research support (including capital).*²³³⁵

*Policymakers are not listening to citizens: There is a lack of channels at the international and European level.*²³³⁶

The regulation of genome edited crops remains unclear with the government considering some form of assessment (e.g.

*testing presence of transgenes) while the industry prefers no pre-market evaluation much like what is done with conventional crops. An advisory team has been tasked by the Department of Agriculture to work out a suitable guideline for genome editing.*²³³⁷

²³³² 98:43 p 11 in 282_May_18_21_Romeo R

²³³³ 119:16 p 7 in 121_Apr_28_21_Doumeizel V

²³³⁴ 119:67 p 17 in 121_Apr_28_21_Doumeizel V

²³³⁵ 157:83 p 12 in 278_May_18_21_Gregorio B

²³³⁶ 160:30 p 10 in 292_May_21_21_ProVeg_Multi

²³³⁷ 181:44 p 10 in 339_May_27_21_Sayoc_Multi

*Enhancing enforcement of regulations for sustainable crop production and movements along the value chain.*²³³⁸

*Slight differences of opinion occurred in the form of granting rights to food producers, some participants considered that land rights were fully granted to food producers, while other participants wanted the land to remain state property and food producers were given access to cultivating state land. -the land owned, despite differences of opinion, basically the participants agreed that food producers should have the right to cultivate productive land. From the discussion process, the arguments and statements of the participants complement and strengthen the presentations of other participants. The ideas presented also complement and enrich the inputs submitted by fellow participants. This shows that the food situation faced has the same pattern with location-specific case variations.*²³³⁹

*It was emphasized that establishing nutrient and ingredient standards for food products targeted at children, around which all stakeholders can converge, will be crucial for decision making around specific products.*²³⁴⁰

*Participants also mentioned that in areas affected by conflict it may be difficult to create alignment based on community preferences as there groups may be in conflict with each other.*²³⁴¹

*It may also be difficult to create alignment as long as interventions are separated by national borders. In the Horn of Africa a regional perspective is key. If you take a food systems perspective you need to take into account Ethiopia even when working in Sudan and Somalia.*²³⁴²

*Even within the same government it can be difficult to create coherence. For instance foreign policy and military strategy of one donor government may not be aligned with humanitarian, development, peace interventions implemented by its aid arm. As long as this coherence is not addressed in case of conflicts the hard security approach undermines development efforts.*²³⁴³

One discussion group also experienced a disagreement about how evidence can be used to inform policy. Some felt that guidelines were transparent but could benefit from better communication and making sure that people were consistent with their use of evidence. Others felt that that was a mischaracterisation of how policy is really made, and that science and evidence is not made in a vacuum. These participants felt that human behaviour and relationships can not necessarily be measured, and these are huge factors in influencing policy. A different group was also conflicted on the extent to which food-

²³³⁸ 183:74 p 14 in 341_May_28_21_Sewraj_KS

²³³⁹ 185:53 p 11 in 343_May_28_21_Abdullah_S

²³⁴⁰ 193:63 p 12 in 351_June_03_21_CIF_Multi

²³⁴¹ 278:76 p 14 in 514_July_01_21_Bolling_Multi

²³⁴² 278:77 p 14 in 514_July_01_21_Bolling_Multi

²³⁴³ 278:78 p 14 in 514_July_01_21_Bolling_Multi

*based dietary guidelines are influenced by industry, and how challenging it is likely to be to include sustainability messages in the next iteration of guidelines.*²³⁴⁴

*The debate on chemical use versus regenerative practices was raised in the Dialogue, with diverse views around the ongoing role of chemicals (e.g. to support minimum or no-tillage) as well as the application of suitable regenerative practices at large scales, including increasing soil carbon, maintaining ground cover and restoring biodiversity. This highlighted a theme of divergence around the role of various solutions (both on-ground practices and regulatory and policy responses) to achieve sustainable food and land use systems.*²³⁴⁵

*The issue of 'just transitions' was raised, given the complexity of farming systems, with panellists and participants acknowledging the diversity of challenges faced by sub-sectors (e.g. horticulture vs. livestock). There was discussion on the need to develop 'basic principles' to ensure a just transition, with farmers and representative bodies closely involved in decision-making, as well as the need for 'skin in the game' to build alignment and support where increased regulation is required.*²³⁴⁶

Priorities

*There is only one participant who thinks that aquatic food receives high priority while the rest believe that it is either inadequate, increasing, or varying.*²³⁴⁷

*Some participants pointed to a potential area of divergence between centering the needs and livelihoods of small-scale fishers and centering sustainability, however others argued that by focusing on the former with a long-enough time horizon and clear enough understanding of system dynamics, fishery impacts, and the effects of climate change, the latter goal will be synergistically achieved.*²³⁴⁸

*Some noted there should be a focus on supporting small-scale operations as this helps build up farm diversity and provides more support for regional communities and economies. Others highlighted that larger operations will be more efficient and productive, helping to reduce waste, emissions, resource use and overall environmental impact.*²³⁴⁹

Climate change: There is still denial in the general population about climate change. We must create awareness, education and a call to action. It will not be sufficient to get people facts, and it will be more important to teach people to discern what is important. Critical thinking is a must: what is relevant and what is not. Education involves connecting the dots and showing the consequences of taking action, or lack thereof will show how everyone is affected, some to a greater degree than others. Politicians/elected

²³⁴⁴ 280:90 p 14 in 516_July-01_21_Anastasiou K

²³⁴⁵ 326:22 p 13 in 563_July_20_21_ClimateWorksAustralia

²³⁴⁶ 326:23 p 13 in 563_July_20_21_ClimateWorksAustralia

²³⁴⁷ 82:25 p 9 in 150_Apr_30_21_GANSFOIWFSN

²³⁴⁸ 155:42 p 10 in 272_May_12_21_Battista W

²³⁴⁹ 156:69 p 13 in 275_May_13_21_Dornom H

*officials must hear from citizens – it is not enough to just vote. Regulation has very limited reach as business is profit-driven. Outside pressure (e.g., from civil society) is needed. We need to sensitize politicians and CEOs. Advocacy is important beyond vote.*²³⁵⁰

*Participants also held opposing positions on the best approach to advocacy for healthy diets. Some participants felt that advocacy efforts for healthy diets should not commence within a region until access to these healthy foods could be secured for the community, while others felt that advocacy efforts for healthy diets and knowledge sharing should commence even in the absence of a stable food system.*²³⁵¹

*More developed markets tended to talk more about sustainability issues (such as water use, soil fertility and carbon mitigation) whereas less developed markets prioritized the need to boost yields (consistently), support farmer livelihoods and improve consumers' access to affordable, diverse, safe food.*²³⁵²

*Political economy is very controversial, but there is need to understand why funding is not available in Africa. In particular, the Ministries of Finance in most African countries have indicated that food security is not a priority as captured in their National Development Plans. A mind set change is needed in general that will demonstrate commitment to the targets set by the international and continental frameworks.*²³⁵³

*What is a key outcome when it comes to communications? Is it a farmer taking up a new and/or improved practice, or is it a farmer making an informed choice to do, or not do, this same thing? What should the goal of communications be when it comes to this?*²³⁵⁴

*Some stakeholders perceive that the targeting of school-aged children and/or provision of school meals is not a cost-effective or efficient way to improve nutrition. Such stakeholders noted that meals served by the programme were sometimes of poor quality, programme costs did not appear sustainable, and school feeding was disregarding.*²³⁵⁵

*Some key stakeholders perceive that certain foods that are widely accepted and are part of the food culture, including instant noodles, should be mandatorily fortified to increase the reach of fortified products and consequently increase micronutrient coverage. Other stakeholders considered instant noodles to be an unhealthy food and highlighted that there is no point mandating fortification for a product that you would like people to consume less of.*²³⁵⁶

During the discussion subject of “combining human health and planetary health”, there were some areas of divergence on promotion of healthy diet and EAT diet on specific context that have not reached food security yet. The debate was constructive and all

²³⁵⁰ 163:158 p 20 in 300_May_27_21_Alesso_Pommeret

²³⁵¹ 167:73 p 14 in 311_June_14_21_NCD Child

²³⁵² 169:47 p 13 in 327_May_18_21_CropLife

²³⁵³ 191:42 p 9 in 349_June_02_21_Ekwamu A

²³⁵⁴ 192:25 p 9 in 350_June_02_21_Farm Radio Int

²³⁵⁵ 193:61 p 12 in 351_June_03_21_CIF_Multi

²³⁵⁶ 193:62 p 12 in 351_June_03_21_CIF_Multi

*participants agreed on the need to contextualize the choices and having different balances among climate and nutrition considerations according to the contexts.*²³⁵⁷

*Some participants agreed that economic growth needs to still be a priority. Others think that economic priorities and national self-interest are intrinsically at odds with the protection of the environment and communities. Some policy officers think that talking about the greater good does not work in practice, and it is important to change the narrative to show to stakeholders why it is in their economic interest to manage water more efficiently.*²³⁵⁸

*A faction of the group would like to focus on short term/emergency aid, others look at the drivers and want to tackle more longer-term, systemic issues.*²³⁵⁹

*The trade-off between giving space to adapt projects in a way which maximises outcomes and fits current local context, and losing accountability due to shifting targets or losing site of the goal (distraction from the main objectives).*²³⁶⁰

*It is necessary to have clear pathways and plans in place for switching approaches in different scenarios, rather than just the flexibility to change however is felt at the time...*²³⁶¹

*Some participants felt that food systems should focus on transformative actions, whereas others felt that technical or incremental change would be more effective.*²³⁶²

*The pressing need, highlighted by several participants, to diversify seafood consumption by the Portuguese was not unanimous. Someone felt that at least compared to other countries, namely the Nordic Europeans, the Portuguese consume a fairly diversified set of seafood, despite having recognized that there is always room for improvement.*²³⁶³

*The largest and most important point of divergence was between making the existing food system structure - which relies on agro-corporations, major farms, heavy reliance on animal proteins, and processed foods that require huge amounts of plastics, shipping, refrigeration, and preservatives - more just, accessible, and equitable versus relying more on localized modes of food production that put finance and development towards smaller farmers, Indigenous practices, and reclamation and rewilding of lands.*²³⁶⁴

Participants acknowledged that there are many areas where views are divergent, partly related to the diversity of livestock systems going forward – contrasting for example,

²³⁵⁷ 215:21 p 13 in 376_June_04_21_IFAD_Multi

²³⁵⁸ 224:21 p 11 in 385_June_09_21_Lazzaris S

²³⁵⁹ 260:13 p 12 in 496_June_23_21_Tradowell C

²³⁶⁰ 278:69 p 13 in 514_July_01_21_Bolling_Multi

²³⁶¹ 278:71 p 13 in 514_July_01_21_Bolling_Multi

²³⁶² 280:89 p 14 in 516_July-01_21_Anastasiou K

²³⁶³ 301:67 p 10 in 537_July_08_21_ANP_WWF

²³⁶⁴ 91:25 p 9 in 217_May_6_21_Schwartz A

*pastoralists, smallholders, intensive farming as well as divergence on the consumption of livestock-derived foods.*²³⁶⁵

*Economic sustainability of mountain food systems: Some saw the high costs of agricultural production in mountain as unsustainable. There are no one-size-fits-all solutions, and an approach that can work in one mountain environment will not necessarily work in all contexts. For example, using tourism as a tool for improving livelihoods was viewed by some as potentially contributing to the dispossession and marginalization of pastoralists and benefitting only the local elite and/or external stakeholders.*²³⁶⁶

*Research institutions often focus on national priority crops, which are in conflict with traditional crops. At local level, there is more research on indigenous local products. In some mountain areas, private sectors are coming out with product diversification, which conflicts with the main crops being promoted by the public sector.*²³⁶⁷

*The greatest divergences of opinion that emerged during the Dialogue were in relation to how we can optimise the contribution of the livestock sector in the future to a sustainable and equitable food system providing safe, healthy and nutritious food to consumers. At the system level, livestock production was discussed in terms of sustainability goals and intensification and how to achieve a balance. Some participants felt intensification should be limited until we can determine whether it can be done within sustainability boundaries, while others suggested it should be balanced with farm income. Culling among herds to improve efficiencies was another divisive issue that emerged. There were also differences of opinion on the use of genetics as a tool.*²³⁶⁸

*Within livestock systems, there was debate regarding ruminant and non-ruminant animal production. Participants had differing views as to whether non-ruminant production makes sense in the future in Ireland if we are to optimise our land use. Some felt that the land-use ratio should be employed more when evaluating ruminant production in order to assess whether livestock systems contribute to food-feed competition, as well as over-dependence on feed imports.*²³⁶⁹

Food waste: Packaging: This was an area of contention because packaging makes food last longer but also adds to waste in landfills so, participants suggested consumer groups/NGOs study which packages expand the life span of a product (and can be re-used) and which can be phased out. Participants also suggested considering a tax on food packaging that reflects the product's true cost based on its environmental footprint. A 'packaging tax' (that can partly subsidize municipal waste disposal services) might also encourage consumers to switch away from processed foods to a healthier fresh diet.

²³⁶⁵ 93:64 p 15 in 227_May_18_21_Tarawali S

²³⁶⁶ 98:35 p 11 in 282_May_18_21_Romeo R

²³⁶⁷ 98:40 p 11 in 282_May_18_21_Romeo R

²³⁶⁸ 112:104 p 17 in 074_May_18_21_O'Mara_Teagasc

²³⁶⁹ 112:105 p 17 in 074_May_18_21_O'Mara_Teagasc

A scientist in the group suggested continuing to promote innovation/research²³⁷⁰ on products designed to increase life span of produce without packaging.

A participant suggested that a disruptive advocacy (for example non-importation of certain foods) should apply to foods that are produced in or available in African countries. Advocating for this could serve to encourage the consumption of local foods. Overall, the future for Africa is to depend on itself for food supply. Another participant fervently disagreed, indicating that disruptive advocacy is not the solution, but what needs to be advocated for is for countries to link national agricultural transformation, trade policies, food and nutrition security policies to the nutritional needs of the population.²³⁷¹

The trade-offs regarding the role celebrities could play to help promote the Food System. There was a suggestion for celebrities to use their influence to promote food system transformation. However, some participants felt involving celebrities may only lead to popularization which is not necessarily transformation.²³⁷²

How to encourage the benefits of local, small scale farming, while others raised the risks from localised food systems.²³⁷³

a divergence emerged concerning the use of seaweed for edible and non-edible purposes. Out of a group of over 25 people, only 3-4 individuals thought there was potential to use it for non-edible purposes. There were also a few strong comments on the fact that seaweed should not be used for packaging etc. There were also discussions on using non-edible seaweeds or by-products of edible seaweeds for packaging, textiles, etc.²³⁷⁴

Seaweed markets: Some want to move into bioplastics and biofertilizers which is mass harvesting/ farming and low value whereas others feel more niche markets like food and cosmetics are better as they are low biomass and high value industries.²³⁷⁵

*Conflict between conservation and livelihood, wherein seaweed farms are touted as good for fisher livelihoods, however some seaweed farms that grow an invasive species of seaweed (*kappaphycus alvarezii*) are harmful for the local ecology.²³⁷⁶*

An important discovery was that although there was a lot of interest in seaweed from the audience that attended the conference, members from the “ Sustainable Seaweed Innovation “ breakout room admitted to having no tactile or physical or visual connection with seaweed to explore applications. They expressed an interest in knowing more and there was also an apprehension in terms of not knowing what seaweeds are edible or not. There is clearly a need to explore the various ways in which people

²³⁷⁰ 163:157 p 20 in 300_May_27_21_Alesso-Pommeret

²³⁷¹ 177:76 p 14 in 335_May_26_21_Laar_Multi

²³⁷² 177:79 p 14 in 335_May_26_21_Laar_Multi

²³⁷³ 245:28 p 12 in 481_June_23_21_Global Counsel

²³⁷⁴ 264:97 p 14 in 500_June_26_21_Edible Issues

²³⁷⁵ 264:98 p 14 in 500_June_26_21_Edible Issues

²³⁷⁶ 264:99 p 14 in 500_June_26_21_Edible Issues

*perceive seaweeds and how they can be further brought to engage more actively with the seaweed value chain.*²³⁷⁷

*One example was in the discussion on access to nutritious food. In Bangladesh, the FGD identified the development of biofortified staple crops as a priority, whereas in Odisha, the FGD advocated for the scaling of nutrient-rich and resilient traditional crops. The FGD in Nepal, on the other hand, focused on local food production as a means of improving nutrition while addressing rural reinvigoration.*²³⁷⁸

*Lack of government support for smallholder farmers, and who produce the majority of the food consumed globally was also a matter of concern and a point of divergence. Especially because some highlighted that current food policies affecting both the global and local markets overwhelmingly tend to support large agri-food companies in detriment of smallholder farmers.*²³⁷⁹

*Technology vs traditional farming There were debates over whether the use of technology will truly change productivity. Traditional farming, or its more recent agroecology methods have argued that this is a way forward - reducing the reliance on pesticides etc to build a production system that includes diversity, human and social values. However, others have argued that traditional farming methods will not be able to increase productivity.*²³⁸⁰

*Monocropping and Multi-cropping Research, Academia and the Department of Extension of the state and Central Governments suggest farmers do intensive monocropping of millets, oilseeds and pulses for better yields and economic returns. Mono cropping has brought better returns, by compromising nutrition. A millet farmer has to purchase pulses from fellow farmers or the local shops. In multiple cropping systems, dryland farmers sow pulses, oilseed and millets and use them for family consumption and sell the marketable surplus. Multi-cropping system not only helps in maintaining and improving the nutritional status of dryland farmers but also makes the dryland food systems, capable of supporting more people.*²³⁸¹

*Crop breeding and Nutrition breeding Agricultural research institutes across the globe have been breeding crop varieties for high yield, pest and disease resistance and climate resilience. Increased crop production alone cannot ensure better income and health of dryland farmers.*²³⁸²

Roles and responsibilities

Some members were in disagreement over which sectors hold the most responsibility to enact and drive change towards sustainability - some believe that consumers and the

²³⁷⁷ 264:100 p 14 in 500_June_26_21_Edible Issues

²³⁷⁸ 313:33 p 11 in 549_July_14_21_Meah N

²³⁷⁹ 317:11 p 12 in 554_July_15_21_Lopez DE

²³⁸⁰ 319:14 p 11 in 556_July_15_21_Von Goh_GenTan

²³⁸¹ 321:26 p 17 in 558_July_16_21_RICH_ICRISAT

²³⁸² 321:28 p 17 in 558_July_16_21_RICH_ICRISAT

*general public are responsible, while others (particularly those in the research and industry space) felt that government bodies and policymakers have the most power. This divergence is a clear reflection of uncertainty around sector roles within the industry and is common across many other food sectors.*²³⁸³

*There were few areas of real divergence as all participants recognised in all cases the need for multiple solutions that encompass all stakeholders viewpoints. Some points of slight divergence occurred around: - Whether the phasing-out of certain practices needs to be driven by government or whether it will happen organically through replacement with improved practices.*²³⁸⁴

*People varied on the pace of change they were calling for and the methods of shifting food systems. Some advocated for all public institutions switching to plant-based as the default. Others wanted to see this happen in private sector as well. And still others felt more education was needed to aid individuals in voluntarily making the shift themselves. Some wanted a more active role of government to provide taxation and incentives, while others felt the demand side and market place might play a more substantial role in helping society to shift to more low carbon, higher nutrient foods.*²³⁸⁵

*But also... who has the right to talk about (food) justice, or benefit from driving it? To what extent should businesses play a role in delivering food equity and justice or in supporting vulnerable people for example? How much should businesses benefit from others' ideas for improving access to healthy, sustainable diets (if at all), particularly when it is felt by some stakeholders that those businesses could be responsible in part for some of the challenges? This Dialogue surfaced divergence around different potential roles as well as the right to shape more equitable access to better diets.*²³⁸⁶

*...the members of the group expressed differences of opinion on the amount of coordination of the planforms, some believing that the coordination needs to originate from the Administration which ensures its sovereign organizational and monitoring role of the sector, whereas other participants favor giving responsibility to private stakeholders, first among these the producers and the representative agencies, the state playing a role as observer and supporter.*²³⁸⁷

Sustainability

*There were also two opposing opinions on sustainability goal setting. One participant expressed when a company sets a goal and does not meet it, there is the danger that the bar gets lower and lower, and nothing gets achieved. Another participant made the point that setting goals is important and it is okay if they are not perfectly achieved because when the ambitious goals are set the whole industry reacts.*²³⁸⁸

²³⁸³ 240:40 p 12 in 319_June_30_21_Fredriksson O

²³⁸⁴ 245:27 p 12 in 481_June_23_21_Global Counsel

²³⁸⁵ 257:19 p 12 in 493_June_23_21_Kevany_Van

²³⁸⁶ 259:23 p 11 in 495_June_23_21_Forum for the Future

²³⁸⁷ 338:28 p 10 in 392a_June_01_21_Sidibe_Remy_Eng

²³⁸⁸ 85:17 p 13 in 160_20_Apr_21_GSI

*There was some divergence of opinion as to sustainability and intensification and how to achieve a balance – whether we should hold intensification until we determine whether it can be done within sustainability boundaries and whether to balance with farm income.*²³⁸⁹

*The greatest divergences of opinion that emerged during the Dialogue were in relation to how we can optimise the contribution of the livestock sector in the future to a sustainable and equitable food system providing safe, healthy and nutritious food to consumers. At the system level, livestock production was discussed in terms of sustainability goals and intensification and how to achieve a balance. Some participants felt intensification should be limited until we can determine whether it can be done within sustainability boundaries, while others suggested it should be balanced with farm income.*²³⁹⁰

*One group diverged in opinions on whether or not there were clear benefits for organic aquaculture and whether or not sustainability has to include organic. Views ranged from there being a need for certified organic and regenerative aquaculture to handling this issue via integrated multi-trophic aquaculture that doesn't necessarily need to be harvested in the ocean nor organic. By the end of the discussion the group agreed that there are clear benefits to both, but whether or not seaweed's form of sustainability should take on one or the other was left for further discussion.*²³⁹¹

*Financial interests vs sustainability - sustainability but at what cost? 'If I can't make payroll I need to cut corners somewhere...'*²³⁹²

*Participants recognized the inherent link between environment and trade, and the importance of sustainable production and consumption, but differed on whether sustainability should be embedded into our trade ecosystem and what such an approach would entail given differing approaches and measurement and fear over trade barriers. Preference was noted for a balanced and integrated approach to sustainable agriculture that reflects the unique opportunities and challenges of Canadian agriculture.*²³⁹³

*The importance of shifting towards alternatives as a key part of a more sustainable food system was raised by some, while others noted that alternatives are ultra-processed and lack the nutritional value of animal-sourced foods, leading to a negative impact on people's health and nutritional outcomes. Alternatives are not necessarily more environmentally friendly – for example almonds have a very high-water cost. Dairy farming produces other benefits besides foods to regional communities which cannot be easily replicated by some alternatives.*²³⁹⁴

There was also a notable divergence of opinions around the role of eco-labels as a means to drive sustainable developments. While some members felt that third-party regulated eco-certifications could help to incentivise sustainable movements within the industry, a

²³⁸⁹ 112:51 p 10 in 074_May_18_21_O'Mara_Teagasc

²³⁹⁰ 112:104 p 17 in 074_May_18_21_O'Mara_Teagasc

²³⁹¹ 119:69 p 17 in 121_Apr_28_21_Doumeizel V

²³⁹² 147:17 p 9 in 239_May_27_21_Allen K

²³⁹³ 153:29 p 11 in 263_May_06_21_CCGA

²³⁹⁴ 156:66 p 13 in 275_May_13_21_Dornom H

*number of members felt that labels could unfairly exclude small-scale producers through financial barriers and that labels hold little merit to consumers if not thoroughly understood by buyers.*²³⁹⁵

*One area of divergence was noted when one producer of marine products which can be grown in a small pond near to the home was asked about the sustainability of such a project, given the importance of maintaining the integrity of an eco system. While discussing the case shared by Bor Shang, one participant asked about the food source for animals in aquaculture. He was concerned about how foods for shrimps were produced as well as the way they enter the aquaculture system. Two representatives from Bor Shang responded to this concern, respectively. However, the stakeholders will keep thinking and communicating about whether the choices for food materials and food production in aquaculture are sustainable in terms of the overall food system.*²³⁹⁶

*There was discussion on the ability to live sustainably with the ocean while extracting resources from it, especially for the local people.*²³⁹⁷

*Organic agriculture was understood by some as a benchmark of sustainability and a way to ensure more nutritious food, being contested by others for understanding that it is only a benchmark for certification that may eventually allow destructive practices for nature, namely, for biodiversity (does not protect the soil, uses agrochemicals, etc.) and that there is no clear scientific evidence that biological products have a higher nutritional content.*²³⁹⁸

*Some participants pointed to reducing meat consumption as one of the most effective measures to tackling imported deforestation, given that a large part of this deforestation is associated with the conversion of areas for pastures or fodder crops. However, others disagreed with a demonizing view of the consumption of animal-based foods, arguing that the consumption of this type of food is essential if we want to have a balanced diet and that a set of other solutions could be adopted to reduce the environmental impacts of animal husbandry such as promoting responsible soy production and improving third-country import criteria.*²³⁹⁹

One of our 'implementation' groups highlighted the potential of plant-based meat alternatives (analogues) to reduce reliance on animal-sourced foods, with continual innovation and research pointing to significant health and environmental sustainability benefits. However, a participant from another group raised concerns that some of these products may still have a significant carbon footprint and lack a good nutrition profile. Work will be required to ensure transparency in this space to allow consumers to make informed choices. Despite some variance of views on this rapidly-evolving sector, there

²³⁹⁵ 240:41 p 12 in 319_June_30_21_Fredriksson O

²³⁹⁶ 243:8 p 8 in 479_June_20_21_Yang_Shanna

²³⁹⁷ 267:29 p 9 in 503_June_29_21_Schnyder_Boura

²³⁹⁸ 301:63 p 10 in 537_July_08_21_ANP_WWF

²³⁹⁹ 301:64 p 10 in 537_July_08_21_ANP_WWF

*was unanimity that the scientific consensus supports dietary patterns that emphasise whole and minimally-processed plant foods.*²⁴⁰⁰

*There were clear differences in perspectives on the complexity of climate change and its impacts on the agri-food system between the on-line public forum and the individual FGDs. From a top-down policy perspective represented by the on-line public forum, addressing climate change is viewed as a complex system with agriculture being both casualty and a driver of climate change. This viewpoint was less prominent in the FGDs, where local discourse on climate resilience was mostly centred on the impact of climatic hazards on the agro ecological landscapes and how this leads to significant losses in productivity and income.*²⁴⁰¹

*The definition of "sustainable agriculture" is still under debate. Stakeholders from various groups hold diverse views as to what qualify as "sustainable agriculture". Some consumer group only consider organic or chemical-free agriculture as 'sustainable', whereas others believe responsible and effective use of chemical input is acceptable as sustainable. More science-based public discussion on such topics will be helpful.*²⁴⁰²

Systems

*There are also many misconceptions and flawed perceptions affecting many of the stakeholder institutions and groups, which can lead to problems with trust between elements of the food system and wider society. These include the perceived ability and willingness of some institutions, particularly local and national governments, to change policy and practice, sometimes leading to suspicions of "greenwash" and insincerity in their desire to change. Similarly, many farmers feel unfairly attacked or blamed for causing environmental and health problems. The need for a discussion about sustainable livestock farming is recognized, but sensitivity is urged.*²⁴⁰³

*The main divergence was in relation to one topic: Indigenous Peoples food systems cannot be treated or understood as traditional food systems because Indigenous Peoples have a holistic and unique relationship with different elements of nature and food systems that are not present in the same way with traditional food systems. Moreover, in indigenous food systems, food is not a commodity and it can be either cultivated or gathered. Indigenous Peoples have learned to relate to their environments in such a complex way that food cannot be separated from of their livelihoods.*²⁴⁰⁴

Also, it was highlighted that tackling food-related issues cannot be done the same way as addressing climate change, as many would like to do, because food systems are more

²⁴⁰⁰ 312:25 p 11 in 548_July_14_21_Genoni A

²⁴⁰¹ 313:15 p 7 in 549_July_14_21_Meah N

²⁴⁰² 329:8 p 10 in 566_July_21_21_Dej-Udom N

²⁴⁰³ 20:37 p 11 in 116_Apr_21_21_Hein JR

²⁴⁰⁴ 21:6 p 8 in 180_Apr_7_21_GHIPFS

complex than what we might think (ex. How often we think we consume something sustainable and when deepening more into it we discover it is not sustainable at all?).²⁴⁰⁵

Participants highlighted the different development of landscape partnerships and contextual needs based on countries i.e. comparing a “crowded” country of Malawi vs other more expansive countries like Canada that have significantly more territory and how integrated landscape management needs are significantly different in each context.²⁴⁰⁶

Decisions about nutrition happen in complex environments at the household and individual level; we should not assume that fixing finance is going to solve that.²⁴⁰⁷

The need for simplifying the language around food systems has been highlighted. However, at the same time it has been emphasized that there is a danger in not recognizing the complexity of the issue. The challenge remains in simplifying the language without simplifying the issue.²⁴⁰⁸

The largest and most important point of divergence was between making the existing food system structure - which relies on agro-corporations, major farms, heavy reliance on animal proteins, and processed foods that require huge amounts of plastics, shipping, refrigeration, and preservatives - more just, accessible, and equitable versus relying more on localized modes of food production that put finance and development towards smaller farmers, Indigenous practices, and reclamation and rewilding of lands.²⁴⁰⁹

Participants acknowledged that there are many areas where views are divergent, partly related to the diversity of livestock systems going forward – contrasting for example, pastoralists, smallholders, intensive farming as well as divergence on the consumption of livestock-derived foods.²⁴¹⁰

An area of divergence is an issue where participants held diverse views, different opinions and/or opposing positions. For example, this might be related to a) strengths and vulnerabilities within food systems, b) areas that need further exploration, c) practices that are needed for food system sustainability, d) stakeholders whose interests should be prioritized.²⁴¹¹

It became apparent that some attendees believe there needs to be a move towards a less centralized and more localized food system, which focusses on a shift towards more local produce and short distribution chains or channels. However, other attendees believed the opposite, and felt that there needed to be more connectivity across all aspects of the farm to fork chain to ensure waste is minimized and there is a better oversight of overall food

²⁴⁰⁵ 22:26 p 11 in 191_Apr_16_21_Donati L

²⁴⁰⁶ 37:19 p 9 in 097_Mar_30_21_EcoAgriculture Partners

²⁴⁰⁷ 63:56 p 13 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁴⁰⁸ 65:23 p 11 in 050_Feb_23_21_World Vision Ireland

²⁴⁰⁹ 91:25 p 9 in 217_May_6_21_Schwartz A

²⁴¹⁰ 93:64 p 15 in 227_May_18_21_Tarawali S

²⁴¹¹ 187:16 p 8 in 345_May_31_21_Buzingo J

*distribution. Whilst this issue was raised in the dialogue, it did not form part of the major scope for discussion, and as such was not explored further.*²⁴¹²

*Food system change vs broader economic system (and affordability vs incomes): To what extent can we tackle the issues within the food system, when so many of the issues stem from our wider economic system? How far can innovation go to be transformative when operating within the constraints of the dominant economic model? For example, many food workers' incomes are too low to afford healthy, sustainable diets. The corresponding solutions could be more about the wages that food businesses pay, than about the affordability of their products.*²⁴¹³

*to better facilitate food systems resilience to fight food crises - or if fundamental aspects like improved governance would count more towards that end. Food systems resilience is a relatively new approach, that builds on experience of resilience and disaster risk reduction approaches. While a (localized) food systems resilience lens inherently brings the cross-sectoral perspective needed for humanitarian-development-peace interventions, it depoliticizes the issue of crisis since external interventions have limited influence over governance conditions.*²⁴¹⁴

*The other school of thought was that it is possible to transform agriculture system to be completely chemical free and given the perilous state we are in with the planetary boundaries being crossed (especially due to the chemical based monoculture farming practices), priority should be towards food safety and restoring of ecosystems, since it is clear that the chemical systems are increasingly becoming unsustainable. The need to be bold and innovative in tackling this issue was highlighted.*²⁴¹⁵

*The dialogue surfaced different perspectives on the scale at which action should be prioritized. Some participants pointed to the value in large scale responses for broad based universal (not means tested) social protection policies, noting that mobilisation of robust safety nets must by design be large. Others called for greater attention to local and mid-level government responses which play a key role in implementation. Overall, participants supported the need to work at multiple scales.*²⁴¹⁶

Technology

*The one noteworthy area of divergence was softened by a shared view of how it should be overcome. Farmers too often are blamed for environmental degradation, yet they are the vanguard of adapting the holistic "circle of life" to modern agriculture.*²⁴¹⁷

*3) How to encourage farmers to engage with data without the risk of data fatigue.*²⁴¹⁸

²⁴¹² 253:19 p 11 in 489_June_22_21_Rare China Centre_Multi

²⁴¹³ 259:21 p 11 in 495_June_23_21_Forum for the Future

²⁴¹⁴ 278:79 p 15 in 514_July_01_21_Bolling_Multi

²⁴¹⁵ 281:12 p 9 in 517_July_03_21_Perera A

²⁴¹⁶ 302:31 p 12 in 538_July_09_21_IDS_Multi

²⁴¹⁷ 8:35 p 13 in 169_Apr_6_21_Shea E

²⁴¹⁸ 11:11 p 9 in 184_Apr_14_21_Genever_Multi

*How to address the potential reality where enhanced technology could displace the human workforce and how can we mitigate the loss of employment and loss of connection to food production from the land.*²⁴¹⁹

*The tension between highly technological food systems vs. going back to nature and the multiple benefits in terms of health and environmental of diversification.*²⁴²⁰

*The tension between the efficiency of highly technological food systems vs. going back to nature and the multiple benefits in terms of health and environmental of diversification.*²⁴²¹

*Technology is critical to reducing costs, but adoption by businesses and by consumer base is challenging need to create proof points around adoption/test hybrid solutions that respond to all levels of technological competency.*²⁴²²

*Finally, there was some debate on what kind of legislation for due diligence processes is relevant and how this system could be built so that it would provide comparable and verifiable information without becoming too expensive. There was a fear that a transparent and verified system would become too pricey and the costs and extra work would be carried by smallholders.*²⁴²³

*Increasing access to technology: There is uncertainty whether the introduction of technology is compatible with maintaining traditional values and cultures, and whether this is feasible in rural mountain areas where all young people have left. Traditional knowledge is not static and not necessarily manifesting the same way in young people, who are intermittently migrating to cities and collecting other types of knowledge. Technologies and infrastructural developments may also not be coherent with local needs. For example, afforestation in mountains with drones spreading one species could be in conflict with local biodiversity needs.*²⁴²⁴

*Divergences of opinion emerged as to the use of genetics as a tool and culling among herds to improve efficiencies.*²⁴²⁵

*Finally, social media emerged as a major topic for debate in the Discussion Groups following the keynote presentation by Prof. Luke O'Neill on communicating science and engaging the public. Some participants felt that scientists don't engage enough in social media and have an important role to play in dispelling misinformation and providing clear, factual messages underpinned by scientific evidence. However, others felt that social media does not provide a forum for balanced debate and is often used to discredit or undermine scientific consensus.*²⁴²⁶

²⁴¹⁹ 18:31 p 13 in 114_Apr_19_21_Maurer H_Roskrige N

²⁴²⁰ 32:7 p 11 in 082_Mar_15_21_Yoovatana M

²⁴²¹ 60:26 p 9 in 021_Jan_27_21_Donati L

²⁴²² 63:60 p 13 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁴²³ 79:41 p 12 in 118_Apr_21_21_Huvio T

²⁴²⁴ 98:36 p 11 in 282_May_18_21_Romeo R

²⁴²⁵ 112:75 p 13 in 074_May_18_21_O'Mara_Teagasc

²⁴²⁶ 112:107 p 17 in 074_May_18_21_O'Mara_Teagasc

*Digitalisation - there was divergence on the issue of digitalisation. While some participants welcomed the opportunities for digital technology to create more efficient food systems, other participants considered that digitalisation could widen the inequality gap.*²⁴²⁷

*One area of divergence that emerged during the Dialogue was the discussion of modern technology within food systems.*²⁴²⁸

*Participants also differed in opinion on the utility and efficacy of the media and technology in disseminating information pertaining to the double-burden of malnutrition. While the media and technology in general were suggested as effective advocacy tools, they were also recognized as exclusionary to the most vulnerable and marginalized. Thus, many participants felt that alternative, and context-appropriate platforms should be pursued.*²⁴²⁹

*The tension between the proponents of technology such as artificial intelligence (AI) by farmers and the opponents. The proponents advanced the view that technology will help with data capturing, e.g., AI could link farmers on the ground to food producers and buyers to help them know what is selling and what is not. But the opposing view intimated the use of AI could be very bad especially if not used properly – especially when it is not clear who/what/when/how data should or could be used. Would need to have that information upfront.*²⁴³⁰

*The issue of the young generations and aging farmers surfaced during the workshop. Others are of the view that precision farming will entice the young generations to go into farming. Others reacted that precision agriculture must also provide opportunities for aging farmers. The latter contend that technology is not only for the young. Older generations have experience and can contribute. There must be no age divide or differential insofar as precision agriculture is concerned.*²⁴³¹

*The purported cheaper genome editing tools may not be true after all. The accessibility of genome editing tools especially CRISPR/Cas system may be easy for research purposes but commercialization of products developed may be restricted and entail exorbitant licensing fees. It was therefore recommended to explore other tools such as TALENS that require simple and affordable licensing terms if any.*²⁴³²

*Gene editing is not well understood as it is confused with GMO technology. Africa needs sensitization of these technologies.*²⁴³³

²⁴²⁷ 131:31 p 11 in 190_Apr_16_21_Cullen N

²⁴²⁸ 143:51 p 15 in 231_May_19_21_MCD

²⁴²⁹ 167:72 p 14 in 311_June_14_21_NCD Child

²⁴³⁰ 177:77 p 14 in 335_May_26_21_Laar_Multi

²⁴³¹ 181:41 p 10 in 339_May_27_21_Sayoc_Multi

²⁴³² 181:43 p 10 in 339_May_27_21_Sayoc_Multi

²⁴³³ 191:43 p 9 in 349_June_02_21_Ekwamu A

*Everyone agreed that the use of technology could to a large degree avoid the need for chemical inputs. However, mainstreaming such technologies, where there is large digital divide and access to finance was seen to be a challenge that needed to be overcome.*²⁴³⁴

*The prevalence of small producers in the informal economy is a big challenge. It is important to recognize the role and potential of the informal sector as a key player in local food systems. There are different perspectives on the formalization of the sector in a context such as COVID where informality is a vulnerability factor but, in some cases, can be a resilience factor for some of the producers. Participants raised questions about whether informal systems were more nimble than formal markets in times of crisis, and whether they might offer more environmentally sustainable approaches.*²⁴³⁵

Terminology

*Participation in food systems is important for universities but it can be complicated. Sometimes, there is disconnect in curriculum vs research. It is important for universities to have a connected approach between food systems and curricula.*²⁴³⁶

*Subtle disagreement was observed on the issues of characterization of the forgotten food. A school of thoughts felt that since these commodities are still used in the rural settings, they should not fall into the category. Apparently, what constitute an underutilized commodity will form the first research action to be undertaking by the community of practice on underutilized food commodities.*²⁴³⁷

*First, the label “Forgotten Foods” was largely criticized by majority as untruthful and not representing the state of affairs. Questions like who forgot the food? And forgotten in what dimension. It was opined that label like “Underutilized food commodities” will be appealing since the commodities in question are still used in certain climes, although not optimally. The neglect is in terms of investment into research for improvement and product development.*²⁴³⁸

*How to define scope of food resilience analysis: how to balance level of detail needed at local level with larger national and international dynamics, and how to let local stakeholders actively play a role in this analysis and feel capacitated to contribute...*²⁴³⁹

There was broad agreement about the challenges and opportunities that exist, despite the diversity of participants. In one discussion group, there was some disagreement about what exactly ‘nutrition science’ means, and what having ‘nutrition principles’ underpinning the food systems transformation even means. For some, they felt that nutrition principles already encompassed wider social/environmental concerns, in addition to health. Others felt that most people did not have a good understanding of the

²⁴³⁴ 281:14 p 9 in 517_July_03_21_Perera A

²⁴³⁵ 302:30 p 12 in 538_July_09_21_IDS_Multi

²⁴³⁶ 157:85 p 12 in 278_May_18_21_Gregorio B

²⁴³⁷ 159:32 p 8 in 287_May 20_21_Akinbamijo_Y

²⁴³⁸ 159:33 p 8 in 287_May 20_21_Akinbamijo_Y

²⁴³⁹ 278:58 p 12 in 514_July_01_21_Bolling_Multi

*functions of the food system and the role of power, and that current principles underpinning the UN FSS did not sufficiently encompass these elements.*²⁴⁴⁰

Trade

*Reliance on global trade often means less investment in local dairy industries which has a negative impact on regional communities and economic resilience. This reliance increases exposure to system shocks, such as COVID19. However, others noted that global trade allowed countries that were better positioned to produce food to help support the food security of people around the globe. Global trade helps shore up gaps to combat hunger and malnutrition.*²⁴⁴¹

Traditions

*The role of farm animals and diets brought up diverse views. Whereas one group promoted a plant-based diet, another group brought up the varying roles of farm animals in different countries. Whereas in developed countries, farm animals are often seen as meat (beef, pork, chicken) or providers of food such as milk or eggs, in Eastern Africa cattle are seen more as pets or financial safety nets. Therefore, reducing cattle in cultures and countries where they represent more than meat, may be difficult. Nevertheless, even if cattle and other farm animals play different roles in different cultures, it would be good to seek sustainable and environmentally friendly solutions to keeping cattle and other farm animals. Practical solutions could be formed when exchanging ideas with the farmers on the grassroot level in developing countries.*²⁴⁴²

*The discussions around culturally relevant meals for school children need to be considered alongside the desire for more localized food systems which – considering regionality and seasonality – may not be able to support diversity and selection of foods.*²⁴⁴³

*Some participants identified a potential area of divergence between "valuing small-scale fishery resources in terms of food/nutrition provisioning abilities" and the call to "center the livelihood needs of small-scale fishers." There may be contexts where these two goals are at odds with each other - where valuing fishery resources in terms of F&N provisioning may be less lucrative for the small-scale fishers themselves. Relatedly, we must be careful to respect and understand the cultures and preferences of these small-scale fishing communities in terms of what they eat and what they do with their incomes. We can't force people to eat the fish they catch just because we think it will be good for them.*²⁴⁴⁴

²⁴⁴⁰ 280:88 p 14 in 516_July-01_21_Anastasiou K

²⁴⁴¹ 156:67 p 13 in 275_May_13_21_Dornom H

²⁴⁴² 79:39 p 12 in 118_Apr_21_21_Huvio T

²⁴⁴³ 84:36 p 12 in 153_Apr_28_21_GCNEF_Multi

²⁴⁴⁴ 155:43 p 10 in 272_May_12_21_Battista W

*Traditional food culture is not very compatible with millennial and digital parents and employed women, leading to a loss of knowledge about traditional foods and how to prepare them, and an increase in the demand for convenience foods.*²⁴⁴⁵

*There is aspirational food consumption towards foods that can be classified as unhealthy, due to modernization, urbanization, economic development, and market globalization. To be effective, therefore, nutrition education must better understand attitudes, beliefs, preferences, cultural factors, market and product factors, and economic factors. This understanding should then be harnessed to inspire, motivate, and enable people to change behaviour, using interdisciplinary methods across the fields of health education, psychology, and sociology, among other fields.*²⁴⁴⁶

*3. Food is culture and connection, this must be highlighted in the work going forward. The narrative needs challenging, there are many ideas of what is traditionally eaten and where we should go with the food system.*²⁴⁴⁷

*IP food and food systems are safe, nutritious and sustainable vs. Indigenous food systems are backward, are against resource conservation and negligible in the context of mass production/ commercial scale therefore promotion of hybrid/HYVs, fast growing agricultural stocks and technology closely related to heavy use of chemical inputs for large-scale production which is considered the 'best option' to address hunger ...*²⁴⁴⁸

*Non-western values and behaviors were highlighted as 'disruptive' by several participants especially when discussing people's relation to nature and food. Not all value the land or nature in the same way. For instance, one speaker started their presentation by giving thanks to their ancestors and to the land for everything that exists but this was not necessarily shared by others. Not only in Western context, in urban settings, and in particular in densely populated cities people has limited opportunities to encounter 'nature'. As discussed in the Dialogue, this has several implications, for one city dwellers often ignore the most basic information about how food is produced. As noted by various participants, city children do not know where milk, eggs, meat, fish or fruit comes from which results in children (and later on in adults) being unable to empathize, care or respect those who producing it— i.e., farmers and nature.*²⁴⁴⁹

Trust

*Public understanding and trust of food systems is key to sustainable choices, as well as to attracting and retaining the talent needed to secure the future of the agricultural and food supply.*²⁴⁵⁰

²⁴⁴⁵ 193:66 p 12 in 351_June_03_21_CIF_Multi

²⁴⁴⁶ 193:67 p 12 in 351_June_03_21_CIF_Multi

²⁴⁴⁷ 211:5 p 7 in 370_June_01_21_WWF Sweden

²⁴⁴⁸ 221:27 p 12 in 382_June_08_21_AIPP_Multi

²⁴⁴⁹ 317:10 p 12 in 554_July_15_21_Lopez DE

²⁴⁵⁰ 4:35 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

*Establish trust and traceability relationships.*²⁴⁵¹

*Indeed, transparency and trust in the food chain should be improved and supported by normative work in a more coherent way.*²⁴⁵²

*Regulatory measures on marketing in the agri-food and fisheries sectors. Improve transparency to foster the consumer trust needed for MedD adoption.*²⁴⁵³

*Although there was an emerging need to establish practices that can enhance trust between producers and consumers in the food systems, globally.*²⁴⁵⁴

*We need transparency and trust, accompanied by a change in regulations in a way that waste and losses are considered either as expensive or as a resource to close a loop.*²⁴⁵⁵

*The complexity of the food systems must be acknowledged: o by taking a stepwise, cross-sectoral approach, to avoid resistance that a “big bang” approach could trigger; allow working in a complementary fashion facilitate (re)building trust in the food systems; by aligning on a definition of sustainability, as we must be clear on where we are heading, if we are to develop successful solutions; the existing divisions could lead to further confusion & loss of trust among food systems actors.*²⁴⁵⁶

*Second, foster trust and quality guarantee given that better information availability from producers, enables wholesale markets to become places of information collection and ensure quality and safety throughout the food supply chain.*²⁴⁵⁷

*The last part of the discussion focused on how COVID-19 boosted corporate partnerships and the fact that this challenging period was an accelerator for corporate partnerships and the collaboration between the private sector and the Food Banks in Europe .How to keep this relationship over time for a post-Covid Europe? Both private actors and Food Banks must invest on trust, shared goals, legal agreements, a clear and frank communication, a more efficient coordination, long-term relations, raising local awareness, engage volunteers from the Companies, rely on...*²⁴⁵⁸

*Having trustworthy, accessible and robust processes for making decisions...*²⁴⁵⁹

*Trust is key and power dynamics matter...*²⁴⁶⁰

Trust in science has increased (e.g. SFI Science in Ireland Barometer 2020, IPSOS Veracity Index 2020) and we need to include more scientists in the communication, which

²⁴⁵¹ 16:27 p 8 in 251_Jan_25_21_World Vegetable Center

²⁴⁵² 22:5 p 7 in 191_Apr_16_21_Donati L

²⁴⁵³ 23:15 p 11 in 205_Apr_27_21_CIHEAM_Multi

²⁴⁵⁴ 24:10 p 11 in 323_Apr_28_21_Giuliodori A

²⁴⁵⁵ 60:36 p 7 in 021_Jan_27_21_Donati L

²⁴⁵⁶ 66:4 p 6 in 052_Feb_25_21_EUFIC

²⁴⁵⁷ 78:18 p 9 in 110_Apr_14_21_Carrara E_Multi

²⁴⁵⁸ 81:24 p 8 in 145_May_6_21_Vandenschrik J_Multi

²⁴⁵⁹ 107:10 p 7 in 047_Feb_19_21_O'Doherty M

²⁴⁶⁰ 107:12 p 7 in 047_Feb_19_21_O'Doherty M

*should be underpinned by training for scientists in public communication. They should also be facilitated to allocate time to communication and receive rewards/recognition for such work.*²⁴⁶¹

*Making evidence more readily available, including solid data sources and fact-checking capabilities, was also deemed critical...*²⁴⁶²

*The potential impact of such actions would be to enhance trust in science, which has already increased during the pandemic. There was some divergence in relation to trust in science on food, however, with some perceptions that when it comes to food, other factors are at play and consumers tend to rely on other sources of information, that may not be underpinned by scientific evidence.*²⁴⁶³

*In summary, it was agreed that we need to understand the consumer better and involve the consumer voice more in the debate. We need to recognise the many different 'publics' with different points of view and listen to them.*²⁴⁶⁴

*Recognize the importance of establishing platforms with an inclusive atmosphere and a multidisciplinary approach in pre-competitive spaces such as innovation hubs. Stakeholders, such as farmers, students, government representatives, NGOs, and companies, can be brought in early to see the development and potential of innovations which in turn works to build trust among them.*²⁴⁶⁵

*Also, there is a need to harmonize the risk approval process at national, regional and even global levels in order to speed up dissemination of information and not reinvent the regulatory approval wheel each time. Different regulatory bodies must build a level of trust with each other.*²⁴⁶⁶

*There is a lack of trust in new technology - we do not have enough examples (e.g biogas) of such technology working well. Therefore, the needs to be more demonstrations to show people the technology works that would ensure more buy-in and less sceptism amongst policy makers.*²⁴⁶⁷

*Smuggling of staple crops and misappropriation needs to be tackled. Rampant and unchecked smuggling of agricultural produce out of Pakistan threatens food security in the country.*²⁴⁶⁸

Open communication on the politics of how the implications would be for different countries - Distribution of power and capital in our food systems: ensure a fair allocation at all stages of the food chain and include everyone in decision making - from seed

²⁴⁶¹ 112:126 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁴⁶² 112:127 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁴⁶³ 112:128 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁴⁶⁴ 112:130 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁴⁶⁵ 113:54 p 9 in 075_Mar_10_21_IFAN

²⁴⁶⁶ 113:55 p 10 in 075_Mar_10_21_IFAN

²⁴⁶⁷ 117:85 p 8 in 109_Apr_13_21_Jacobs-Mata I

²⁴⁶⁸ 127:92 p 12 in 159_Apr_21_21_Hafeez M

production to where we purchase our food - Scale up CSO actions to ensure accountability and transparency (watchdog role).²⁴⁶⁹

Improving trust in dairy by increasing transparency and acknowledging areas that need improvement.²⁴⁷⁰

Implementation – can be fostered by bringing in community members of trust...²⁴⁷¹

The group identified a number of challenges/tensions: • Some farmers are defensive • Many enterprises are limited by income • Technology scares some farmers • Farmers don't always trust processors.²⁴⁷²

Finally, it is necessary to reshape the chain with sustainability and justice at its core. Participants agreed that a just food system is needed and that it is essential to respect the local production, local crops, local types of animals, and to avoid homologation. Each country, each region has its own personality and the base of the system has to be transparency and trust.²⁴⁷³

There also seems to be a lack of trust by the public in the science. This could be due to the boundless information available via social channels or by the conflicting science they see governments and global institutions arguing over in public arenas.²⁴⁷⁴

CONSUMER INFORMATION Labelling cannot be the only solution and tool for conveying information to consumers. Among these, a large proportion are illiterate in terms of specific and technical descriptions. The intention to shift this burden back to consumers is a hazardous and unfair one. On the other hand, examples were raised on how to deliver a comprehensive scheme on which consumers can rely and compare different products.²⁴⁷⁵

Without communication, meaningful change to food systems cannot happen - farmers will not be empowered to make transformative changes based on their own circumstances. In this sense, people-based solutions are important.²⁴⁷⁶

Teaching and respecting rights of treaties, change the culture of priorities: Treaty Rights, histories and current arrangements need to be taught at all levels with Indigenous communities. There is a need for a broader understanding and knowledge of the Treaty Rights that Indigenous Peoples hold across the United States, Mexico, and Canada. The teaching and respecting of the treaties, can also be taught in combination with teaching/shifting cultural values towards respect, reciprocity, balance, harmony and relational values. Such teachings and values can be taught in schools, on up through

²⁴⁶⁹ 138:34 p 7 in 214_May_05_21_50by40

²⁴⁷⁰ 156:8 p 11 in 275_May_13_21_Dornom H

²⁴⁷¹ 163:4 p 6 in 300_May_27_21_Alesso_Pommeret

²⁴⁷² 170:2 p 12 in 328_May_19_21_Lalor_Teagasc

²⁴⁷³ 171:4 p 10 in 329_May_19_21_CI_WFO

²⁴⁷⁴ 175:5 p 13 in 333_May_25_21_GMA_Multi

²⁴⁷⁵ 179:2 p 7 in 337_May_26_21_CI_WFO

²⁴⁷⁶ 192:3 p 6 in 350_June_02_21_Farm Radio Int

*government municipalities, private sector, civil society and conservation organizations, development sector etc.*²⁴⁷⁷

*Fishermen and fisherwomen are facing violent attacks when exercising their treaty rights: Some of our brothers and sisters who fish and catch lobster, especially along the Atlantic coast of Canada, are facing violent attacks and targeted destruction of their fishing equipment and warehouses for exercising our treaty rights. They are being attacked by non-Indigenous fishers who are not able to fish at the same times as Indigenous fishers due to the differences and rights stated in our treaties. This conflict has caused great danger and destruction for the Indigenous fishers of the Atlantic coast of Canada.*²⁴⁷⁸

*Sources of trust around food and the sources of food safety information most trusted - often being heavily weighted towards family and friends, closely followed by food labels, then medical professionals, celebrities and religious leaders and correspondingly, low(er) trust in food safety authorities.*²⁴⁷⁹

*There is a lack of public trust in authorities around food safety, with many people relying on friends, family, celebrities and religious bodies for their knowledge of safe food.*²⁴⁸⁰

*Ensuring that the private sector is encouraged – or required – to develop their food labelling practices and transparency around the source of food and potential risks associated therein.*²⁴⁸¹

*Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030 2. Ensuring consumers across the world can identify the source of food they buy quickly and reliably 3. Ensuring food safety information will be trusted by consumers 4. Ensuring the food industry in all countries has sufficient skill.*²⁴⁸²

*Ensuring food safety information will be trusted by consumers Food fraud information is shared in varying channels, but food safety data is not shared in the same way. The private sector needs to do more to be transparent on food safety incidents, why recalls happen and their role in keeping consumers safe from harm. More can be done to involve the private sector in food safety policy-making to take account of production needs with mutual sharing of research and data.*²⁴⁸³

*On the demand side, it is crucial to build trust and confidence among consumers through scientific research on the values of these foods, ensuring hygiene and food safety, and highlighting the health and environmental benefits.*²⁴⁸⁴

²⁴⁷⁷ 197:18 p 8 in 356_Apr_08_21_Livingston_Way

²⁴⁷⁸ 197:20 p 11 in 356_Apr_08_21_Livingston_Way

²⁴⁷⁹ 207:20 p 5 in 366_May_27_21_Cumbers S

²⁴⁸⁰ 207:22 p 7 in 366_May_27_21_Cumbers S

²⁴⁸¹ 207:23 p 8 in 366_May_27_21_Cumbers S

²⁴⁸² 207:26 p 5 in 366_May_27_21_Cumbers S

²⁴⁸³ 207:32 p 11 in 366_May_27_21_Cumbers S

²⁴⁸⁴ 219:40 p 9 in 380_June_08_21_Shakya_Chettri

*On the other hand, the state of play reveals that the African food system is truly vulnerable to Covid -19 but nevertheless the traditional food system has been able to preserve itself. This is why it is important to build trust between the stakeholders involved in the local food system. Organic farming would be a suitable solution for producers for a sustainable food system.*²⁴⁸⁵

*The fisheries and aquaculture industries are underpinned by a significant degree of mistrust between policymakers and producers - a culmination of decades of disconnected decision making that neglected to award many producers direct input or voice at the decision making table. Because of this, policy for positive innovation has often misaligned with industry needs and legislation (or lack thereof) has caused bottlenecks to innovative progress. Greater linkages and dialogue between these two sectors is needed - communicators and interdisciplinary actors will be integral to bridging this gap.*²⁴⁸⁶

*...foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion...*²⁴⁸⁷

*Better food labelling.*²⁴⁸⁸

*Key to design and delivery of comprehensive policy responses should be the inclusion of local voices in decision making and strategy design as well as indigenous knowledge and food production practices. Civil society can be a link to understanding the needs of the most impacted (we define this to include women, youth, people with disabilities, displaced persons and those working in the informal sector), and there is a need to strengthen coordination between formal government responses and community level responses (through networks, community organizations, civil society). It was suggested that greater collaboration with civil society may help foster trust in government responses in contexts where trust is weak.*²⁴⁸⁹

Urban and rural divide

*For example, not everyone was convinced that the invisible wall dividing the urban and rural areas is actually real since, de facto, the city cannot live without its surrounding.*²⁴⁹⁰

Some participants felt more emphasis should be placed on urban farming. While this is an important focus, the emphasis on rural areas is important for at least two key reasons: (i) incidence of poverty and malnutrition predominate in rural areas; (ii) strengthening rural economies offer opportunities for stemming the migration from rural to urban spaces. Population increase in urban cities is expected to explode within the upcoming decades. This scenario – without appropriate structural economic transformation - lends itself to compounded development challenges. Additionally, while the emphasis is on

²⁴⁸⁵ 229:18 p 9 in 226a_May_17_21_Oteyami O_English

²⁴⁸⁶ 240:42 p 6 in 319_June_30_21_Fredriksson O

²⁴⁸⁷ 244:41 p 8 in 480_June_21_21_CiHEAM_Multi

²⁴⁸⁸ 285:3 p 11 in 521_July_05_21_BBSRC-UKRI

²⁴⁸⁹ 302:8 p 7 in 538_July_09_21_IDS_Multi

²⁴⁹⁰ 22:25 p 11 in 191_Apr_16_21_Donati L

*rural spaces, the proposed activities and expected impact do not preclude urban farming.*²⁴⁹¹

*Only supermarkets/hypermarkets of a certain size are obliged to donate food that would otherwise go to waste. The offer remains the same, and voluntary workers from social organizations like “Die Tafel” then need to collect the food. But the workload has become higher and higher, and volunteers cannot even collect and distribute the food to needy people in a reasonable time! Thus, the law makes it a bit too easy for supermarkets.*²⁴⁹²

Some participants argued that people living in cities value food less as they are not densely connected to food production. People from rural regions would value food more. This however rather holds true for people working in the agricultural sector.

*In city regions, people are frequently more educated and aware about the food waste issue. Also, people in rural or poorer regions are frequently not ready to pay more in order to support shorter supply chains. Instead of saving on food quantity, they might just save on food quality in their own household, rather than consuming cheap food that went through a long supply chain, including convenience products. As they can be stored longer, this might even lead to less food waste.*²⁴⁹³

*Non-western values and behaviors were highlighted as ‘disruptive’ by several participants especially when discussing people’s relation to nature and food. Not all value the land or nature in the same way. For instance, one speaker started their presentation by giving thanks to their ancestors and to the land for everything that exists but this was not necessarily shared by others. Not only in Western context, in urban settings, and in particular in densely populated cities people has limited opportunities to encounter ‘nature’. As discussed in the Dialogue, this has several implications, for one city dwellers often ignore the most basic information about how food is produced. As noted by various participants, city children do not know where milk, eggs, meat, fish or fruit comes from which results in children (and later on in adults) being unable to empathize, care or respect those who producing it— i.e., farmers and nature.*²⁴⁹⁴

Various scale of farms including local

Relatedly, a second area of divergence came from whether or not achieving “large farm” status is, itself, a sustainable strategy for national or global food systems. This speaks to global issues of climate and resource sustainability: if the only path to success in agriculture is achieving large-farm status, then by definition all small to medium sized farms will scale themselves towards these industrial-scale strategies. These strategies may not be sustainable for the future, given the climate and resource implications of industrial-scale agriculture. Thus, there is a systemic question of whether the aspirations of farmer success should be restricted to the modern large-scale agriculture practices. This has major implications for how countries allocate resources to small, medium, and

²⁴⁹¹ 225:6 p 8 in 386_June_09_21_Sutherland J

²⁴⁹² 311:26 p 11 in 547_July_14_21_Heilinger K

²⁴⁹³ 311:27 p 11 in 547_July_14_21_Heilinger K

²⁴⁹⁴ 317:10 p 12 in 554_July_15_21_Lopez DE

*large farms: if this aspiration is in fact unsustainable (which many of our participants argued it was), it becomes the responsibility of governments to transfer substantial monetary and capital resources to small- and mid-sized farms, such that these farms can achieve large-farm levels of monetary success without the unsustainable practices that come with it. This area of discussion seems to have the most global implication, though it remains a difficult one to define more concretely.*²⁴⁹⁵

*Boosting nature-positive large-scale food production: what is the approach to strengthen food systems for sustainable production and consumption standards? Generally, family farming has shown its tremendous capacity to adapt over the centuries despite wars, economic crises, famines and natural disasters. This resilience finds its source in the characteristics of the family structure: solidarity, selflessness, dedication, willingness to pass on one's inheritance and knowledge, and acceptance of temporary limitations in case of need. Producers who practice family farming, due to their local roots and their in-depth knowledge of their territories, represent hotbeds of empirical innovations adapted to their respective local contexts. They also contribute to the economic development of these regions by supporting maintenance and even creation of marketing channels that are consistent with local economies. Despite its many virtues, family farming is nevertheless threatened in Africa. It remains vulnerable to the Covid-19 pandemic and climate change in all aspects. Moreover, it would be appropriate to reflect on resilience strategies through agroecological measures that will allow family farming to be more sustainable.*²⁴⁹⁶

*In the first case, there was a surprisingly lengthy discussion about whether or not access to export markets would be a viable strategy for sustainably growing a small farm. This has implications for developing future resources and infrastructure in the name of streamlining the experience for small farmers. For example, one participant raised the experience of facing difficulties navigating the regulations of importing and exporting his products; much like domestic regulations on crops, this points to the need for building deeper community roots for government regulatory agencies, where farmers can turn to for advisement. Another participant pointed out that given how competitive the developed-country market can be (such as the United States), small farmers may find their best opportunities by exporting to other countries.*²⁴⁹⁷

Waste

There were a couple of areas of divergence. The first was around the focus on developing sustainable, low cost technology to remove contaminants from the waste stream. It was suggested that we should stop focusing on adding new processes and more innovation to selectively capture an ever-increasing list of contaminants and instead, focus should be on upstream causes of this contamination. We should be asking why they are present in the waste stream in the first place and how we can rectify this (e.g. source reduction, not

²⁴⁹⁵ 213:9 p 8 in 373_June_02_21_Bread for the World_Multi

²⁴⁹⁶ 229:13 p 9 in 226a_May_17_21_Oteyami O_English

²⁴⁹⁷ 213:8 p 8 in 373_June_02_21_Bread for the World_Multi

*mixing waste streams in the first place, rather than paying to fix them further down the line. e.g. producing new, less persistent pharmaceuticals).*²⁴⁹⁸

*Some people argued that the impact of “using more”, e.g. a broccoli stem in the own kitchen, does not markedly contribute to food waste reduction. This is the debate of small changes at a consumer level vs. larger changes in the legal framework and on the producer level (bottom-up vs. top-down). In the end, changes in the mindset and actions of both levels are important, as all actors bear a certain responsibility for their food and their handling of food waste.*²⁴⁹⁹

*The conflicting but shared responsibility between consumers and corporations was also observed by the Food Waster group. Though most of the group members blamed the food producers for food waste, some participants reminded that consumers, such as college students in a buffet-style dining hall, contribute to food waste.*²⁵⁰⁰

Guiding Theme 21. Build Global Transformation Momentum Across Systems: Generate mutually reinforcing acceleration of solutions across food, climate, and health systems toward transformational critical mass and tipping points.

*Adopt a systems thinking approach to deal with the complexity inherent to sustainable food systems.*²⁵⁰¹

*Participants also highlighted the importance of holistic analysis to understand and prepare for trade-offs and areas of synthesis/reinforcement. Participants agreed that food systems must become more sustainable while also ensuring continued sufficient nutrient-dense food supplies that are safe, accessible, affordable, and appropriate to diverse consumer needs.*²⁵⁰²

²⁴⁹⁸ 124:25 p 10 in 142_May_11_21_Carter L_Dennis S

²⁴⁹⁹ 311:25 p 11 in 547_July_14_21_Heilinger K

²⁵⁰⁰ 332:15 p 4 in 156a_Apr_27_21_Dong_Quyang

²⁵⁰¹ 1:5 p 6 in 072_Mar_09_21_Sibanda L

²⁵⁰² 4:7 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

*A more open, predictable, rules-based global trading environment with fewer barriers will facilitate more efficient movement of agriculture and food products, including to regions suffering from malnutrition and food insecurity.*²⁵⁰³

*Integrated farming systems needs to be boosted.*²⁵⁰⁴

*Animal agriculture should be viewed as a part of a broad, diversified system – and as a solution rather than a problem. Its benefits in high-quality protein and in providing nutrients to and management of the land are essential parts of the circle of life.*²⁵⁰⁵

*Systems-based agricultural research that is energized and integrated with SDG goals. Integrated research agendas should advance a systems approach to ensure health.*²⁵⁰⁶

*To build on that point, the group talked about what a full transformation of our food system could look like. Communication around sustainability is important because each person or region's definition might vary slightly, and practices look different across the globe. Our producers emphasized the importance of avoiding the one-size-fits-all approach. The food system is fragile, so transformation must be approached cautiously and include the voice of farmers.*²⁵⁰⁷

*There needs to be a focus on how tweaks to the beef production system – better health, better genetics, better grazing, better feeding – as they can improve productivity. We need to recognise that we are dealing with complex biological systems and need tools to help deal with unintended consequences of single topic decision.*²⁵⁰⁸

*Everyone should do something: we need a systemic transformation and there are so many actions needed. We have to change our eating habits, and one step is to change school lunch more plant-based. This should done urgently and it is a political decision.*²⁵⁰⁹

The participants of the dialogue stressed that the WEF nexus approach requires a shared vision for water and food security in the Central Asian region, and one that is facilitated by improved policy coherence and institutional coordination. Stronger collaboration and cooperation across and between governments and its multiple tiers is needed to achieve this, along with strengthening policy synergies with the private sector and civil society. The strong interdependency between water, energy, food and climate change in arid and semi-arid regions such as Central Asia calls for robust interventions, i.e. an approach that integrates management and governance across sectors, and where conventional policy and decision-making in 'silos' gives way to an approach that reduces trade-offs and builds synergies across sectors in line with the global UN SDGs and climate targets.

²⁵⁰³ 4:12 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

²⁵⁰⁴ 7:19 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

²⁵⁰⁵ 8:9 p 6 in 169_Apr_6_21_Shea E

²⁵⁰⁶ 8:15 p 6 in 169_Apr_6_21_Shea E

²⁵⁰⁷ 8:30 p 11 in 169_Apr_6_21_Shea E

²⁵⁰⁸ 11:3 p 6 in 184_Apr_14_21_Genever_Multi

²⁵⁰⁹ 13:6 p 7 in 207_Apr_28_21_WWF Finland Youth

There is required to develop the long term regional limited planning for water allocation between sectors.²⁵¹⁰

The existing role and influence of communities on the policy in the field of renewable economic activity are very different in different countries (they are at different stages of development). Therefore, action planning should be maximally adapted to the situation in each individual country. The realistic goal is to raise the status of communities in the planning and implementation of the WEF policy in the country by one step. At least to the role of an "observer", it is better to the role of a "participant in the process" with an advisory vote, ideally to the status of a "full member" of a collegial body for shaping the national policy of the WEF.²⁵¹¹

Our current systems are structured in a linear fashion, with the primary focus on resource production and extraction. There is very little emphasis, if at all, on sustainable systems or community focused systems. These systems should become more circular, and activities such as regenerating clean water and putting it back into the system should become the norm.²⁵¹²

Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marketing, distribution and purchasing; consumption and waste; etc.) are essential for change.²⁵¹³

How we will do it Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marketing, distribution and purchasing; consumption and waste; etc.) are essential for change.²⁵¹⁴

Some progress is being made on “circular economy” thinking and practice, but the system as a whole has not kept up with people’s ideas and plans. Linking food, agriculture and health policies was particularly discussed.²⁵¹⁵

At the same time, ‘food as medicine’ should be embedded within national public policy on health promotion. This involves formalising links between the food system and the health system to reduce highly prevalent non-communicable diet-related diseases and build consumer demand for high-quality, affordable food. Increased support for green prescribing is also called for, including in the management of certain chronic diseases.²⁵¹⁶

They stressed the importance to reconnect with food traditions, retouch cultural values, invest on social capital, connect the food we eat with its environment, conceptualize new

²⁵¹⁰ 17:2 p 6 in 164_Apr_15_21_Anarbekov_Akramov

²⁵¹¹ 17:33 p 13 in 164_Apr_15_21_Anarbekov_Akramov

²⁵¹² 18:6 p 6 in 114_Apr_19_21_Maurer H_Roskrug N

²⁵¹³ 19:4 p 6 in 115_Apr_24_21_Foronda_Multi

²⁵¹⁴ 19:26 p 6 in 115_Apr_24_21_Foronda_Multi

²⁵¹⁵ 20:22 p 10 in 116_Apr_21_21_Hein JR

²⁵¹⁶ 20:23 p 10 in 116_Apr_21_21_Hein JR

*ways of planning territories and use the urban areas as connectors to build a more dense and interconnected system.*²⁵¹⁷

*The reactions of the two external speakers were interesting, as they underlined and shared the important message of the Bites of Transfoodmation community. Indeed, they felt inspired and considered that rethinking our societies through a food perspective is a key aspect. Sara Roversi stated that food should not be seen as a commodity, food it is much more than that, it is care and sharing. They all mentioned that we have lost the real value of food and that education can lay a considerable role in recovering from this situation. It has been also said that a food system is like a living organism where everything is interconnected and it works well only if everything else is in harmony. Christian Frutiger has also underlined the importance of the reciprocity concept between people and their habitats.*²⁵¹⁸

*The main requests of the young changemakers were that diversity should be considered as a unifying factor along the entire chain of future food systems, in the sense that a dense network of deeply connected small and different realities leads to more resilience and better collaboration.*²⁵¹⁹

*Moreover, the young changemakers highlighted the importance of connecting modern practices with the original roots, as a way to embrace small-holder realities and change the system.*²⁵²⁰

*He continued by stressing the importance of not only looking at food systems from the production side – the sustainability perspective – but also from the consumption side – the social and inclusiveness perspective.*²⁵²¹

*Concerning the youth, Christian Frutiger highlighted the importance of “getting the science right” in order to have true definitions. He felt like the Food Systems Summit will be the beginning (and not the end) of a journey of change of food systems, even though he wished something like an IPCC of food systems as the outcome of the Summit. For this, Frutiger stressed the importance of involving all sectors from academia, the public sector, the private sector, the multilateral system (IOs, IFIs), governments, civil society, etc.*²⁵²²

One key outcome that emerged from this first SFS-MED Dialogue was the need to strengthen a common understanding of sustainable food systems and their complexities, through a holistic approach, specific for the Mediterranean context. It was recognized that the multiple challenges of the Mediterranean, further exacerbated by the effects of the COVID-19 pandemic, are deeply interrelated. Food system transformation is a very complex and dynamic process that requires considering food systems in their entirety,

²⁵¹⁷ 22:4 p 7 in 191_Apr_16_21_Donati L

²⁵¹⁸ 22:6 p 7 in 191_Apr_16_21_Donati L

²⁵¹⁹ 22:11 p 9 in 191_Apr_16_21_Donati L

²⁵²⁰ 22:13 p 9 in 191_Apr_16_21_Donati L

²⁵²¹ 22:21 p 10 in 191_Apr_16_21_Donati L

²⁵²² 22:24 p 10 in 191_Apr_16_21_Donati L

*linking production and consumption, and in a cross-sectorial as well as inter-disciplinary manner.*²⁵²³

The importance of the nexus approach, which allows to connect and valorise the connection among different aspects and areas related to food, was also acknowledged. To this effect, it was recognised that: green, blue and circular economy are pivotal to food systems transformation; mainstreaming biodiversity and sustainable land and water management are key issues to climate change resilience; sustainable fisheries and aquaculture are also central to improve the sustainability of food systems; cities and local food policies play a critical role in moving towards more sustainable food systems.

Furthermore, the Mediterranean diet was highlighted as one of the levers of change for bridging sustainable consumption and production.

*Overcome the silos of knowledge and disciplinary boundaries.*²⁵²⁴

*Develop structures for an integrated approach when reviewing/developing policy (e.g. involve agriculture, health, environment, trade, safety, education) due to potential synergies and trade-offs.*²⁵²⁵

*Food system transformation is a very complex and dynamic process that requires considering food systems in their entirety, linking production and consumption, and in a cross-sectorial as well as inter-disciplinary manner.*²⁵²⁶

*Circular economy approaches should also be promoted, not just in terms of food but the overall capital of a community.*²⁵²⁷

*The solutions discussed for the above mentioned concerns included strengthening the local, circular economy, ensuring better price realization for farmers and creating equitable systems of production. This will involve knowledge generation at the grassroots level, enterprise development and infrastructure, all of which would require public investment.*²⁵²⁸

*This group began the discussion by recognizing the complexity of the interconnections between various aspects of food systems. The importance of learning from nature, linking indigenous knowledge to modern science and disseminating it with the help of digitalization were also acknowledged.*²⁵²⁹

Adoption and integration of an ethical approach to food systems transformation through the promotion of ethics of respect and stewardship for nature especially for ecosystems

²⁵²³ 23:19 p 6 in 205_Apr_27_21_CiHEAM_Multi

²⁵²⁴ 23:29 p 7 in 205_Apr_27_21_CiHEAM_Multi

²⁵²⁵ 23:72 p 11 in 205_Apr_27_21_CiHEAM_Multi

²⁵²⁶ 23:73 p 6 in 205_Apr_27_21_CiHEAM_Multi

²⁵²⁷ 26:27 p 8 in 023_Jan_29_21_Bharat K S

²⁵²⁸ 26:33 p 10 in 023_Jan_29_21_Bharat K S

²⁵²⁹ 27:42 p 10 in 044_Feb_18_21_Bharat K S

*relevant to food and agriculture productions will significantly accelerate food systems transformative process.*²⁵³⁰

*We have to transform our culture of exploitation and promoting the Rights of Nature can drive forth the cultural realization that humans are part of nature and the environment and cannot be view separately.*²⁵³¹

*Policy: Governments should recognize the protection and preservation of the environment as a public interest because our ability to produce food is directly link to the state of our planet, ecosystems and natural resources.*²⁵³²

*Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right.*²⁵³³

*Adoption of a food systems approach that acknowledges inter-system and intersectoral linkages and the multiple outcomes of the food system: food security and nutrition, environmental, social and economic.*²⁵³⁴

*It finally stressed the necessity of taking actions in a collective and holistic manner and not only individually.*²⁵³⁵

*Holistically identify critical areas of development and missed opportunities within the agricultural sector. This will justify an increase in budget allocation to the agriculture sector or departments within. e) Education of the general populace on the importance of the agricultural sector.*²⁵³⁶

*Food security needs a holistic food perspective with bottom-up and top-down action. Macro-economic policies need to be created at a university and national level to support the most vulnerable on campus.*²⁵³⁷

*A systems approach to the food system and its supply chain is an imperative.*²⁵³⁸

*Complexity: We recognize that food systems are complex, and are closely connected to, and significantly impact, human and animal health, land, water, climate, biodiversity, the economy and other systems, and their transformation requires a systemic approach.*²⁵³⁹

²⁵³⁰ 29:9 p 7 in 066_Mar_5_21_Nkenglefac T

²⁵³¹ 29:18 p 7 in 066_Mar_5_21_Nkenglefac T

²⁵³² 29:19 p 7 in 066_Mar_5_21_Nkenglefac T

²⁵³³ 35:98 p 6 in 095_Mar_27_21_Chinapoo C_Multi

²⁵³⁴ 36:9 p 6 in 096_Mar_29_21_ESCWA

²⁵³⁵ 39:20 p 9 in 175_Mar_16_21_Donati L

²⁵³⁶ 44:33 p 11 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

²⁵³⁷ 48:5 p 6 in 078_Mar_11_21_Cadogan T

²⁵³⁸ 50:2 p 6 in 087_Mar_20_21_Chinapoo C_Multi

²⁵³⁹ 53:43 p 2 in 001_Nov_5_20_CGIAR

*It is important to take a larger perspective, embracing the whole value chain from production, transformation, distribution, and consumption.*²⁵⁴⁰

*Proposal: Promotion of a holistic view, focusing on local agriculture as a primary provider of food security, with emphasis on quality and not only quantity and eco-friendly agriculture.*²⁵⁴¹

*We have to tackle this issue in a holistic way to help all stakeholders join for the good of all. 8. There is a lack of a national holistic food policy. Each ministry works independently without any coordination.*²⁵⁴²

*Promotion of a holistic view, focusing on local eco-friendly agriculture as a primary provider of food.*²⁵⁴³

*Holistic approach: the environment and people's behaviour should be targeted simultaneously, through a mix of complementary mandatory and voluntary interventions, while considering socioeconomic and health aspects, and having in mind the 'triple wins' of sustainability - health, planet and economy.*²⁵⁴⁴

*However, points critical for food systems transformation came to the surface, including: - the need for comprehensive definition of sustainability; - acknowledgement of complexity & interdependency of food systems; - the need for holistic, cross-sectoral, multi-level approaches to multifaceted complex issues; - the lack of education on healthy lifestyles, and especially on healthy sustainable food systems; - the need for comprehensive, interconnected, evidence-based policy; - the lack of data as key hurdle, and integration of key performance indicators; - the need to improve representation of businesses/industry, as well as of farmers & citizens in the FSSD, who all must be part of the solution; - existence of vested interests, and the polarisation that they can lead to; - the need to recognize the true cost of food; - the need for tradeoffs between local and global food systems; - the need to recognize differences in production, consumption, and the different needs of the food systems transformation between Global North & South.*²⁵⁴⁵

*Food systems are complex. It is not just an issue for a Minister of agriculture. Food systems define our health. Food systems define our environment. Food systems are central for the future of our young people and this complexity, this interdependence, is often hard to manage - but if you come to a city, to a village, to a landscape; this complexity becomes manageable. So, while framework conditions need to be created from the top down, it is even more important to build from the bottom up, the communities of practice we want to work with.*²⁵⁴⁶

²⁵⁴⁰ 59:15 p 5 in 020_Jan_26_21_IFAN

²⁵⁴¹ 64:15 p 6 in 041_Feb_17_21_Adler D

²⁵⁴² 64:75 p 12 in 041_Feb_17_21_Adler D

²⁵⁴³ 64:81 p 13 in 041_Feb_17_21_Adler D

²⁵⁴⁴ 66:80 p 14 in 052_Feb_25_21_EUFIC

²⁵⁴⁵ 66:89 p 15 in 052_Feb_25_21_EUFIC

²⁵⁴⁶ 74:9 p 8 in 189a_April_16_21_Ateneo de Manila

Dr. Cuyegkeng agreed that food waste from the production and distribution stages should be included aside from personal level, in order to formulate a holistic view of the situation. She added that in her talk, she encouraged rethinking consumption on the individual and personal level with the hopes that the institutions will act as enablers. She stressed that each one has a role to play in working for a more sustainable food system such as policy, scientific research, and production among others but, at a personal or individual level, we can also make behavioral changes that will advocate for a more sustainable lifestyle through our own contributions in our households and institutions. Moreover, the discussion on food waste at the production and distribution stages will require another round of dialogues in a setting with the sectors and agencies

So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use. Soil regeneration is very important so that no one solution adversely affects another part of society.²⁵⁴⁷

Cuyegkeng shared the key insights and tools needed to develop and advance a systems mindset for dealing with complex problem solving and transitioning to the Circular Economy, expounding on the following key terms...²⁵⁴⁸

But all systems are dynamic and often complex thus, a more holistic approach is required to understanding phenomena.²⁵⁴⁹

There is no single solution for continuing to strengthen the Mérida food system. We need to develop a set of actions simultaneously that are going to attend to the challenges and opportunities of the Mérida food system. Although there are actions that can be implemented in the short term and others that require more time for implementation, all of them should have a holistic approach and a long-term vision with citizen participation and monitoring.²⁵⁵⁰

In the area of urban planning, it is essential to have a coherent food governance that includes a reflection on how to secure in the medium-term – 20 years- fresh food availability and identifying the fresh food actors that can do this as to increase the ability to supply growing Asian populations. For instance, governments should plan where to develop wholesale markets, positioning them in such a way that their reach and connections are extensive in the best way possible. Food security can be improved through farming in peri-urban areas with systems as central to a holistic approach to proximity, logistics, and planning.²⁵⁵¹

Many agricultural projects focus on farmers and their production and productivity. Without processing industry and more developed markets, improving production and quality doesn't change the system. Action needs to be taken on the systems as a whole and competence development is necessary on all levels. It's important to increase jobs

²⁵⁴⁷ 74:40 p 37 in 189a_April_16_21_Ateneo de Manila

²⁵⁴⁸ 74:48 p 17 in 189a_April_16_21_Ateneo de Manila

²⁵⁴⁹ 74:49 p 17 in 189a_April_16_21_Ateneo de Manila

²⁵⁵⁰ 75:2 ¶ 37 – 38 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

²⁵⁵¹ 77:19 p 9 in 108_Apr_13_21_Carrara E_Multi

*opportunities in the whole food system, not just in farming. Project support that progresses in 3-5-year cycles doesn't give enough support for long-term change.*²⁵⁵²

*...key aspect is the key word "relationship" because the main target of the food system transformation is, indeed, provided by a set of relationships.*²⁵⁵³

*The food supply chain is broken and needs to be changed: following the transition from a linear to a circular economy, it is now needed to use this momentum as an opportunity to re-design and move to a food system model with future resilience. On the other side the problem of food insecurity in Europe is growing with millions of people in precarious situations and in need. Moreover, there is a climate emergency and many analyses declared that governments around the world will not meet the Paris Agreement's targets without tackling food loss and waste. Therefore, it is evident how food loss and waste prevention is an integral part of the food system transformation. During the FEBA Annual Convention 2021 "For a sustainable future food system" some game-changer aspects were identified in this regard starting from the interconnectivity of this process. What are the key aspects that need to be transformed within the food system? Everything it is interconnected and to face a problem it is necessary to look at the entire picture with all the interconnectivities. Regarding the food loss and waste, it is fundamental to look at the framework of public and private actors and the role played by governments, businesses and civil society organisations.*²⁵⁵⁴

*Panelists highlighted how the vast array of aquatic food systems, from ocean to inland water bodies, can produce diverse aquatic food species critical to the food and nutrition security of communities in low- and middle-income countries. Holistic knowledge and food system approaches are needed to ensure access to sufficient amounts of aquatic foods that is sustainably produced, nutritious and safe to eat and consumed as part of healthy diets for generations to come. The benefits derived from giving aquatic foods greater recognition in the food systems agenda can contribute to building the sustainability, resilience and inclusivity of aquatic food systems and related value chains. Innovative and holistic approaches to aquatic food systems hold significant opportunities for boosting health, livelihoods and wellbeing, especially of the poor and vulnerable.*²⁵⁵⁵

*It is imperative to make systematic change visible. The benefits and successes of systematic collaboration should be made visible as it will inspire those who want to see a change in the food system to do so. More so, it will expose those who continue with the status quo and force them to change.*²⁵⁵⁶

Recognize interconnections: Multisector solutions depend on identifying interconnections across the food system. Participants wanted to bolster connections between farmers, schools, food banks and urban communities to build mutual support, understanding and resiliency. Specific to dairy, participants recognized the strong connections between

²⁵⁵² 79:43 p 10 in 118_Apr_21_21_Huvio T

²⁵⁵³ 81:1 p 6 in 145_May_6_21_Vandenschrik J_Multi

²⁵⁵⁴ 81:19 p 13 in 145_May_6_21_Vandenschrik J_Multi

²⁵⁵⁵ 82:6 p 6 in 150_Apr_30_21_GANSFOIWFSN

²⁵⁵⁶ 83:4 p 6 in 152_Apr_29_21_Kubheka M

*animal welfare, environmental sustainability and social science to enhance consumer trust and support farmers' livelihood.*²⁵⁵⁷

*Finally, this group also touched on food production and food insecurity. While millions of people across the United States go hungry each day, there are times when farmers are forced to dispose of surplus food. Participants cited the need for a cohesive system (vs. present ad hoc models) that connects farmers with hunger coalitions to identify mutually beneficial options that get surplus food into the hands of those that need it most. Dairy farmers expressed their strong and historical support for participating in such systems and referenced the work undertaken by the U.S. dairy community to support address food insecurity when COVID-19 disrupted the food system.*²⁵⁵⁸

*Participants agreed that the link between environmental challenges, climate change, malnutrition and economic inequality is becoming clearer. Society is looking to the convergence of nutrition and sustainability for solutions. Change at speed and scale is essential to ensure global food systems can provide healthy, sustainable foods. There is a tremendous – and essential – role for the private sector to play in delivering innovation, collaboration and transformation for food systems.*²⁵⁵⁹

Participants believe the aquaculture sector has proven experience mobilizing responsible production progress. It shows how a sector can work collaboratively to identify and implement solutions to environmental challenges at a global scale. This experience is transferrable to other sectors.

*Participants emphasized that progress cannot simply occur in a private sector silo. There's a critical need to link science-based regulations, knowledge transfer from big to small companies, and holistic business policy frameworks. Ideally, this approach will enable momentum, collaboration and accountability from the United Nations as well. Participants saw a clear role for private sector to partner with the United Nations and public institutions; they recognized that each of these groups has a unique and vital role to play.*²⁵⁶⁰

*The Dialogue highlighted the need for bottom-up approaches and by affording those affected a say in necessary changes. This includes discussing how food should be incorporated in urban planning, such as considering the primary modes of transportation a locality uses, geographic barriers, and zoning plans. Improved quality in food pantries and incentives for cheaper pricing and wider selection of healthy options in grocery stores (and improved profitability) can improve consumption patterns in America. Finally, food justice should be deliberately incorporated into sustainable consumption and urban planning as it relates to food policy.*²⁵⁶¹

The Lancet Commission's six planetary boundaries best describe nature-positive production. The boundaries are climate change, biodiversity loss, land system change,

²⁵⁵⁷ 84:7 p 7 in 153_Apr_28_21_GCNF_Multi

²⁵⁵⁸ 84:26 p 10 in 153_Apr_28_21_GCNF_Multi

²⁵⁵⁹ 85:3 p 6 in 160_20_Apr_21_GSI

²⁵⁶⁰ 85:5 p 6 in 160_20_Apr_21_GSI

²⁵⁶¹ 86:8 p 6 in 162_Apr_16_21_Fountain G

*freshwater use, and nitrogen and phosphorus flows. It is significantly difficult to consider these boundaries separately, as they often affect or are dependent on one another. Promoting soil health and carbons sequestration through regenerative practices can address these boundaries. Unfortunately, economic, and political lock-ins incentivize chemical-dependent, high-yield, monoculture agricultural practices, further complicate these issues.*²⁵⁶²

*The need to make rural areas liveable was acknowledged. To this end, it is important to consider holistic development initiatives that permit mitigation of problems such as emigration; reduce chronic child malnutrition; and improve the situation of access to water and sanitation.*²⁵⁶³

*It was highlighted how the absence of an articulation of shareholders does not allow overcoming the challenges the region faces. Therefore, addressing the issues of rural development from a more holistic perspective is considered important, which should result in better training, access to basic services, and new jobs.*²⁵⁶⁴

*Of note, participants flagged that not all sustainable opportunities require trade-offs (i.e. food waste) but where trade-offs exist, there is a role for government in reducing them by ensuring policies are created through a holistic 'food-system' lens.*²⁵⁶⁵

*The F2F strategy can be the answer but it will be a challenge to implement all the ambitions. We need to start thinking about the food system as a whole.*²⁵⁶⁶

*Fostering a holistic and systemic approach along with the multidimensional nature of food (FAO 10 elements of Agroecology).*²⁵⁶⁷

*So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use.*²⁵⁶⁸

*Embracing a systems approach and catalyzing non-State Actors (private sector, farmers, NGOs) Improving a food system necessarily calls for a systems approach which in turn entails devising an institutional mechanism for the relevant actors to work systemically.*²⁵⁶⁹

*Due to the complexity of the issues for farmers and farm households (different viability challenges for different cohorts (age, system, region)), it was agreed that actions must involve systems solutions.*²⁵⁷⁰

²⁵⁶² 86:9 p 6 in 162_Apr_16_21_Fountain G

²⁵⁶³ 89:18 ¶ 79 in 186a_Apr_15_21_Caballeros_eng

²⁵⁶⁴ 89:21 ¶ 83 in 186a_Apr_15_21_Caballeros_eng

²⁵⁶⁵ 90:12 p 8 in 206_Apr_27_21_CCANCC

²⁵⁶⁶ 99:24 p 8 in 285_May_20_21_TFFF_Multi

²⁵⁶⁷ 103:43 p 31 in 007a_Dec_18_20_NAAGD

²⁵⁶⁸ 103:68 p 37 in 007a_Dec_18_20_NAAGD

²⁵⁶⁹ 111:30 p 6 in 070_Mar_09_21_Akinbamijo,O

²⁵⁷⁰ 112:34 p 9 in 074_May_18_21_O'Mara_Teagasc

Adopting a systems approach will support a move from silo thinking to bringing all elements together. These actions will also support capacity development, leading to diffusion of learning among rural communities.²⁵⁷¹

Participants agreed that communications should be aimed at those who trust and believe in science, rather than the detractors. For some complex, emotive topics, such as animal welfare, we need to adopt a systems approach to communicating and understanding the complexity of the issues.²⁵⁷²

Water, energy, and food security is necessarily cross-cutting, and requires an integrated, systems approach to navigate through trade-offs and competing industries that exist, and to leverage positive interlinkages and ways to make the WEF nexus more functional.²⁵⁷³

Regional coordination, alongside the systems approach, can help avoid issues of inward looking policies that may be detrimental to a country in the long-run.²⁵⁷⁴

Systems-based approach linked to livelihoods & holistic response options.²⁵⁷⁵

The need to address gender issues in a holistic manner that ensures all areas and issues affecting women in food systems are necessary to achieve transformation. For example, addressing the lack of access to finance does little if we do not concurrently address the challenges of tenure rights. Policy makers and stakeholders must work together in a coordinated approach to tackle these issues and ensure systemic change.²⁵⁷⁶

Over half a million women die annually due to maternity complications. Therefore there is need to understand the linkages between women's empowerment, decision making power and maternal health care. Better information and messaging for vulnerable groups is required. Better investment, better education, more health workers and nutritional services are needed to cover these vulnerable populations. A system approach that involves schools and educational departments can help integrate maternal health education into curriculums.²⁵⁷⁷

There is need for holistic approaches that foster access to extension services by women. Private-public alliances that promote the extension of knowledge and new technologies to women must be fostered. Consideration should be given to who should approach women farmers, depending on country, customs, religious contexts.²⁵⁷⁸

Gender smart programs require a holistic approach based on comprehensive ecosystem of global and local partners. There is need to have women representation along the entire value chain and not just at the production level. Women farmers must be supported

²⁵⁷¹ 112:41 p 9 in 074_May_18_21_O'Mara_Teagasc

²⁵⁷² 112:99 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁵⁷³ 117:43 p 12 in 109_Apr_13_21_Jacobs-Mata I

²⁵⁷⁴ 117:45 p 12 in 109_Apr_13_21_Jacobs-Mata I

²⁵⁷⁵ 117:69 p 16 in 109_Apr_13_21_Jacobs-Mata I

²⁵⁷⁶ 120:3 p 5 in 127_May_13_21_IAFN_CWFS

²⁵⁷⁷ 120:14 p 7 in 127_May_13_21_IAFN_CWFS

²⁵⁷⁸ 120:19 p 7 in 127_May_13_21_IAFN_CWFS

*to foster entrepreneurship in a holistic way, facilitate access to productive farming resources, information, technology, capacity...*²⁵⁷⁹

*‘Food as medicine’, as a core strategy for healthier islands through sustainable food systems is a holistic approach to the prevention and control of non communicable diseases like diabetes and risk factors like hypertension and obesity --- as environmental modifications focus on food as a solution and not a cause of ill-health by ensuring that all people in all islands have access to healthier, affordable and locally produced and gathered food from sustainable resources.*²⁵⁸⁰

*“We are what we eat” - articulates a holistic view of culture and identity in relation to a holistic view of food.*²⁵⁸¹

*This is a complex topic and understanding the risks and benefits of adopting a circular economy cannot be achieved by working solely on our areas of interest and in isolation. We need to adopt a nexus approach bringing together expertise in food, energy, sanitation, environment, human health, and policy. Collaborative thinking will require funding mechanisms to be put in place support future interdisciplinary research initiatives.*²⁵⁸²

*A holistic approach and reliable database on water resources and their use across Pakistan is the key to achieving food, water, and energy security in the fifth most climate-vulnerable country in the world, participants of the UN Food Systems Summit Independent Dialogue (Pakistan) have reported.*²⁵⁸³

*Moreover, a systematic approach is needed with much more information for balancing tradeoffs. While making a decision, consider a link between managing the canal and groundwater, and determine the impacts and implications of canal risk management. Canal management is an intervention tool, for recharging groundwater. Conservative water management is important that is already happening in Pakistan however, there is a need to further improve the traditional water management to adopt a water balancing system approach and to understand the availability of resources to be used efficiently.*²⁵⁸⁴

*Taking a systems thinking approach that includes looking at communities, cultures, ecology, and arts. These are systems that allow the community to continue to function, and food systems are one vital component of the entire system.*²⁵⁸⁵

*On tackling malnutrition, we must look at all aspects of the food systems, including WASH, Health, social protection and livelihoods; this came out strongly from IFPRI and IDS research.*²⁵⁸⁶

²⁵⁷⁹ 120:23 p 7 in 127_May_13_21_IAFN_CWFS

²⁵⁸⁰ 121:3 p 5 in 130_May_22_21_Foronda R_Gloria C

²⁵⁸¹ 121:8 p 5 in 130_May_22_21_Foronda R_Gloria C

²⁵⁸² 124:3 p 6 in 142_May_11_21_Carter L_Dennis S

²⁵⁸³ 127:1 p 7 in 159_Apr_21_21_Hafeez M

²⁵⁸⁴ 127:56 p 15 in 159_Apr_21_21_Hafeez M

²⁵⁸⁵ 129:14 p 10 in 179_Apr 01_21_Livingston_Way

²⁵⁸⁶ 131:17 p 8 in 190_Apr_16_21_Cullen N

*Exploring an integrated or combination approach is critical given that gender is a cross-cutting approach, and it involves different institutions and stakeholders.*²⁵⁸⁷

*Actions that focus on going back to basics – systems thinking and systems innovation, taking into account externalities and systems solutions.*²⁵⁸⁸

*Improving nutrition security requires a systemic approach, which combines for example creating demand with improving the enabling environment and the supply of nutritious foods. This makes it more complex and is why it is not always easy to deliver outcomes at the level of improved diets (i.e. which are more diverse, safe, healthy, and affordable). But it is also why working through a multistakeholder approach is promising.*²⁵⁸⁹

*...address those challenges the participants stressed the importance of a holistic approach - integrated landscape management, which involves a whole region and all stakeholders. The leadership and participation of all actors are key in that approach, as is the use of validated methods and tools and neutral facilitation.*²⁵⁹⁰

*Altering “one size fits all” policies that work well in certain areas but poorly in others.*²⁵⁹¹

*Build a stronger partnership between the public, private sectors, farmers’ associations, civil society, research, and universities, to ensure that inclusive approaches are used across the agricultural value chains...*²⁵⁹²

*It is important to shift from a sectorial approach to a systemic one. By supporting cities and local governments, a systemic approach can be progressively built, connecting markets to other food systems components.*²⁵⁹³

*Analyse incentives and disincentives for different users of land resources through participatory approach and manage rangelands to get better achievements.*²⁵⁹⁴

*Primary agriculture should adopt a larger food systems perspective and explore opportunities to further engage in food systems conversations to pursue a more integrated and comprehensive approach and understanding.*²⁵⁹⁵

*Ensuring interconnectedness of academe, policy, research, and governance to provide holistic approach/system on food systems...*²⁵⁹⁶

²⁵⁸⁷ 137:13 p 6 in 212_May_04_21_Akinbamijo Y

²⁵⁸⁸ 138:20 p 9 in 214_May_05_21_50by40

²⁵⁸⁹ 141:27 p 13 in 229_May_18_21_NFP_Rabobank_Multi

²⁵⁹⁰ 141:51 p 16 in 229_May_18_21_NFP_Rabobank_Multi

²⁵⁹¹ 143:40 p 11 in 231_May_19_21_MCD

²⁵⁹² 150:15 p 6 in 253_Apr_29_21_AFDB_Multi

²⁵⁹³ 151:9 p 7 in 261_May_03_21_Carrara_Le More

²⁵⁹⁴ 152:36 p 8 in 262_May_04_21_ILC_Multi

²⁵⁹⁵ 153:27 p 10 in 263_May_06_21_CCGA

²⁵⁹⁶ 157:28 p 6 in 278_May_18_21_Gregorio B

*Adopting the landscape approach, looking beyond the farm, and taking a more holistic approach to sustainability.*²⁵⁹⁷

*Delivering an integrated and holistic approach in curriculum design in agriculture, food systems, and innovation.*²⁵⁹⁸

*It further prescribed the agricultural innovation systems approach to and the best research to development partnership model.*²⁵⁹⁹

*Eight nine percent of the participants agree that innovations systems approach is the best research for development model to be used.*²⁶⁰⁰

*Incorporate a system thinking approach to food systems.*²⁶⁰¹

*Integrate the systems approach with the end-user being the community member. Critical to engage them to learn about their pain points in order to create solutions (don't assume).*²⁶⁰²

*But we also need to find ways to encourage the farmers to take a whole-of-farm system approach (within the local, regional and global food system) to manage their livestock in a commercially relevant way.*²⁶⁰³

*This last dialogue aimed to identify mutually beneficial solutions for food systems transformation, promoting a systemic approach to sustainable food systems through closer collaboration between producers and consumers.*²⁶⁰⁴

*An integrated system approach, where we work collectively and leverage all available tools, to advance sustainable development has tremendous potential.*²⁶⁰⁵

*More involvement of medical & health care community.*²⁶⁰⁶

The discussion was opened by Daniela Ropelato, Director of the Doctoral School of the Sophia University Institute, who asserted the “culture of care” (Laudato Si’, 231) as the necessary paradigm for holistic and collective action. Engaging political processes relating to food systems through the lens of care, would allow for the appreciation of the complementarity between men and women in political processes and forge necessary alliances in decision-making. Afterwards, Lola Castro, Regional Director for Southern Africa, World Food Programme (WFP), urged audiences to move beyond the interpretation of women as victims of an unsustainable, unjust and fragile food system,

²⁵⁹⁷ 157:53 p 9 in 278_May_18_21_Gregorio B

²⁵⁹⁸ 157:68 p 11 in 278_May_18_21_Gregorio B

²⁵⁹⁹ 159:23 p 7 in 287_May_20_21_Akinbamijo_Y

²⁶⁰⁰ 159:27 p 7 in 287_May_20_21_Akinbamijo_Y

²⁶⁰¹ 163:73 p 10 in 300_May_27_21_Alesso_Pommeret

²⁶⁰² 163:154 p 19 in 300_May_27_21_Alesso_Pommeret

²⁶⁰³ 175:20 p 8 in 333_May_25_21_GMA_Multi

²⁶⁰⁴ 178:5 p 6 in 336_May_26_21_CI_WFO

²⁶⁰⁵ 188:12 p 5 in 346_May_31_21_CANEUS_Multi

²⁶⁰⁶ 198:7 p 8 in 357_Apr 14_21_Harfouche S

*and recognize them as “agents of change” and leaders in the reformulation of systems. She reiterated the need to formally recognize their contributions across all stages of food systems, and enhance their participation in political processes destined to shape them. She stressed the importance of increasing the involvement of women in early prevention and response strategies to food crises, and increasing their representation in leadership positions.*²⁶⁰⁷

*Innovation must come from people coming together, both in an international multi stakeholder setting as well as at the grassroots level. We have to acknowledge the intricacies of each of these issues.*²⁶⁰⁸

*Why are we, as a global society, allowing for the continuous oppression and execution of indigenous communities and cultures? Around the world these communities are denied of a voice- whether that be because of a lack of access to technology, visibility, or because of more violent systems of oppression. In the Amazon and Andes, indigenous communities are disenfranchised and displaced. In many of the regions where human rights are violated, it is the state and private companies denying that are denying these communities of what is inalienable. We must enforce a system of accountability to ensure that people are given the right to their land- allowing for ancestral and nature positive production to flourish. In light of the boycott coming from indigenous and peasant farming, we need to make sure that their message is heard at the upcoming Summit. We need to propose to the UNFSS a simple message: everyone must see their role in food systems transformation, not just multi-national corporations and neoliberal civil society organizations.*²⁶⁰⁹

*It is crucial that everyone, no matter their political or economic clout, can see their role in food systems change because urban communities and consumers hold power in demanding food systems change with their actions. Reciprocity between producers and consumers; land and mouth; rural and urban connection is crucial. We must build networks of relationships.*²⁶¹⁰

*...superfoods are being used as a marketing strategy while making products less accessible to indigenous populations. We must implement alternative systems that challenge our capitalist model by consulting local communities and creating resiliency to truly decolonize our plates.*²⁶¹¹

Dr. Esben Larsen, fellow in Food, Forests, and Water Program, World Resources Institute (WRI) proposed; i) a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North, ii) guarantee the Global South real access to technology, and iii) increase opportunities for vocational

²⁶⁰⁷ 200:7 p 6 in 359_May_17_21_FAO_IFAD

²⁶⁰⁸ 204:7 p 8 in 363_May_26_21_Mehta_Bautista

²⁶⁰⁹ 204:8 p 8 in 363_May_26_21_Mehta_Bautista

²⁶¹⁰ 204:9 p 8 in 363_May_26_21_Mehta_Bautista

²⁶¹¹ 204:25 p 10 in 363_May_26_21_Mehta_Bautista

*training in agri-food production to equip workers to optimise the use of available technologies.*²⁶¹²

*Technology, such as artificial intelligence and big data, can help achieve a more nuanced judgement of how the use of technological innovations impact food systems as a whole by constructing data sets that comprise diverse disciplines, wisdoms and local knowledge. The adoption of this approach at global level can provide the necessary framework for local initiatives to thrive and promote an awareness of individual participation and responsibilities in food systems.*²⁶¹³

*Finally, Sr. Helen Alford outlined the role and responsibility of the Church in guiding international debates towards the common good. The universal church must be active in mobilizing its resources to connect COVID-19 recovery plans with the people who need support, and enrich global discussions with values that can promote systemic change towards the achievement of the Sustainable Development Goals once and for all.*²⁶¹⁴

*Need for a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North.*²⁶¹⁵

*Institutional innovation along the lines of a lifecycle approach, integrated policy and local empowerment.*²⁶¹⁶

*Work collaboratively with African universities and other actors in and outside Africa to marshal the needed response to strengthen Africa's food systems and for scaling out best practices. There is need to bridge the disconnect between academia and government and between technocrats and politicians who allocate resources to support food systems enhancement.*²⁶¹⁷

*Foster global partnerships to develop more sustainable, inclusive, and resilient food systems that consider the needs of smallholder farmers and youth.*²⁶¹⁸

*Encouraging the building of national and international farm to fork strategies, encompassing areas such as environmental standards to also have a food safety component.*²⁶¹⁹

He highlighted the need to bring the voices of vulnerable communities to the center of international political debates, promote circular models of food production and consumption, enhance local and traditional knowledge to ensure better protection of

²⁶¹² 205:6 p 6 in 364_May_26_21_DPIHD

²⁶¹³ 205:9 p 6 in 364_May_26_21_DPIHD

²⁶¹⁴ 205:12 p 6 in 364_May_26_21_DPIHD

²⁶¹⁵ 205:16 p 9 in 364_May_26_21_DPIHD

²⁶¹⁶ 205:19 p 9 in 364_May_26_21_DPIHD

²⁶¹⁷ 206:8 p 7 in 365_May_27_21_Ekwamu A

²⁶¹⁸ 206:9 p 7 in 365_May_27_21_Ekwamu A

²⁶¹⁹ 207:17 p 8 in 366_May_27_21_Cumbers S

*natural resources and reform present-day technological and financial structures to support the transformation of food systems.*²⁶²⁰

*The participants understood that “We are all in this together” type problems (such as the pandemic) require strong public institutions at national and supranational levels.*²⁶²¹

*The participants discussed the needs for cross- country research to promote One Health. The participants discussed the needs for a systematic global effort to monitor pathogens emerging from animals.*²⁶²²

*Decision-making: prioritizing, cooperating, systems thinking.*²⁶²³

*To build resilience, the focus must be on food systems and not on farming systems. The food system incorporates wider food resources beyond the farm, for example from forests, wetlands, and home gardens – and therefore spreads risk and improves the ability to cope with shocks and stress.*²⁶²⁴

*Participants emphasized that systems thinking is required to embrace the Summit’s Principle ‘Recognizing Complexity’. Systems thinking, as part of comprehensive food systems evaluations, can illuminate how natural, human, social and produced capital linked to food systems are interconnected. Systems thinking requires that game changing solutions are not considered in isolation within their action tracks but that capital impacts and dependencies of solutions are assessed across all action tracks.*²⁶²⁵

*The private sector calls for the creation of a measurement matrix that values both positive steps but also targets negative interventions. This will allow different stakeholders to compare each of these diverse aspects and make decisions based on more ‘complete’ information, not just between businesses, but across the full value chain from farmer to consumer.*²⁶²⁶

*Funding international schemes. Innovation helps better manage water, but there is a need to fund innovation also in poorer countries. One of the obstacles to this solution is to find ways to convince wealthier countries to act internationally even in a situation where the emergency could be still hard to grasp within their own national borders.*²⁶²⁷

*The regional “Central American” aspect under the integration process, complemented in turn by the actions being developed nationally in each country since we are stronger united as a region • The “public-private partnership,” in which the skills and abilities of each country and their productive sectors are coordinated.*²⁶²⁸

²⁶²⁰ 210:2 p 6 in 369_May_31_21_Holy See

²⁶²¹ 212:6 p 9 in 371_June 01_21_Güngören A

²⁶²² 212:7 p 9 in 371_June 01_21_Güngören A

²⁶²³ 215:17 p 12 in 376_June_04_21_IFAD_Multi

²⁶²⁴ 219:21 p 12 in 380_June_08_21_Shakya_Chettri

²⁶²⁵ 220:1 p 6 in 381_June_08_21_UNEP_Multi

²⁶²⁶ 220:8 p 9 in 381_June_08_21_UNEP_Multi

²⁶²⁷ 224:15 p 9 in 385_June_09_21_Lazzaris S

²⁶²⁸ 235:1 p 6 in 276a_May_13_21_CCIE_English

It is necessary to broaden the view of agriculture since it has a multidimensional effect on health, nutrition, food security, the environment, and biodiversity and is therefore an important factor in transforming food systems to achieve the 2030 SDGs.²⁶²⁹

It is important to have a systemic view that integrates the intersection between human, animal, plant, and ecosystem health. Improving the relationship between soil and food quality has an impact on national and international food security. Likewise, agriculture cannot be thought about independently, without considering economic, environmental, geographical, and social issues.²⁶³⁰

To address the challenges of these issues in education and training, it is extremely important to detect those regions and rural areas that are most vulnerable to climate change and natural disasters. In the case of the Caribbean, it is important to work together with other regions.²⁶³¹

World food systems are tools for the fight against hunger and severe malnutrition in the world, and for this reason it is considered that it would be meaningless or unjustified to totally or partially replace food systems, such as livestock-meat, which are widely implemented worldwide and with maximum and proven capacity as a supplier of abundant foods with high nutritional potential and that are safe. Regarding the nutritional point of view, animal source foods are a very rich source, unique in some cases, of several micronutrients (essential) and bioactive compounds and their restriction can lead to health problems without prescribed and constant supplements. There is no sense in trying to substitute, totally or partially, the animal source proteins with alternative proteins such as artificial synthetic ones obtained in the laboratory, whose real food or nutritional potential is unknown, and whose ability to contribute to solving the serious problem of hunger and malnutrition in the world is as unknown as it is unlikely.²⁶³²

Several speakers also stressed the importance of the cultural and “human” dimension of food in the region, with the Mediterranean diet as an opportunity to build healthier and more sustainable food systems. In this context, there was a call to switch to sustainable consumption and production models, noting that often consumption and production are still treated separately by policies and stakeholders, and recognizing that only a systemic approach would allow moving towards sustainable food systems.²⁶³³

By taking into account the interconnected social, environmental, economic and nutritional and health-related challenges present in the Mediterranean, it was stressed that it is crucial to adopt an integrated approach, people-centered and specific to the Mediterranean context, to provide a better understanding of the multidimensionality of the sustainability of food systems, by linking the sustainable management of natural resources with the sustainable food consumption and production (SCP). In this context,

²⁶²⁹ 236:1 p 6 in 277a_May_14_21_IICA_English

²⁶³⁰ 236:3 p 6 in 277a_May_14_21_IICA_English

²⁶³¹ 236:9 p 6 in 277a_May_14_21_IICA_English

²⁶³² 237:11 p 11 in 284a_May_19_21_INTERPORC_English

²⁶³³ 244:15 p 8 in 480_June_21_21_CiHEAM_Multi

*the Mediterranean Diet could act as a sustainable lever to bridge the gap between consumption and food production in the region.*²⁶³⁴

*Countries could consider establishing “Food Ministries”, rather than having separate ministries for agriculture and fisheries, to ensure holistic food policies. This can also be established through cross-governmental task forces.*²⁶³⁵

*To close the opening forum, convenors reiterated the need to restructure food systems towards delivering healthier diets, economies, and environment through a holistic food-land-water approach and repurposing public support for agriculture to prioritize nutrition, deliver public goods like research and extension, and reduce market distortions and inefficiencies to ensure meaningful and equitable participation in the agri-food system.*²⁶³⁶

*In this discussion group, participants agreed that there is a general lack of communication about sustainability, as well as sustainable standards. This group strongly felt that a holistic approach is needed, which includes all stakeholders. Consumers need to be involved in the paradigm shift for more sustainable practices, as they have the biggest effect on food production through demand - however, there is a lack of education on our food system and on which practices are actually sustainable or unsustainable.*²⁶³⁷

*An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts e. Decentralise access to good food f. Empower people through food skills and knowledge.*²⁶³⁸

*Interconnected considerations for approaches to plant-based innovation to help catalyse a just transition to better diets. To be more transformative, that innovation needs to: Address the challenges holistically, avoiding trading off one aspect against another (eg human health vs the environment) or ignoring some issues altogether (eg living wages for food workers).*²⁶³⁹

*There is a shift happening within organisations from dealing with the emergency response, to a more holistic approach which aims to consider the drivers and looking on an individual basis at how to bring people into a state of food security.*²⁶⁴⁰

²⁶³⁴ 244:22 p 9 in 480_June_21_21_CiHEAM_Multi

²⁶³⁵ 251:14 p 7 in 487_June_29_21_Selwyn_Multi

²⁶³⁶ 254:12 p 6 in 490_June_22_21_Yasmi Y

²⁶³⁷ 256:19 p 9 in 492_June_23_21_Liu JA

²⁶³⁸ 259:3 p 6 in 495_June_23_21_Forum for the Future

²⁶³⁹ 259:10 p 8 in 495_June_23_21_Forum for the Future

²⁶⁴⁰ 260:5 p 6 in 496_June_23_21_Tradowell C

*Apply a systems-based approach to support self-understanding of challenges, needs, and solutions.*²⁶⁴¹

*Advocate justice and take measures against fishery crimes through system-based approaches.*²⁶⁴²

*A food system approach does not just happen. For scalability to happen analysis is needed in order to match solutions with the most urgent needs. Change makers need to be identified, supported and connected.*²⁶⁴³

*Regenerative agriculture is a holistic approach to farming which takes into account the biophysical environment of the soil, but also the broader efficiency of land use.*²⁶⁴⁴

*The importance of taking a holistic system view is at the heart of the debate, which encompasses environmental, social and economic indicators, and potentially not disparate indicator, we need to think of it more broadly across the food system as well.*²⁶⁴⁵

*In order to make holistic and systemic changes we need to agree on a more holistic vision for nutrition science and food system transformation. We need to identify the people who have agency to come in and endorse definitions.*²⁶⁴⁶

*To realize the transition to sustainable food systems through territorial governance, support is needed to integrate across multiple scales and sectors.*²⁶⁴⁷

*Scaled policies and good practices can crystalize solutions to ensure needed impacts at territorial levels and bring everyone in the system together. These can be designed into context-specific projects and programs but also provide cross-cutting solutions relevant in several contexts. While locals build good practices, continued effort is needed for flexible, replicable models and knowledge-sharing networks.*²⁶⁴⁸

*Rebuild local knowledge systems to have a systems approach. We need knowledge-based systems rather than science-based solutions with academia as an active partner to co-create and share knowledge within sectors and across similar territories.*²⁶⁴⁹

Municipalities and local governments have a series of tools to support the re-territorialization of food systems, such as public procurement (e.g. for school meals), zoning (eg. for public markets and community gardens/kitchens) or strategies to restore nature and culture. But the challenge is to integrate top-down and bottom-up

²⁶⁴¹ 263:16 p 6 in 499_June_25_21_GANSF

²⁶⁴² 263:18 p 6 in 499_June_25_21_GANSF

²⁶⁴³ 263:34 p 8 in 499_June_25_21_GANSF

²⁶⁴⁴ 273:8 p 6 in 509_June_30_21_FFA_Nestlé

²⁶⁴⁵ 273:76 p 12 in 509_June_30_21_FFA_Nestlé

²⁶⁴⁶ 280:43 p 9 in 516_July-01_21_Anastasiou K

²⁶⁴⁷ 299:10 p 6 in 535_July_08_UNESCO Chair on Food

²⁶⁴⁸ 299:26 p 8 in 535_July_08_UNESCO Chair on Food

²⁶⁴⁹ 299:44 p 9 in 535_July_08_UNESCO Chair on Food

*approaches. The public sector can regain a role through the participatory construction and implementation of local food policies shifting from sectoral approaches to integrate all dimensions of territorial systems.*²⁶⁵⁰

*Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.*²⁶⁵¹

*Food literacy needs to happen both at school and at home. Drawing parallels between Africa and Ireland, sometimes even when children are educated at school, they go home and all the effort is lost as the parents either do not understand or cannot afford to eat more nutritious food. We have to take a holistic approach looking at the whole picture.*²⁶⁵²

*We call upon the UNFSS to embrace the idea and practice of Farmer Research Networks (FRNs), where adaptive learning, diverse evidence such as farmer's traditional and Indigenous knowledge, and the recognition that holistic understanding of food systems impacts are all essential. This should also include well-planned participatory methodologies of disseminating research findings coming from undertaking research based on community needs.*²⁶⁵³

*Ensure integrated, participatory, rights-based approaches to governance and policymaking at all levels to address the structural inequities and power imbalances in food systems. Build processes and policy platforms on democratic principles, transparent deliberations, shared power, and inclusive participation to ensure that policies are driven not only by evidence but also by ethics and the broader public interest.*²⁶⁵⁴

*The dominant framing of dietary guidelines is on personal responsibility, leaving food choices in the hands of individuals. However, dietary habits are influenced by multiple factors from age and gender to education, income and health status, food environments, culture and nutritional and cooking knowledge. There must be a reframing to recognise that policy and business bear key responsibility for system transformation rather than the individual 'consumer'. This means: – Dietary guidelines must be reflected throughout food and nutrition policy at all levels of government.*²⁶⁵⁵

*The urgency and complexity of food systems transformation underscores the need to consider multiple perspectives and pathways.*²⁶⁵⁶

²⁶⁵⁰ 299:45 p 9 in 535_July_08_UNESCO Chair on Food

²⁶⁵¹ 302:7 p 7 in 538_July_09_21_IDS_Multi

²⁶⁵² 308:23 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

²⁶⁵³ 309:17 p 7 in 545_July_13_21_Mbenya R

²⁶⁵⁴ 309:21 p 7 in 545_July_13_21_Mbenya R

²⁶⁵⁵ 312:20 p 9 in 548_July_14_21_Genoni A

²⁶⁵⁶ 313:36 p 11 in 549_July_14_21_Meah N

*Reducing food loss and waste in food systems requires systematic thinking and approaches, with additional policy attention to developing effective market systems, especially for perishables. The market access could be improved by supporting the formation through farmer groups, cooperatives, associations and link them to markets, encourage contractual farming and long-term contractual agreements between growers and processors.*²⁶⁵⁷

*Reducing FLW in food systems with systematic approaches from pre-harvest farm-level losses to post-harvest losses, where additional policy concerns are given to vegetables, fruits and the perishables wastes which accounting for 20-30% of total FLW, not merely the grain losses.*²⁶⁵⁸

*Whole value chain approach for FLW reduction and increase of grain production while aiming at carbon neutrality approach. Develop anti-food loss regulations and rules to cultivate consciousness of saving food and supervise the implementation of laws from the government level.*²⁶⁵⁹

*For many farmers, particularly smallholders, lacking financial means to implement food loss-reducing investments such as better storage solutions is a major impediment. One of the key actions needed in the food system to reduce food loss is therefore to financial innovation and incentive mechanisms. Since 1994, the Agriculture Development Bank of China (ADBC) was set up as one of China's Policy Banks with a set mandate to contribute to agricultural development and poverty alleviation. ADBC has introduced a loan system that covers every segment of the food supply chain, which includes a series of credit products to serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc. All these advancements have the potential to reduce food waste through making processes more efficient and streamlined. Furthermore, ADBC implement preferential credit policies to support and further incentivize reduction of grain waste and losses.*²⁶⁶⁰

*Participants emphasized cooperation throughout the Dialogue. There is an inherent interdependency in the food system, and each player impacts others' capacities to act. There is a need for more coalitions and collaborations not only between food businesses but across the entire food and agriculture system. Together, these individual players can have a much larger positive impact.*²⁶⁶¹

The Dialogue also identified the challenge of communicating the interdependence of all food system players in a way that is easy to understand. At the consumer level, sustainable food businesses need to make it convenient and easy for eaters to think about eating not only for human health but planetary health. New labels, for example, can frame carbon footprints similar to calories on food packaging. Companies must find

²⁶⁵⁷ 315:5 p 6 in 551_July_15_21_FAO_ESCAP_Multi

²⁶⁵⁸ 315:17 p 8 in 551_July_15_21_FAO_ESCAP_Multi

²⁶⁵⁹ 315:18 p 8 in 551_July_15_21_FAO_ESCAP_Multi

²⁶⁶⁰ 315:27 p 10 in 551_July_15_21_FAO_ESCAP_Multi

²⁶⁶¹ 316:7 p 6 in 553_July_15_21_Food Tank_Oatly

*simple ways to show that their products are part of many solutions to a large, interconnected problem.*²⁶⁶²

*Participants highlighted that sustainable food businesses have an opportunity to challenge the status quo. Multi-stakeholder business models that value the planet, community, workers, eaters, and natural resources can help move the focus from a singular devotion to profit. Large companies have the scale, resources, and ability to influence change that smaller businesses don't have. But as these smaller businesses demonstrate financial and cultural success and find ways to engage with larger multi-national food companies, they can influence how large companies operate, helping to create greater impact.*²⁶⁶³

*Moving forward, participants focused on the need to shift core values not only for food business but the consumers purchasing from them. With simultaneous and interconnected planetary crises, it's not enough for companies to be less harmful; sustainability and equitability must be inherent in their core products or services -- not just side product lines -- and companies should find a way to include advocacy in their work.*²⁶⁶⁴

*Participants also spoke about marrying conversations surrounding sustainability more broadly. Often, food-specific discussions and climate-specific discussions focus on the same issues in separate forums. The food and agriculture system needs to be brought fully into the global conversation surrounding the climate crisis at forums like UNFCCC's COP. The industry should acknowledge its role in the global environmental, human health, and social justice crises, and also recognize its potential as a powerful solution for those same crises.*²⁶⁶⁵

*Some of the ideas in transforming the society beyond feeding the society is as follows...Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.*²⁶⁶⁶

*The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: o Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems.*²⁶⁶⁷

Participants agreed that evaluation is able to deliver the knowledge and evidence needed to inform decision-making leading to transformation of food systems. For this to happen and for the evaluation community to fully release its potential, the field of evaluation

²⁶⁶² 316:15 p 7 in 553_July_15_21_Food Tank_Oatly

²⁶⁶³ 316:16 p 8 in 553_July_15_21_Food Tank_Oatly

²⁶⁶⁴ 316:22 p 9 in 553_July_15_21_Food Tank_Oatly

²⁶⁶⁵ 316:23 p 9 in 553_July_15_21_Food Tank_Oatly

²⁶⁶⁶ 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

²⁶⁶⁷ 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

*needs to keep up to and evolve as much as are the development challenges we are confronted to, which are becoming increasingly complex and urgent.*²⁶⁶⁸

*Evaluation tools and frameworks have to be adapted to address and to analyze the complexity of the food systems and make a difference. This is already happening and participants shared two examples moving in this direction: i) The CGIAR is developing its new research programme cycle, in which they revised methods used, approaches, areas to analyze, among others. This revision led to enhancing the way in which evaluations should be carried out, and what they should prioritize. ii) The Nourish for flourish diagnostic evaluation/needs assessment, provides an example of a diagnostic evaluation to determine food security needs, carried out at the provincial level in Cape Town in partnership with Academia and other stakeholders, leading to a multilevel stakeholder discussion, which enhanced the engagement among stakeholders towards food systems key areas of improvement. Outcomes were taken by the provincial government to develop a strategy for improving food systems. This exercise, which can be seen as a process use evaluation, helped create community and government led groups to discuss and address food security issues.*²⁶⁶⁹

*Participants emphasized that to address complexity it is important to use participatory approaches and the engagement of stakeholders, particularly small-scale farmers. For instance, the qualitative impact protocol (QUIP) puts the farmers at the center of the system, helps to understand the contribution of other actors and linkages. Inclusive and equitable evaluations were also suggested to address root-causes of inequalities: indigenous evaluations and feminist approaches in particular.*²⁶⁷⁰

*Regarding specific tools and methods that evaluators can use to address the complexities of food systems and their transformation, Theories of Change were mentioned, and in particular new nested approaches to Theories of Change design, which are important for bringing stakeholders together. In the toolbox of evaluators, there should also be a place for Stakeholder mapping, and in order to deepen and expand on specific stakeholders input and influence, influence mapping in decision-making.*²⁶⁷¹

*It is important to advocate for strengthening the evaluation culture and to balance accountability and learning, aiming for evaluation to become everyone's business.*²⁶⁷²

*However, one solution to this issue maybe to persuade State Governments to do more to dissuade their populations and businesses from putting everything into an economic context and focusing much more on the human and environmental impacts that this current model is having. It was suggested by participants that we need to shift from GDP focussed development to quality of life and sustainable development.*²⁶⁷³

²⁶⁶⁸ 320:7 p 7 in 557_July_15_21_EvalForward_FSRD

²⁶⁶⁹ 320:8 p 7 in 557_July_15_21_EvalForward_FSRD

²⁶⁷⁰ 320:10 p 8 in 557_July_15_21_EvalForward_FSRD

²⁶⁷¹ 320:11 p 8 in 557_July_15_21_EvalForward_FSRD

²⁶⁷² 320:14 p 9 in 557_July_15_21_EvalForward_FSRD

²⁶⁷³ 323:32 p 11 in 560_July 19_21_Arbutnott_Multi

*The food and land use system offers a critical opportunity to achieve multiple goals, or potential for a win-win-win scenario: alongside climate and emissions reduction outcomes, nature-based solutions offer the ability to achieve broader environmental goals (including healthy soils, sustainable water use, protection and restoration of biodiversity) as well as supporting regional livelihoods and healthy diets.*²⁶⁷⁴

*The need for coordinated action across stakeholders and at different scales to achieve multiple goals, and to realise win-win-win scenarios, where outcomes across climate and emissions reduction are achieved alongside nature and broader environmental goals, as well as supporting regional livelihoods and healthy diets.*²⁶⁷⁵

*There are many powerful tools available to reduce methane emissions from livestock such as feed additives, manure management, and animal efficiency. While reducing enteric methane emissions is promising it is not the only strategy. In fact, reaching 50% methane reduction will be an uphill battle with feed additives as our only weapon. There is no silver bullet for farmers. We must look at the system as a whole and make reductions along the supply chain at every chance we have. If we zoom out and look at the whole system we can begin to identify inefficiencies. We then must communicate these efficiencies to the whole supply chain.*²⁶⁷⁶

*Establish an integrated, multi-sectoral strategic approach to nutrition, specifically inclusion of hygiene awareness.*²⁶⁷⁷

*Complexity of the issue/need to integrate complementary programs to school meals, especially with governance structures such as CONSEA or the Food Procurement Program...*²⁶⁷⁸

*The availability of healthy and nutritious food for all requires actions at the levels of supply, operation-transportation/conditioning/distribution, and demand from individuals and States that purchase food for vulnerable populations).*²⁶⁷⁹

*Innovate the processes that make up the Food System from production to consumption, based on co-innovation and technical assistance.*²⁶⁸⁰

*The presentation of FF as a system of production and development beneficial to humanity should be incorporated at all formal educational levels, not only in primary schools, and the message should be conveyed to those responsible for providing food in educational centers.*²⁶⁸¹

Food sovereignty was defined as a principle of struggle which will lead to the food security nations of the world aspire to. The strategies that will mark this route will be

²⁶⁷⁴ 326:5 p 6 in 563_July_20_21_ClimateWorksAustralia

²⁶⁷⁵ 326:13 p 8 in 563_July_20_21_ClimateWorksAustralia

²⁶⁷⁶ 328:7 p 9 in 565_July_20_21_Mitloehner_Kebreab

²⁶⁷⁷ 330:69 p 13 in 568_July_21_21_Cooper-Liverpool M

²⁶⁷⁸ 339:35 p 9 in 393a_June_01_21_Food of Tomorrow_Eng

²⁶⁷⁹ 340:2 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

²⁶⁸⁰ 340:10 p 9 in 406a_June_10_21_COPROFAM_CLOC_Eng

²⁶⁸¹ 340:14 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

*adherence to a comprehensive and mainstream agrarian reform and agroecology as a guarantee of healthy, diversified daily production. This is what can impact all stages of the agri-food chains.*²⁶⁸²

*Make joint efforts, from the Government, companies, agro-industries and other stakeholders, so that it can be produced in a sustainable way and with the nutritional elements required by the diet of the Dominican population, contemplating adequate planning of what is produced, imported and exported.*²⁶⁸³

*Nutrition requires a multi-layered approach; it is necessary to promote the consumption of foods with specific socio-environmental, cultural and nutritional characteristics. Intersectoral and inter-ministerial partnerships are required in order to ensure Food and Nutrition Security.*²⁶⁸⁴

*A plan among local governments for promoting access to food through holistic actions is necessary.*²⁶⁸⁵

Interconnected

*Establish Vegetable Business Hubs to provide crop management knowledge and connect producers with traders, processors, input and credit vendors.*²⁶⁸⁶

*Bringing families and communities together to connect over food and identity is critical to revival and pride in one's culture.*²⁶⁸⁷

*Bringing people and communities to connect with the 'aina (land) and caring for the land is also an important cultural practice.*²⁶⁸⁸

*Food Systems Framework: This framework should be connected to the proposed national hubs, where Indigenous Peoples need to be present, also to ensure enhanced understanding of diversity of contexts.*²⁶⁸⁹

*The main requests of the young changemakers were that diversity should be considered as a unifying factor along the entire chain of future food systems, in the sense that a dense network of deeply connected small and different realities leads to more resilience and better collaboration.*²⁶⁹⁰

They stressed the importance to reconnect with food traditions, retouch cultural values, invest on social capital, connect the food we eat with its environment, conceptualize new

²⁶⁸² 345:3 p 6 in 419a_June_08_21_CLOC_Eng

²⁶⁸³ 350:20 p 8 in 424a_June_28_21_PROLIDER_Eng

²⁶⁸⁴ 351:1 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

²⁶⁸⁵ 351:3 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

²⁶⁸⁶ 16:42 p 8 in 251_Jan_25_21_World Vegetable Center

²⁶⁸⁷ 19:45 p 5 in 115_Apr_24_21_Foronda_Multi

²⁶⁸⁸ 19:46 p 5 in 115_Apr_24_21_Foronda_Multi

²⁶⁸⁹ 21:12 p 7 in 180_Apr_7_21_GHIPFS

²⁶⁹⁰ 22:11 p 9 in 191_Apr_16_21_Donati L

*ways of planning territories and use the urban areas as connectors to build a more dense and interconnected system.*²⁶⁹¹

*It has been also said that a food system is like a living organism where everything is interconnected and it works well only if everything else is in harmony.*²⁶⁹²

*Moreover, the young changemakers highlighted the importance of connecting modern practices with the original roots, as a way to embrace small-holder realities and change the system.*²⁶⁹³

*Participants in the eight discussion groups were able to openly voice their opinions and exchange broadly on potential solutions to the complex and interconnected challenges that Mediterranean food systems are facing.*²⁶⁹⁴

*Recognize complexity: The Dialogue recognized that food systems are complex and also interconnected with other systems.*²⁶⁹⁵

*After all, the interconnectivity, the access to know-how, the change of the perception of reality introduced by the digitalization era is showing that, while an acceleration in terms of classic scaling up is occurring, at the same time a tissue of new forms of interconnected local economies blending new traditions, social proximity, sustainability and affordability is growing fast.*²⁶⁹⁶

*However, points critical for food systems transformation came to the surface, including: - the need for comprehensive definition of sustainability; - acknowledgement of complexity & interdependency of food systems; - the need for holistic, cross-sectoral, multi-level approaches to multifaceted complex issues; - the lack of education on healthy lifestyles, and especially on healthy sustainable food systems; - the need for comprehensive, interconnected, evidence-based policy; - the lack of data as key hurdle, and integration of key performance indicators; - the need to improve representation of businesses/industry, as well as of farmers & citizens in the FSSD, who all must be part of the solution; - existence of vested interests, and the polarisation that they can lead to; - the need to recognize the true cost of food; - the need for tradeoffs between local and global food systems; - the need to recognize differences in production, consumption, and the different needs of the food systems transformation between Global North & South.*²⁶⁹⁷

*How will connecting the knowledge dots get us there?*²⁶⁹⁸

My last word goes to my colleague and friend, Oliver Oliveros, who has brought us together here, and who is running a champions network of around 200 high-profile champions from all over the planet, who help in connecting between the global, the pre-

²⁶⁹¹ 22:39 p 7 in 191_Apr_16_21_Donati L

²⁶⁹² 22:40 p 7 in 191_Apr_16_21_Donati L

²⁶⁹³ 22:41 p 9 in 191_Apr_16_21_Donati L

²⁶⁹⁴ 23:97 p 3 in 205_Apr_27_21_CiHEAM_Multi

²⁶⁹⁵ 51:11 p 3 in 137_Mar_24_21_Ejezie J

²⁶⁹⁶ 60:49 p 6 in 021_Jan_27_21_Donati L

²⁶⁹⁷ 66:89 p 15 in 052_Feb_25_21_EUFIC

²⁶⁹⁸ 66:106 p 8 in 052_Feb_25_21_EUFIC

*summit in Rome, the summit in New York, and the local - bringing their constituencies, bringing their expertise, bringing their networks together.*²⁶⁹⁹

*The fundamental principle of this shift is that everything is interconnected.*²⁷⁰⁰

*From a systems thinking perspective, it requires a paradigm shift from a linear, structured “mechanical worldview” to a dynamic, chaotic, interconnected array of relationships and feedback loops.*²⁷⁰¹

*Since everything is interconnected, there are constant feedback loops and flows between elements of a system.*²⁷⁰²

*...it essential to strengthen rural and urban linkage that recognizes the peculiarities of the different farming systems in rural areas, including connecting with conflict-affected areas.*²⁷⁰³

*There are many global frameworks of relevance that we really need to connect with and get the movement involved.*²⁷⁰⁴

*Connect young people, universities, and research centers with all Mérida food system shareholders in developing innovations.*²⁷⁰⁵

*We also need to find ways to connect the various shareholders for developing solutions based on our knowledge and experience.*²⁷⁰⁶

*Fostering digital transformations of the fresh food supply chain to ensure better price, improved access to healthy quality diets, and for better connections between producers, markets, and consumers (for example, by connecting farmers’ groups to electronic national markets where machines check food quality, develop e-commerce platforms, etc.).*²⁷⁰⁷

*Education to better food habits, connecting consumers with the raw product/impact of the production methods should be in this context a priority.*²⁷⁰⁸

*Four pillars have been recognised in this respect: bringing together the social and the natural, creating or strengthening positive flows and interactions within and between food systems, making space for pluralism and connecting food with other public goods (health, well-being, the environment, the welfare system).*²⁷⁰⁹

²⁶⁹⁹ 74:116 pp 8–9 in 189a_April_16_21_Ateneo de Manila

²⁷⁰⁰ 74:117 p 17 in 189a_April_16_21_Ateneo de Manila

²⁷⁰¹ 74:118 p 17 in 189a_April_16_21_Ateneo de Manila

²⁷⁰² 74:119 p 18 in 189a_April_16_21_Ateneo de Manila

²⁷⁰³ 74:120 p 25 in 189a_April_16_21_Ateneo de Manila

²⁷⁰⁴ 74:121 p 31 in 189a_April_16_21_Ateneo de Manila

²⁷⁰⁵ 75:68 ¶ 66 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

²⁷⁰⁶ 75:69 ¶ 75 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

²⁷⁰⁷ 77:46 p 8 in 108_Apr_13_21_Carrara E_Multi

²⁷⁰⁸ 78:48 p 7 in 110_Apr_14_21_Carrara E_Multi

²⁷⁰⁹ 81:45 p 6 in 145_May_6_21_Vandenschrik J_Multi

*Connecting food with other complex systems and policy priorities is a key factor, both for the private and NGO sectors.*²⁷¹⁰

*Food Banks are important actors in this food system transformation where it is necessary to connect food with other important aspects and priorities in the governments arena, health, welfare, housing and transports.*²⁷¹¹

*Everything it is interconnected and to face a problem it is necessary to look at the entire picture with all the interconnectivities.*²⁷¹²

*Act with Urgency: In the "Clarification of Opinions" session, all participants are invited to share their thoughts and action plans. Be Respectful: The speaker, Ms. Yang Wenping (Principal of Hao Tang Village Primary School, Pingqiao District, Xinyang City, Henan Province), has been practicing food education activities in Hao Tang Village Primary School to protect and improve the personal health and well-being of school children (mainly left-behind children) while respecting the local culture and national context of the Hao Tang Village area. Recognize Complexity: The dialogue convener, Mr. Jian Yi, and Professor Shahbaz Khan, Director of UNESCO China, both focused on recognizing the complexity in their presentations.*²⁷¹³

*Intersectional recommendation: Advocate to put an end to socio-political conflicts, protect populations against insecurity, and strengthen the health and protection systems of vulnerable populations in the face of health crises.*²⁷¹⁴

*All rights are interconnected (human rights, natural rights, rights to a healthy and sustainable environment, etc) except for corporate rights which are frequently prioritized over the rights of people. We must move from theory to action by initiating practical pilot projects within our respective communities.*²⁷¹⁵

*o Waste and reuse is a public health issue.*²⁷¹⁶

*These observations demonstrate a loophole in a local market characterized by unstable supplies and access to healthy food. The promotion of nutrition-sensitive agriculture could allow producers to receive more consideration from political authorities, so their needs could be heard and the food supply could be stabilized and secured. We know that food systems are weakened by security, health, climatic, or demographic shocks. These various types of shocks are present in Niger, and this decreases the availability of healthy and nutritious food. Strengthening links between producers and processors around nutrition issues is therefore an opportunity to be seized by both parties to stabilize the food system.*²⁷¹⁷

²⁷¹⁰ 81:46 p 6 in 145_May_6_21_Vandenschrik J_Multi

²⁷¹¹ 81:47 p 6 in 145_May_6_21_Vandenschrik J_Multi

²⁷¹² 81:52 p 13 in 145_May_6_21_Vandenschrik J_Multi

²⁷¹³ 508:6 p 3 in 069_May_16_21_SFEAN_Multi

²⁷¹⁴ 510:42 p 6 in 079a_May_27_21_NGA_Soung_Eng

²⁷¹⁵ 512:15 p 6 in 088_May_28_21_Divine NTF

²⁷¹⁶ 513:28 ¶ 244 in 090a_May_29_21_Theunissen D_Eng

²⁷¹⁷ 517:10 p 5 in 100a_June_10_21_Hainikoye IM_Eng

*Outcomes for each discussion topic Discussions led to the establishment of important axes to achieve a more sustainable and equitable food system. In particular, cooperation with the political authorities was recommended in order to set up subsidies that could help farmers invest in good quality equipment and facilitate their work and the achievement of a satisfactory production yield. These subsidies could also make it possible to invest in quality and certified seeds, and in sustainable agricultural inputs for production that respects the environment and does not risk the health of consumers. In addition, it would improve production, in terms of both quantity and quality, without increasing the prices of raw materials and staple foods in the local diet and decreasing the purchasing power of Nigeriens. With subsidies for agricultural inputs, it will be easier for farmers to secure an income and establish a fair food system.*²⁷¹⁸

*However, this could happen, so it is important to prepare the production chain of these sensitive foods to comply with this standard. In addition, to ensure the quality and health safety of these infant flours, it is important to support producers and processors in setting up traceability and quality procedures (Good hygiene and manufacturing practices, HACCP, etc.). In order to make these procedures compulsory, it would be important to first formulate a standard for the traceability of foodstuffs, which could then be adopted into law.*²⁷¹⁹

*The most topical issues such as ensuring food and biological safety of the country, health of farm animals, and livestock produce trends; biodiversity of forest resources and fertilization system of field crop rotation; problems of ensuring food safety and the impact of food safety on human health; agricultural clustering and agro-business development; processes and potentials of agricultural education and science, were discussed.*²⁷²⁰

*Most of these situations have resulted in reduced economic and physical availability of food. That also led to deterioration of health and immunity.*²⁷²¹

*Therefore, when making decisions regarding the development and regulation of the agro-business and the consumption of agricultural products, one must consider cross-sectoral positive and negative effects, including the human well-being trends, the quality and availability of products manufactured, returns to scale, etc.*²⁷²²

It is necessary to pay more attention to a comprehensive solution not only to the production problem, but also to the processing and destruction of generated waste, as well as to increase the deep processing of products (fish, aquaculture, etc.), while considering the tasks and needs of all key agro-business sectors and consumers. At the same time, manufacture and supply of products with higher added value and processing to international markets should not replace current ones, but supplement them, while

²⁷¹⁸ 517:11 pp 6–7 in 100a_June_10_21_Hainikoye IM_Eng

²⁷¹⁹ 517:12 p 7 in 100a_June_10_21_Hainikoye IM_Eng

²⁷²⁰ 519:34 p 5 in 106a_June_18_21_Nurgaziev R_Eng

²⁷²¹ 519:37 p 9 in 106a_June_18_21_Nurgaziev R_Eng

²⁷²² 507:1 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

*contributing to expanding the supply and forming more favorable conditions for product consumers.*²⁷²³

*Achieve internal consistency and inter-sector integration carried out by the state both in agriculture and processing industry and in the field of education, science, etc...*²⁷²⁴

*Information system for exchanging skills and services: Take an inventory of residents' skills and strengths; what we do and what we produce; an inventory for linking producers with transformers.*²⁷²⁵

*The panel discussed innovative ways to connect research with policy and action to ensure aquatic foods are recognized as part of game-changing solutions in the 2021 UN Food Systems Summit.*²⁷²⁶

*Creating an enabling environment for research to connect with policy to ensure sustainable production and consumption of safe and nutritious aquatic foods.*²⁷²⁷

*The various action tracks are interconnected and the leadership of AT1 and 2 was presented at the webinar.*²⁷²⁸

*The forces that shape food systems are interconnected.*²⁷²⁹

*Factors to consider include: • Planetary boundaries as interconnected elements.*²⁷³⁰

*While it sustains us and connects us, our food systems are severely distant resulting in a disconnect and reduction in the value we place on food within our value-chain.*²⁷³¹

*Our theme connects Food Systems to Environmental Degradation and Climate Change.*²⁷³²

*The UN Food Systems' Summit should not condemn any one type of food production but rather recognize that all systems are interconnected and have opportunities for continual improvement, including livestock, and work with livestock stakeholders to ensure mutual goals of sustainable consumption patterns are reached.*²⁷³³

²⁷²³ 507:5 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

²⁷²⁴ 519:20 p 7 in 106a_June_18_21_Nurgaziev R_Eng

²⁷²⁵ 526:11 p 7 in 124a_July_18_21_FEA Hatillo_Eng

²⁷²⁶ 82:28 p 5 in 150_Apr_30_21_GANSFOIWFSN

²⁷²⁷ 82:32 p 6 in 150_Apr_30_21_GANSFOIWFSN

²⁷²⁸ 82:47 p 3 in 150_Apr_30_21_GANSFOIWFSN

²⁷²⁹ 86:57 pp 5–6 in 162_Apr_16_21_Fountain G

²⁷³⁰ 86:58 p 6 in 162_Apr_16_21_Fountain G

²⁷³¹ 86:59 p 12 in 162_Apr_16_21_Fountain G

²⁷³² 87:25 p 5 in 173_Mar_25_21_Mayne A

²⁷³³ 90:36 p 11 in 206_Apr_27_21_CCANCC

*The fundamental principle of this shift is that everything is interconnected.*²⁷³⁴

*From a systems thinking perspective, it requires a paradigm shift from a linear, structured “mechanical worldview” to a dynamic, chaotic, interconnected array of relationships and feedback loops.*²⁷³⁵

*Since everything is interconnected, there are constant feedback loops and flows between elements of a system.*²⁷³⁶

*In addition, data must be married with human input to be meaningful, enabling effective joint action by many stakeholders in a complex interconnected system.*²⁷³⁷

*Developing policy and institutional supporting arrangements that can connect different scale models to achieve impact.*²⁷³⁸

*It is important to promote the idea of interconnected and complex WEF systems.*²⁷³⁹

*Connecting final consumer to farmer using tech could double the profit of farmer.*²⁷⁴⁰

*Participation in the global orientation and training for convenors, curators, and facilitators was very useful in appreciating the principles of engagement and the potential impact of linked and interconnected efforts on food systems change.*²⁷⁴¹

*The entire food system of the world is inextricably connected to land.*²⁷⁴²

*The breakout questions were chosen to explore the complexity and interconnected nature of our food systems and areas to learn and better work together.*²⁷⁴³

*House insecurity, homelessness, food insecurity...all interconnected – monitor these to determine success.*²⁷⁴⁴

*As the global population grows, food safety and food fraud are also more interconnected – we need to categorise food risks accordingly and make sure that consumers do not have an over-abundance of information and/or mixed messaging that impacts what they can assess and how.*²⁷⁴⁵

If we are to succeed in addressing the interconnected crises of climate change, biodiversity loss, social inequities and human health, we need to bring the value provided

²⁷³⁴ 103:142 p 17 in 007a_Dec_18_20_NAAGD

²⁷³⁵ 103:143 p 17 in 007a_Dec_18_20_NAAGD

²⁷³⁶ 103:144 p 18 in 007a_Dec_18_20_NAAGD

²⁷³⁷ 104:35 p 1 in 051a_Feb_24_21_Google

²⁷³⁸ 117:112 p 14 in 109_Apr_13_21_Jacobs-Mata I

²⁷³⁹ 117:113 p 15 in 109_Apr_13_21_Jacobs-Mata I

²⁷⁴⁰ 118:80 p 13 in 117_Apr_22_21_Dinesh D_Multi

²⁷⁴¹ 121:67 p 3 in 130_May_22_21_Foronda R_Gloria C

²⁷⁴² 152:74 p 5 in 262_May_04_21_ILC_Multi

²⁷⁴³ 153:49 p 3 in 263_May_06_21_CCGA

²⁷⁴⁴ 163:189 p 12 in 300_May_27_21_Alesso_Pommeret

²⁷⁴⁵ 207:35 p 10 in 366_May_27_21_Cumbers S

*by nature, people and society to the forefront of decision-making to transform food systems.*²⁷⁴⁶

*Systems thinking, as part of comprehensive food systems evaluations, can illuminate how natural, human, social and produced capital linked to food systems are interconnected.*²⁷⁴⁷

*Today, more than ever, the region is facing unprecedented and interconnected environmental, economic and social challenges that affect food security, health, nutrition, sustainability, and, thus, the livelihoods of all people across the Mediterranean.*²⁷⁴⁸

*Moreover, policy-makers are constrained to take into consideration a web of interconnected and interdependent components, within a decision-making environment concerning food systems is very fragmented, with a wide range of voices from different interest groups and agendas, with diverse institutional and agro-ecological constraints in countries and territories on all shores of the Mediterranean.*²⁷⁴⁹

*Panel 1 introduced the topic of partnerships as a dialogue across all shores of the Mediterranean towards strengthened regional cooperation on SFS, overcoming fragmented sectorial approaches and jointly coping with the multiple interconnected challenges facing the region.*²⁷⁵⁰

*By taking into account the interconnected social, environmental, economic and nutritional and health-related challenges present in the Mediterranean, it was stressed that it is crucial to adopt an integrated approach, people-centered and specific to the Mediterranean context, to provide a better understanding of the multidimensionality of the sustainability of food systems, by linking the sustainable management of natural resources with the sustainable food consumption and production (SCP).*²⁷⁵¹

*An example of positive behaviour to encourage is connecting with on-the-ground action and transferring that upwards.*²⁷⁵²

*Many connections were made between personal health and environmental well-being – and the complex, intricate food system that connects them.*²⁷⁵³

*Globalized food systems, as they currently exist, are a vast interconnected economic system that do not have the well-being of people and the planet at their core.*²⁷⁵⁴

All existing ones are binary modes of assessing, but it is a continuum where personal spectrometry products or more targeted nutrition science can allow people to have a

²⁷⁴⁶ 220:29 p 5 in 381_June_08_21_UNEP_Multi

²⁷⁴⁷ 220:31 p 6 in 381_June_08_21_UNEP_Multi

²⁷⁴⁸ 244:52 p 5 in 480_June_21_21_CiHEAM_Multi

²⁷⁴⁹ 244:53 p 5 in 480_June_21_21_CiHEAM_Multi

²⁷⁵⁰ 244:54 pp 8–9 in 480_June_21_21_CiHEAM_Multi

²⁷⁵¹ 244:55 p 9 in 480_June_21_21_CiHEAM_Multi

²⁷⁵² 245:48 p 10 in 481_June_23_21_Global Counsel

²⁷⁵³ 247:13 p 3 in 483_June_24_21_Mandal_Goodman

²⁷⁵⁴ 247:14 p 6 in 483_June_24_21_Mandal_Goodman

*holistic understanding of the food in front of them and how it connects to the idea of food as medicine.*²⁷⁵⁵

*Connecting regenerative agriculture and organic agriculture with institutional health care.*²⁷⁵⁶

*The industry-science collaborations that have worked well, share some characteristics: a clear task at hand, a clear and time bound strategy and goals that are aligned with other initiatives including the SDGs as a common anchoring point.*²⁷⁵⁷

*However, dialogue attendees felt that for this myriad of interventions and tools to be truly effective, there is a greater need to look at how these can be connected across the whole food system, and an increased need for connectivity across different actors, solutions and legislation focused on reducing food waste.*²⁷⁵⁸

*The group discussed a need to engage a group of advocates to champion the need to reduce food waste, with a need to then use these advocates to mainstream arguments against food waste and ensure the topic is connected in peoples 'hearts and minds' to wider issues, such as climate change and biodiversity loss.*²⁷⁵⁹

*Recognise complexity: Throughout the dialogue, we always recognised that sustainability in the context of our food system is complex, and closely connected to human and animal health, land, water, climate, biodiversity, the economy, and geopolitics.*²⁷⁶⁰

*Health and sustainability are connected.*²⁷⁶¹

*An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets.*²⁷⁶²

*The value lies in treating these considerations as an interconnected set to help ensure innovation is truly transformative, and/or in understanding which area we can be best at, while supporting others to act on the remaining areas (and certainly without undermining them).*²⁷⁶³

By linking the Dialogue to the Food Systems Summit Action Track 4, and connecting to the other action tracks, we increased the awareness of aquatic foods as part of sustainable food systems, and highlighted the importance of system-based approaches to advance equitable livelihoods with aquatic foods. - We recognised the urgent topics being eliminating poverty, reducing risks for the world's poorest, and addressing inequitable access to resources, to improve resilience through social protection and seek

²⁷⁵⁵ 249:59 p 10 in 485_June_22_21_Levesque_SD

²⁷⁵⁶ 249:60 p 14 in 485_June_22_21_Levesque_SD

²⁷⁵⁷ 251:32 p 6 in 487_June_29_21_Selwyn_Multi

²⁷⁵⁸ 253:23 p 6 in 489_June_22_21_Rare China Centre_Multi

²⁷⁵⁹ 253:24 p 8 in 489_June_22_21_Rare China Centre_Multi

²⁷⁶⁰ 256:65 p 3 in 492_June_23_21_Liu_JA

²⁷⁶¹ 257:22 p 8 in 493_June_23_21_Kevany_Van

²⁷⁶² 259:36 p 6 in 495_June_23_21_Forum for the Future

²⁷⁶³ 259:38 p 8 in 495_June_23_21_Forum for the Future

*to ensure that food systems 'leave no one behind'. - By showcasing cross-sectorial solutions to these topics in current food systems, we promoted the importance of integrating aquatic foods in the Food Systems Summit agenda. - The selected topics were explored from social, economic and environmental perspectives with multiple stakeholder groups. - We recognised the complexity in aquatic foods systems and encouraged collaboration among sectors and stakeholders to achieve the Food Systems Summit goal. - We emphasised regional and applicable solutions to demonstrate that sustainable aquatic food production can coexist with local and traditional practices. - We advertised the Dialogue on different platforms to reach out to all possible stakeholder groups around the world. - The stakeholders were introduced to the Global Action Network: Sustainable Food from the Ocean and Inland Waters mission which are in line with the Food Systems Summit goals and objectives, and relevant SDGs. - The private sector, civil society, including academic institutions, and regional and intergovernmental organisations play important roles together with various nations in the world to realise the potential of aquatic foods contribution to food security and nutrition.*²⁷⁶⁴

*To ensure respect of the Principles of Engagement, the following measures were taken. The webinar (hereafter Dialogue) was designed to highlight actions and solutions by showcasing examples on "how to walk the talk", discussing how to connect research and policy and how to scale up solutions for advancing equitable livelihoods with aquatic foods.*²⁷⁶⁵

*The dialogue was convened so that it welcomed participants and enabled them to engage purposefully with open exchanges, listen to each other and be open to the co-existence of divergent points of view. - The Dialogue commits directly to the vision and goals of Food Systems Summit Action Track 4 (advance equitable livelihood), and connects to other actions tracks, as well as the UN Nutrition Decade, and UN 2030 Sustainable Development Goals (SDGs). - Recognising the complexity of the aquatic food systems (healthy waters, sustainable harvesting/production, food security, nutrition and healthy people, equity etc), the Dialogue included multiple perspectives.*²⁷⁶⁶

The Dialogue was open for all to sign up to thus participants from multiple stakeholder groups around the world could join. - A holistic food chain approach was taken, highlighting interlinked areas important to the four pillars of sustainability and motivate innovative thinking and approaches to deliver system-level transformation. - The Dialogue was carefully designed to ensure the diversity of the panels and participants (gender ratio, global representation, participants from middle- and low-income countries, vulnerable groups, women and youth). - This Dialogue was free and open and provided an opportunity to share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for the common good. - To ensure the

²⁷⁶⁴ 263:60 p 3 in 499_June_25_21_GANSF

²⁷⁶⁵ 263:64 p 3 in 499_June_25_21_GANSF

²⁷⁶⁶ 263:65 p 3 in 499_June_25_21_GANSF

*Dialogue contents were transparent and accountable, we incorporated evidence-based solutions, and the event recap was made available to all.*²⁷⁶⁷

*Health and education are therefore, in this context, tightly connected and once fully supported and embraced in the Food System then Kiribati or any nation, in similar context with Kiribati, will grow healthy and will be able to strive forward in generations to come.*²⁷⁶⁸

*How to connect youth with opportunities in sustainable food systems by promoting more and better jobs?*²⁷⁶⁹

*Connecting the challenge of digital access with inclusivity, organizations are struggling with inclusivity of digital technology, not only in terms of how to reach people in terms of internet access, but how to make the technology itself inclusive too • ‘Human centred digitalization’ in agri-food systems can help ensuring existing divides are not deepened and new divides are not created.*²⁷⁷⁰

*As, secondly, the coalition should make sure it connects to local actors, mechanisms and structures.*²⁷⁷¹

*Policymakers and practitioners can work together better to both have the overview of how a system works and what is needed, and connect that to an understanding of how food systems work from the perspective of local people.*²⁷⁷²

*Connecting to existing mechanisms and institutions - Connect to existing mechanisms for NGO coordination, like the Food Security and Livelihood Clusters, local/national universities and research institutes, to develop strong coordination and a joint approach.*²⁷⁷³

*They felt that from an agriculture perspective, people focus on the raw food product, but what happens in the supply chain after that is connected to bigger things.*²⁷⁷⁴

*It connects food and its broader components to other issues.*²⁷⁷⁵

*The dialogue connected those in agriculture sector and those in finance sector and it allowed for innovative solutions such as blended finance facilities towards sustainable agriculture to be discussed in detail.*²⁷⁷⁶

²⁷⁶⁷ 263:66 p 3 in 499_June_25_21_GANSF

²⁷⁶⁸ 265:50 p 3 in 501_June_28_21_Kairo K

²⁷⁶⁹ 272:47 p 5 in 508_June_30_21_GDPRD

²⁷⁷⁰ 272:48 p 10 in 508_June_30_21_GDPRD

²⁷⁷¹ 278:123 p 7 in 514_July_01_21_Bolling_Multi

²⁷⁷² 278:124 p 8 in 514_July_01_21_Bolling_Multi

²⁷⁷³ 278:125 p 14 in 514_July_01_21_Bolling_Multi

²⁷⁷⁴ 280:96 p 9 in 516_July-01_21_Anastasiou K

²⁷⁷⁵ 280:97 p 10 in 516_July-01_21_Anastasiou K

²⁷⁷⁶ 281:21 p 3 in 517_July_03_21_Perera A

*The discussions connected key issues central to UNFSS Action Tracks, such as shifts towards healthy diets, land use, water management, climate, biodiversity, equity, socio-economic aspects.*²⁷⁷⁷

*This Dialogue reflected specific aspects of the Principles, such as: - Elaborated pathways to food systems transformation through innovative, game-changing solutions with aquatic foods to contribute to the 2030 Agenda for Sustainable Development. - Tabled a diversity of stakeholders from different regions and backgrounds – within government, the business community, civil society and research – to identify actions, potential synergies and trade-offs across the food system, from production to consumption. - Added value to existing practices, investments and policy processes by providing a safe platform to share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for healthy people and planet. - Empowered stakeholders to be open-minded and inclusive, fostered new connections, listened to each other and embraced divergent points of view. - Involved multiple stakeholders from diverse regions and backgrounds across different food system sectors to identify actions, potential synergies and trade-offs.*²⁷⁷⁸

*It is crucial for farmers to engage in local markets, connect with cities and consumers requiring the right set of services and produce quality food, reduce losses, and engage with other actors.*²⁷⁷⁹

*The following dimensions can be included in the agenda of territorial governance: • Support strong local food/farmers' markets and connect producers and consumers (to harness their economic and political power).*²⁷⁸⁰

*Connect people to food system processes through dialogue, collaborative mapping for shared understanding and shift narratives.*²⁷⁸¹

*Connect food procurement to climate change and the opportunity to move toward territorial approaches for sustainable food procurement.*²⁷⁸²

*Secondly, because entrepreneurs have the ability to influence the food environment, policy should connect entrepreneurs to the upcoming food dietary guidelines in order to engage the private sector with healthy and nutritious food.*²⁷⁸³

*The Dialogue built on the existing policy processes and initiatives while trying to provide an avenue to connect stakeholders and broaden partnerships to transform food systems.*²⁷⁸⁴

²⁷⁷⁷ 283:7 p 3 in 519_July_05_21_FABLE_Multi

²⁷⁷⁸ 287:8 p 3 in 523_July_06_21_WorldFish_FAO

²⁷⁷⁹ 299:110 p 6 in 535_July_08_UNESCO Chair on Food

²⁷⁸⁰ 299:111 p 9 in 535_July_08_UNESCO Chair on Food

²⁷⁸¹ 299:114 p 10 in 535_July_08_UNESCO Chair on Food

²⁷⁸² 299:115 p 12 in 535_July_08_UNESCO Chair on Food

²⁷⁸³ 300:23 p 6 in 536_July_08_21_Musabyimana JC

²⁷⁸⁴ 305:38 p 3 in 541_July_12_21_AEHT

*Complement the Work of Others- The YFC was able to connect with several youth groups and organizations operating in the region.*²⁷⁸⁵

*Urban farms and urban gardens can be a gateway for youth to learn more about food systems issues and to connect with farmers.*²⁷⁸⁶

*The importance of partnerships with businesses was also underscored, which would enable multidisciplinary collaboration among farmers, NGOs, governments and restaurant owners to design projects that can connect small farmers (especially those from rural areas) to large commercial areas and urban centers.*²⁷⁸⁷

Dialogues Official Feedback Form Dialogue title Food Waste in the DACH region and beyond – connecting academic’s and practitioner’s views Date published 15/07/2021

*Allocate the maximum amount of time reasonable to discussion groups: the dialogue is a unique opportunity to connect a wide array of experts, so sufficient time enabled exploration of their areas of aligned interests and divergence.*²⁷⁸⁸

*Seek permission to connect participants after the event: fostered new relationships by seeking approval prior to share contact details.*²⁷⁸⁹

*The dialogue convened market operators, governments, researchers, civil society, and the private sector to discuss how these groups would connect and collaborate to advance local Market Cities’ strategies.*²⁷⁹⁰

*Participants in each group agreed that they wanted to connect regularly and preferred to meet regionally (North America, Europe, Asia, Africa, and South America) as participants felt like people within their own regions would share similar issues.*²⁷⁹¹

*Moving forward, the Market Cities Initiative will be developing ways for stakeholders to connect through online platforms, events, and conferences.*²⁷⁹²

*Hou Kaidi, Vice President, Pinduoduo E-commerce to reduce the loss of agricultural products • E-commerce platform focusing on agricultural production with cold-chain logistics network could improve procurement efficiency from smallholder farmers to consumers, well connecting transportation and retailing, contributing to food loss and waste reduction.*²⁷⁹³

With simultaneous and interconnected planetary crises, it’s not enough for companies to be less harmful; sustainability and equitability must be inherent in their core products or

²⁷⁸⁵ 307:80 p 3 in 543_July_13_21_YRYFC

²⁷⁸⁶ 307:81 p 11 in 543_July_13_21_YRYFC

²⁷⁸⁷ 310:58 p 8 in 546_July_13_21_INDEP

²⁷⁸⁸ 312:36 p 3 in 548_July_14_21_Genoni A

²⁷⁸⁹ 312:37 p 3 in 548_July_14_21_Genoni A

²⁷⁹⁰ 314:10 p 5 in 550_July_15_21_Danie_Verel

²⁷⁹¹ 314:11 p 6 in 550_July_15_21_Danie_Verel

²⁷⁹² 314:12 p 6 in 550_July_15_21_Danie_Verel

²⁷⁹³ 315:49 p 9 in 551_July_15_21_FAO_ESCAP_Multi

*services -- not just side product lines -- and companies should find a way to include advocacy in their work.*²⁷⁹⁴

*Recognize complexity: Participants came to the Dialogue with the understanding that there is not one solution to the complex challenges the global food system faces, and that the discussion would explore how all players are interconnected and interdependent.*²⁷⁹⁵

*This interconnected nature should also be reflected within each food business model.*²⁷⁹⁶

*Companies must find simple ways to show that their products are part of many solutions to a large, interconnected problem.*²⁷⁹⁷

*Cultural change: consumers increasingly show interest in local food markets as it provides them fresh produce and a better feel to be connected with nearby producers.*²⁷⁹⁸

*Overall, there was an important reflection on the need to change our values and practices and learn from those participants and initiatives that advanced an interconnected approach to the land and to nature; to learn from those who understand and see nature as a living system that deserves respect rather than continuing with a distant and indifferent position to nature, to food, and to those who produce it.*²⁷⁹⁹

*The food systems consists of highly interconnected social, technical, financial, economic, and environmental subsystems, hence their betterment requires a systemic approach.*²⁸⁰⁰

*However, in order to evaluate and inform change of complex and interconnected processes, evaluators should be part of all stages of interventions and engage in an iterative dialogue and co-creative process of change.*²⁸⁰¹

*hat factors influence the regulator's decision-making around regulation encouraging sustainable production and consumption? - Complement the work of others Participants collaborated on the maps they were working on in B/O rooms, and while sharing those maps with others, exploring ways how each groups' map connects with or can build on other existing maps.*²⁸⁰²

*The discussion groups were diverse so as to complement the work of each other, and to connect and share information and innovations so as to build trust across the board.*²⁸⁰³

²⁷⁹⁴ 316:39 p 9 in 553_July_15_21_Food Tank_Oatly

²⁷⁹⁵ 316:42 p 3 in 553_July_15_21_Food Tank_Oatly

²⁷⁹⁶ 316:43 p 6 in 553_July_15_21_Food Tank_Oatly

²⁷⁹⁷ 316:44 p 7 in 553_July_15_21_Food Tank_Oatly

²⁷⁹⁸ 317:44 p 11 in 554_July_15_21_Lopez DE

²⁷⁹⁹ 317:45 p 12 in 554_July_15_21_Lopez DE

²⁸⁰⁰ 319:23 p 3 in 556_July_15_21_Von Goh_GenTan

²⁸⁰¹ 320:25 p 5 in 557_July_15_21_EvalForward_FSRD

²⁸⁰² 322:7 p 3 in 559_July_19_21_Chouchair_Multi

²⁸⁰³ 328:17 p 3 in 565_July_20_21_Mitloehner_Kebreab

*It is our hope that this dialogue serves to “share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for the common good.”*²⁸⁰⁴

*Promote fairs, exhibitions, tastings, in intermediate and major urban centers, to connect FFs with operators and consumers.*²⁸⁰⁵

*Connect AFCI with culinary professionals, so that they can get to know the attributes of their products and increase their demand.*²⁸⁰⁶

*Develop e-commerce that connects AFCI and consumers with health and environmental authorities that support production in agroecological systems.*²⁸⁰⁷

*Enabling aspects: examples of projects and initiatives that are already being carried out were mentioned, such as the Food Bank, the Alimentalistas initiative, the Lloverá foundation, and many others that have ties or relationships with each other and with other organizations for connecting donors with the non-profit organizations that can deliver the food to the end recipients.*²⁸⁰⁸

*Adopt a food systems approach that acknowledges inter-system linkages and the multiple outcomes of the food system.*²⁸⁰⁹

*Better infrastructure can connect local consumers to wider markets, improving consumer choices and access to foods.*²⁸¹⁰

*To make it happen, think about road transportations those for connecting people, knowledge and markets.*²⁸¹¹

*The food systems transformation and the ecological transition should be achieved jointly by addressing with an integrated approach their interconnected environmental, economic and social criticalities.*²⁸¹²

*The assessment of the rural property's landscape considers several interconnected production chains, where there is a need to include the perspective of producers in the design processes of integrated production systems with a forest component.*²⁸¹³

Indigenous Peoples' natural resource management practices and food system designs have a great deal to show the world on how to create "nature-positive" food generation

²⁸⁰⁴ 328:18 p 3 in 565_July_20_21_Mitloehner_Kebreab

²⁸⁰⁵ 341:44 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

²⁸⁰⁶ 341:45 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

²⁸⁰⁷ 341:46 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

²⁸⁰⁸ 352:14 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

²⁸⁰⁹ 358:7 p 6 in 402_June_10_21_Ekwamu_Ei Dukheri

²⁸¹⁰ 359:7 p 8 in 403_June_10_21_ESCAP_Multi

²⁸¹¹ 367:33 p 8 in 411_June_15_21_Mone S

²⁸¹² 386:7 p 7 in 429_July_05_21-CIHEAM Bari

²⁸¹³ 389:13 p 9 in 431_June_22_21_CEBOS_EMBRAPA

*models and the critical importance of enhancing biodiversity through food generation, and the interconnected, systems approach to natural resource management.*²⁸¹⁴

*Commit to investing in infrastructure and capacity building for and by Indigenous Peoples' communities to build accredited processing centres for foods, community gardens/growing areas for traditional foods, and connecting to composting, recycling systems and networks to reduce waste.*²⁸¹⁵

*It is very important that we keep connecting to country because it will help lead us into a healthier life.*²⁸¹⁶

*We want to communicate this to more communities, and we use our food and the number of species we are able to grow to share the importance and benefits (such as increased biodiversity) of rotational farming Little Farm in Big Forest connects storytelling to communicate base knowledge by using social media to help communicate traditional knowledge.*²⁸¹⁷

*Claudia Albertina Ruiz, Chef, Mexico- Traditional gastronomy - I try and get the youth to connect to the flavors of the dishes, connect to the experiences and show them the holistic involvement, bringing what they are eating back to who grows the foods Still lots of discrimination still towards Indigenous Peoples.*²⁸¹⁸

*This was particularly important as the dialogue aimed to specifically connect local producers, CSOs and government stakeholders with their international peers and other stakeholders.*²⁸¹⁹

*While there was consensus that smallholder farmers played a critical role for local food security and sovereignty, there were voices arguing for the necessity of connecting local farmers to export markets as well.*²⁸²⁰

*Place-based agroecology initiatives present an interesting opportunity as it gives the farmers access to the market and directly connects them with local restaurants and retail.*²⁸²¹

*Certifications, connecting production and consumption stages, present an opportunity for systems change.*²⁸²²

²⁸¹⁴ 390:6 p 6 in 432_Dec_15_20_UNPFII_FAO

²⁸¹⁵ 394:5 p 6 in 436_June_16_21_GIYC_Multi

²⁸¹⁶ 394:6 p 10 in 436_June_16_21_GIYC_Multi

²⁸¹⁷ 394:7 p 13 in 436_June_16_21_GIYC_Multi

²⁸¹⁸ 394:8 p 13 in 436_June_16_21_GIYC_Multi

²⁸¹⁹ 396:23 p 3 in 438_June_16_21_Caballero_Multi

²⁸²⁰ 396:24 p 12 in 438_June_16_21_Caballero_Multi

²⁸²¹ 401:12 p 10 in 442_Apr_08_21_Mizenko B

²⁸²² 401:23 p 10 in 442_Apr_08_21_Mizenko B

*Some of the solutions to reduce food loss and waste have been through setting clear targets and making the economic case; contractual arrangements with suppliers and allowing for greater flexibility of contracts between suppliers and buyers; better collaboration between the different players; finding collaborative ways to prevent food loss and waste; repurposing crops that don't meet cosmetic standards; connecting food banks with upstream and downstream players; and supporting the adaptation of new technologies.*²⁸²³

*Practical co-operation through direct producer-consumer linkages, including the adoption of innovative technologies to connect producers/retailers and consumers is another way to trigger the shift to sustainable production and consumption (SCP).*²⁸²⁴

*Participatory governance mechanisms that bring together different food system actors and connect actors from different food agendas are key.*²⁸²⁵

*There is a movement toward connecting these programs and developing overarching food systems visions and goals across local government departments and with local stakeholders.*²⁸²⁶

*To start creating holistic food systems improvements, leadership must come together with the community to develop an overarching vision, develop a structure, and connect programs and people.*²⁸²⁷

*The issues of food justice, racial justice, food sovereignty, community involvement, and sustainable production are all connected.*²⁸²⁸

*There is a strong need to connect with youth and listen to their perspectives through humble and open attitudes.*²⁸²⁹

*These dialogues also recognized the complexity of food systems, by acknowledging that humans, animals, land, water, climate and the ecology and economic systems are all interconnected and fundamental to creating resilient, equitable food systems.*²⁸³⁰

*Designing sessions on the principles of diversity and inclusion from the outset helped to create dialogues that provided an opportunity for different stakeholders to connect across issue and sector silos, share perspectives and elevate areas of convergence and divergence.*²⁸³¹

²⁸²³ 401:24 p 11 in 442_Apr_08_21_Mizenko B

²⁸²⁴ 401:25 p 12 in 442_Apr_08_21_Mizenko B

²⁸²⁵ 401:26 p 13 in 442_Apr_08_21_Mizenko B

²⁸²⁶ 404:7 p 6 in 445_May_26_21_ICLEI USA

²⁸²⁷ 404:8 p 6 in 445_May_26_21_ICLEI USA

²⁸²⁸ 404:9 p 6 in 445_May_26_21_ICLEI USA

²⁸²⁹ 405:5 p 6 in 446_May_27_21_Lyons_Gould

²⁸³⁰ 406:10 p 3 in 447_Jan_29_21_IFAD_Multi

²⁸³¹ 406:11 p 3 in 447_Jan_29_21_IFAD_Multi

*These dialogues also recognized the complexity of food systems, by acknowledging that humans, animals, land, water, climate and the ecology and economic systems are all interconnected and fundamental to creating resilient, equitable food systems.*²⁸³²

*Designing sessions on the principles of diversity and inclusion from the outset helped to create dialogues that provided an opportunity for different stakeholders to connect across issue and sector silos, share perspectives and elevate areas of convergence and divergence.*²⁸³³

*Speakers included three UN FSS Champions Network members, who explored the integral role of research to transform food systems to be renewable, healthy, inclusive, interconnected, and equitable.*²⁸³⁴

*Creating strategic alliances and networks will be critical to bridge the gap between different actors and research bodies involved in food systems, and connecting producers to consumers.*²⁸³⁵

*Experience from villages have shown that many available food are missing from diets because people now have less time to dig, make and set traps, and all the other related activities and traditions connected to wild food.*²⁸³⁶

across issue and sector silos, share perspectives and elevate areas of convergence and divergence.

*Mapping is crucial and should be happening in every city around the world, based on: - What we consume (in the city) - What we have on offer (at local/regional/rural level) - We want the kitchens to be connected with the farmers, and also to bring this collaboration all the way to the teaching materials in the schools, but it needs to both involve the city officials so that not all have to know the procurement rules and how to do a food contract to do the cooking in the kitchens, this is what the project COACH can help with, by creating a teaching material of how to write public procurement that opens up for SME and farmers to give a direct bid to it.*²⁸³⁷

*Furthermore, keeping in line with the Principles of commitment, understanding complexity and respect, the Dialogue was also an opportunity to discuss the implications of climate-related human mobility for food systems, and connect to just recovery from COVID-19, and resilience-building in food systems through just transition as well as to share knowledge, experience, best practices, and lessons learned.*²⁸³⁸

²⁸³² 407:6 p 3 in 448_Feb_25_21_IFAD_Multi

²⁸³³ 407:7 p 3 in 448_Feb_25_21_IFAD_Multi

²⁸³⁴ 407:9 p 5 in 448_Feb_25_21_IFAD_Multi

²⁸³⁵ 407:10 p 6 in 448_Feb_25_21_IFAD_Multi

²⁸³⁶ 408:8 p 9 in 449_March_08_21_Wild Foods_Multi

²⁸³⁷ 417:8 p 7 in 458_May_31_21_Madsen BB

²⁸³⁸ 419:8 p 3 in 460_June_03_21_Ekanayake S

*Connect to just recovery from COVID-19, and resilience-building in food systems through just transition.*²⁸³⁹

*Utilising the opportunities provided by the pandemic to facilitate gender mainstreaming across interconnected issues such as health, nutrition and sustainability.*²⁸⁴⁰

*These dialogues also recognized the complexity of food systems, by acknowledging that humans, animals, land, water, climate and the ecology and economic systems are all interconnected and fundamental to creating resilient, equitable food systems.*²⁸⁴¹

*Designing sessions on the principles of diversity and inclusion from the outset helped to create dialogues that provided an opportunity for different stakeholders to connect across issue and sector silos, share perspectives and elevate areas of convergence and divergence.*²⁸⁴²

*In Uganda, we need to organize farmers into unions so that individuals are not selling individually but as farmer unions who can collectively bargain for better prices - In Uganda, young people avoid agriculture because they consider it not profitable and are selling land to move to city- try to connect youth with older generations to show that you can have a farm and an office job - and that profit is possible; use SBCC with having peer to peer conversations that can show success stories and impact - Promoting Technology in agriculture would demonstrate that it is possible to make a profit by saving time and cost and makes it more attractive to the youth - In the US, youth not really involved in farming unless they grew up doing it as part of a family business - certain neighborhoods should start household cultivation.*²⁸⁴³

*For this, it is important to elect mayors or political leaders that have a clear agenda for a healthy and vibrant city, where everyone can make a decent living, and a city which is well-connected to the surrounding rural areas.*²⁸⁴⁴

*All of these kaupapa (principles) are interconnected and drawn from the māramatanga (Māori knowledge) continuum.*²⁸⁴⁵

*The discussion also addressed specific interconnected SDGs and suggested actions to adopting best impact standards in the food systems value chain and across all other action tracks.*²⁸⁴⁶

Dialogue and bringing people together as fundamental Strengthening the agency of small and medium food producers and suppliers Empowering consumers to be drivers of change Imbedding a hybrid of new agriculture technologies, vertical, hydroponics, greenhouses, to enable communities places to grow anywhere, anytime Addressing

²⁸³⁹ 419:9 p 5 in 460_June_03_21_Ekanayake S

²⁸⁴⁰ 421:16 p 9 in 462_June_10_21_NISD_RySS_Multi

²⁸⁴¹ 423:6 p 3 in 464_June_10_21_IFAD_UNFSS_Multi

²⁸⁴² 423:7 p 3 in 464_June_10_21_IFAD_UNFSS_Multi

²⁸⁴³ 424:9 p 9 in 465_June_16_21_Congressional Hunger

²⁸⁴⁴ 426:3 p 7 in 467_June_17_21_NWGN_Multi

²⁸⁴⁵ 427:6 p 11 in 468_June_18_21_Mayne A

²⁸⁴⁶ 431:21 p 5 in 472_June_18_21_van Oosterhoud_Kusumadireja

*economic and social inequities through creating circular and shared value chains A focus on the local level, but connecting those local systems together to share data, and knowledge globally.*²⁸⁴⁷

*Fiscal justice for women working in food systems Promote exports to generate more income for the women and revenues for the government Surplus- be resourceful about surpluses Mandatory registration of women in cooperatives to ensure access to finance Equitable access to resources (production, capital, extension services) Partnerships support for women in agriculture Improving partnership with financial institutions to enhance women access to funds Extend capacity building to rural women (partner with the national, county governments, Financial Institutions and the grass root women) Connect grass root women to multistakeholder platforms to share their experiences and challenges Link research organizations and various ministries with grass root women to create awareness on new technologies Nutrition- train and provide knowledge on preparation and consumption of nutritious foods to women Partnership with national and county government to implement policies that are gender mainstreamed to support women in agriculture e.g. on issues of land rights, gender just climate solutions among others.*²⁸⁴⁸

*Given that less than a decade is left for the achievement of major SDG targets, the dialogue highlights the need for a conceptual framework that strongly connects problem assessment with response assessment in a living manner and helps to prioritize responses towards a sustainable food system.*²⁸⁴⁹

*We need a dynamic framework that connects the two and delivers usable products like investment mapping, prioritise investment making in near real time conditions with the support of Data foundation, co design, capacity development and contributing to SDG implementation.*²⁸⁵⁰

*Continuing to ensure information-sharing and connecting stakeholders across the board is important.*²⁸⁵¹

*Under each goal we included three columns: role, resource, need, opportunity; person, organization, strategy to offer; and groups or organizations already connected to this work.*²⁸⁵²

*The more we can connect organic as a climate solution, the more compelling it is for the younger generation.*²⁸⁵³

²⁸⁴⁷ 432:2 p 6 in 473_June_18_21_Sheridan S

²⁸⁴⁸ 433:10 p 7 in 474_June_18_21_Matu_Opiyo

²⁸⁴⁹ 441:6 p 1 in 529A_July_07_21_Ziadat_Bhaduri_Feedback2

²⁸⁵⁰ 441:7 p 6 in 529A_July_07_21_Ziadat_Bhaduri_Feedback2

²⁸⁵¹ 463:25 p 11 in 155_Apr_27_21_FCDO_Multi

²⁸⁵² 464:12 p 6 in 185_Apr_14_21_Local Farm_Multi

²⁸⁵³ 468:45 p 7 in 219_May_10_21_OTA

*These dialogues also recognized the complexity of food systems, by acknowledging that humans, animals, land, water, climate and the ecology and economic systems are all interconnected and fundamental to creating resilient, equitable food systems.*²⁸⁵⁴

*The components of urban systems, from food distribution networks and energy grids to transport and greenways, are interconnected and dynamic.*²⁸⁵⁵

*To ensure respect of the Principles of Engagement, the following measures were taken: – The Dialogue was designed to highlight actions and solutions by showcasing examples on "how to walk the talk", discuss how to connect research and policy and how to scale up solutions for sustainable production of aquatic foods as an integral part of the whole food system.*²⁸⁵⁶

*The Dialogue was free and open and provided an opportunity to share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for the common good.*²⁸⁵⁷

We need to bring all parties with us, using digital spaces as open public infrastructure where we can connect as both farmers and citizens.

*By engaging universities and academics more, we could connect young people more to farming/the land, and create a different vision.*²⁸⁵⁸

*It will be important that we find ways to connect the community to local growers and native foods within community to build support for these changes.*²⁸⁵⁹

*An integrated, articulated agriculture interconnected in sustainability will be a type of production that can evolve towards continuous improvement with measurable indicators.*²⁸⁶⁰

*It provided an opportunity to share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for the common good.*²⁸⁶¹

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²⁸⁵⁴ 472:6 p 3 in 241_May_19_21_IFAD_Food Tank_Multi

²⁸⁵⁵ 483:7 p 6 in 283_May_18_21_ICLEI_FAO

²⁸⁵⁶ 485:12 p 3 in 288_May_20_21_GAN_Multi

²⁸⁵⁷ 485:14 p 3 in 288_May_20_21_GAN_Multi

²⁸⁵⁸ 486:25 p 9 in 291_May_21_21_Polman_Prabha

²⁸⁵⁹ 487:9 p 7 in 293_May_22_21_City of San Antonio

²⁸⁶⁰ 491:16 p 7 in 301_May_27_21_CropLife Latin America

²⁸⁶¹ 494:10 p 3 in 308_June_09_21_FAO_Pinduoduo_Multi

²⁸⁶² 495:13 p 3 in 309_June_10_21_ICC_EIT_Multi

²⁸⁶³ 496:11 p 3 in 312_June_15_21_FAO_ICC_Multi

*Connecting producers with who will ultimately be consumers, through technology they can connect, but considering access gaps is an important step.*²⁸⁶⁴

*It provided an opportunity to share promising innovations, connect stakeholders, and broaden partnerships to transform food systems for the common good.*²⁸⁶⁵

*Participants agreed that we need food and health systems based on a preventative health agenda and holistic approaches that take into account interconnected challenges.*²⁸⁶⁶

*It should also be responsive to the diverse communities and represent food customs and heritage. The need for a GLOBAL PERSPECTIVE owned and supported by governments that expresses the value of our food system, recognizes how their countries' systems are interconnected and asks for commitments that will positively influence and incentivize sustainability, health and equity Food Systems Summit.*²⁸⁶⁷

Guiding Theme 22. Learn And Adapt Through Ongoing Evaluation

*Harness technology, ICT and Big Data as critical enablers...*²⁸⁶⁸

*We agreed on the importance of integrating financial and sustainability performance indicators in generated data (certainly curriculum/training needs to showcase this type of 'data' - ie should be more than just showing sensor data feeds). Evidence-based commercial relevance is important.*²⁸⁶⁹

*Increase the availability of information that allows better analysis of difficulties, gaps and roles of women in food systems...*²⁸⁷⁰

*Evidence-based and people-centered approaches that reflect the concerns of producers and multiple stakeholder groups to implement solutions and partnerships at landscape scale.*²⁸⁷¹

*Farmers are making sustainable contributions because of environmental and climate imperatives, but also to achieve greater efficiency and effectiveness. Often this is best achieved through trial-and-error.*²⁸⁷²

Economics and the market help drive innovation, as farmers respond to business economics to cut costs. Farmers need to be at the table as academics and policymakers

²⁸⁶⁴ 496:12 p 7 in 312_June_15_21_FAO_ICC_Multi

²⁸⁶⁵ 497:17 p 3 in 314_June_16_21_ICC_US Farmers_Multi

²⁸⁶⁶ 501:12 p 10 in 397_June_04_21_WHO_Multi

²⁸⁶⁷ 504:10 pp 6–8 in 400_June_09_21_Viera_Pollmeier

²⁸⁶⁸ 1:8 p 6 in 072_Mar_09_21_Sibanda L

²⁸⁶⁹ 2:9 p 9 in 081_Mar_15_21_CRC

²⁸⁷⁰ 3:16 p 10 in 099_Mar_31_21_FAO_IFPRI

²⁸⁷¹ 8:14 p 6 in 169_Apr_6_21_Shea E

²⁸⁷² 8:20 p 9 in 169_Apr_6_21_Shea E

interpret new data and map out new agricultural strategies. Genetics, equipment, GPS, and precision agriculture are all factors in producing and reviewing the data.

The group also raised the question of what measurement components are necessary for farmers to build and focus on. Targets that are based on differences across a county, across a continent, or around the globe.; a focus not on reduction of specific inputs, for example, but targets related to soil health, water conservation, nutrient management, and other factors related to the “circle of life” on the farm and its surrounding areas.²⁸⁷³

A reliable information system is also needed to support the implementation.²⁸⁷⁴

Slaughter age reduction is a clear target for the industry from a profitability and greenhouse gas emission perspective. There needs to be continual focus on selecting animals on feed conversion efficiency in breeds where those traits are available, and encourage other breeds to start collecting the data.²⁸⁷⁵

The role of data and how it can drive business decisions needs to have a practical focus, as it is not just about collection, it is about translation and focussing efforts on the ones that make the biggest difference.²⁸⁷⁶

For WEF Nexus approaches to result in better socio-economic outcomes, first, national and research institutions should put more effort into disseminating and implementing research findings in collaboration with government and with support from international research/education organizations. For example, data on water management could greatly improve through micro-level assessments (e.g. household surveys), and tools/models could be developed so policy making entities have a greater base of evidence.²⁸⁷⁷

It is necessary to create a unified database platform (DB) and develop an information system. These aspects have been proposed by the members of the group and ways in which progress could be assessed, it has been indicated necessity to develop and implement a monitoring system to assess the actions taken. The group participants highlighted that WEF models, tools and frameworks will work for the decision makers when the data which is going to be used for modelling is accurate and trust is established from the source of data.²⁸⁷⁸

The main way stakeholders can implement WEF nexus approaches to improve socio economic outcomes is by having the research sector generate up-to-date data and scientific evidence that governments can use to improve food and energy production, water saving, transboundary water management, sanitation, and health.²⁸⁷⁹

²⁸⁷³ 8:22 p 9 in 169_Apr_6_21_Shea E

²⁸⁷⁴ 10:10 p 9 in 181_Apr_8_21_Miranda

²⁸⁷⁵ 11:4 p 6 in 184_Apr_14_21_Genever_Multi

²⁸⁷⁶ 11:8 p 8 in 184_Apr_14_21_Genever_Multi

²⁸⁷⁷ 17:5 p 6 in 164_Apr_15_21_Anarbekov_Akramov

²⁸⁷⁸ 17:25 p 10 in 164_Apr_15_21_Anarbekov_Akramov

²⁸⁷⁹ 17:31 p 12 in 164_Apr_15_21_Anarbekov_Akramov

*There is a clear disconnect around data and its contribution to the future of land use and production...*²⁸⁸⁰

*Continue developing robust and proper traceability systems from field to fork, which are not currently being fully achieved.*²⁸⁸¹

*Create information systems to identify problems and promote solutions for food insecurity in island settings.*²⁸⁸²

*The reactions of the two external speakers were amazing, as they underlined the important message of the Bites of Transfoodmation community. Indeed, they felt inspired and considered that equal access to digitalization, technology and connectivity is a crucial goal to ensure sustainable future food systems. However, despite equal access, they highlighted the importance of filtering good information from bad information (the way we distinguish good quality food from bad quality food). Mirja Michalscheck and Francesco Holecz also confirmed that technology is only a vehicle of change, since people are the ones ensuring change; data and artificial intelligence just facilitate the process. Finally, they concluded their interventions by suggesting that there is a need for a legal framework regarding technology, so that the whole society can operate through these rules: the idea behind it is to make sure that responsibilities do not only lay on the consumer's side, but also on the authorities.*²⁸⁸³

*The need for reliable data both quantitative, and especially qualitative.*²⁸⁸⁴

*Regional Platform for the digitalization and data collection on fisheries and aquaculture.*²⁸⁸⁵

*It was agreed that there is a lack of proper scientific evidence and poor documentation of traditional natural farming practices. These should be taken up on a priority basis and disseminated to both farmers and policy makers.*²⁸⁸⁶

*There is an urgent and continued need for robust data and innovation, and for food systems policies to be informed by and formulated based on science.*²⁸⁸⁷

*Development of an evidence-based decision-making process by collecting, analysing, and sharing food system data and scientific analysis for the purpose of supporting the transformation process.*²⁸⁸⁸

²⁸⁸⁰ 18:12 p 9 in 114_Apr_19_21_Maurer H_Roskrug N

²⁸⁸¹ 18:16 p 10 in 114_Apr_19_21_Maurer H_Roskrug N

²⁸⁸² 19:9 p 6 in 115_Apr_24_21_Foronda_Multi

²⁸⁸³ 22:9 p 8 in 191_Apr_16_21_Donati L

²⁸⁸⁴ 23:30 p 7 in 205_Apr_27_21_CiHEAM_Multi

²⁸⁸⁵ 23:44 p 8 in 205_Apr_27_21_CiHEAM_Multi

²⁸⁸⁶ 26:29 p 9 in 023_Jan_29_21_Bharat K S

²⁸⁸⁷ 28:8 p 6 in 064_Mar_4_21_Farming First

²⁸⁸⁸ 36:10 p 6 in 096_Mar_29_21_ESCWA

*Create data centers that provide advice to food industries in Arab region • Implement an Arab regional strategy to ensure food safety.*²⁸⁸⁹

*Our landscape support organizations reiterated the need for long-term institutional support for landscape partnerships. They highlighted the following key areas where they requested support from the UNFSS: • Technical support through data, tools, technology, and knowledge exchange for improved scenario planning and decision-making.*²⁸⁹⁰

*Secondly, the group talked about connectivity, knowledge and digitalization. It suggested that, in order to shift our food systems, on one hand we need knowledge coming from family, school, etc. to know how and what to consume and on the other hand we need data to improve the provision of food in terms of diversification and personalization to make it more accessible.*²⁸⁹¹

*Close(r) interaction between financial institutions and women clients • Training and capacity building in financial and investment literacy for women • Ensuring that women know what data to collect and how to present it to financial institutions, and that financial institutions have a good understanding of women's constraints and possibilities in relation to data collection and tracking.*²⁸⁹²

*Enhancing data collection tools to capture the data of vulnerable groups, the inclusion of these vulnerable groups in policy planning and implementation processes, incentivizing groups by providing tailored education and support for them, are some of the strategies to build a more inclusive food system in the country.*²⁸⁹³

*The design of a comprehensive central data collection and sharing platform/database for the agricultural sector that multiple parties can benefit from is crucial. There must be harmonized and inter-connected central data gathering, storage, and sharing platform in the agricultural sector at a national and/or sub-national level.*²⁸⁹⁴

*Implementation of a robust well-structured data management system.*²⁸⁹⁵

Improving data management systems and information sharing systems to ensure a fair and up to date flow of research for all agriculture stakeholders. This initiative also stimulates much beneficial dialogue and provides feedback to focus on relevant areas of research and development. Improving on biomass conversion, sustainable waste management and investing in energy efficient technologies to lower the total dependency on commercial monopoly type energy sources. Improving on the research and information of agrometeorological work done by several organisations to increase the

²⁸⁸⁹ 36:19 p 7 in 096_Mar_29_21_ESCWA

²⁸⁹⁰ 37:15 p 8 in 097_Mar_30_21_EcoAgriculture Partners

²⁸⁹¹ 39:9 p 7 in 175_Mar_16_21_Donati L

²⁸⁹² 42:16 p 9 in 178_Apr_8_21_AGRA_Multi

²⁸⁹³ 44:10 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

²⁸⁹⁴ 44:17 p 8 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

²⁸⁹⁵ 44:26 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

*chances of healthier food production, less wastage and a higher chance of managing climate risks in agriculture.*²⁸⁹⁶

*Sensor networks for real time information, better data quantity and quality, decision making. Data storage and analysis for precision agriculture and actionable knowledge.*²⁸⁹⁷

*Further explore food systems by drawing on data and evidence to guide: 1. Public policy—including subsidies, taxing, and food labeling—with regard to food security, public health, climate change and the environment, farmer livelihoods, and the needs of women, youth, and underserved groups. 2. Businesses, including financial investments, research and development, and innovation. 3. Research, education, and civil society to advance the SDGs.*²⁸⁹⁸

*Given the extent of transformation that will be required to adapt food systems to address climate change and ecology, as well as food security and public health, participants focused on The urgency of data and evidence to evaluate trade-offs, and make adjustments in an iterative and timely manner. Practices that are needed for food system sustainability: Participants expressed the importance of involving a variety of stakeholders in the process of developing innovative solutions to transform to end to end food systems. They emphasized the importance of collecting data and evidence about trade-offs and what works, leveraging technology for sharing real-time information, and being inclusive.*²⁸⁹⁹

*There is a necessity for change in terms of how we frame our food system. We can do this by collecting data at all points in the supply chain. This data should not serve as a marketing strategy or profit tool for retailers / brand owners but rather as a way to shape food and trade policy to support local communities, create new financial instruments to support producers, and create information that is useful for consumers.*²⁹⁰⁰

*Data infrastructure for metrics and standardized metrics, perhaps through the ESG lens, applying success from other sectors for a pathway to impact - we open ourselves to women's empowerment, access to healthy foods and nutritious foods, etc.*²⁹⁰¹

*Design blended structures with a deliberate agenda of data generation, financing innovation, learning, and informing policy, rather than just with an agenda of mobilizing capital on a time-bound basis.*²⁹⁰²

²⁸⁹⁶ 50:25 p 10 in 087_Mar_20_21_Chinapoo C_Multi

²⁸⁹⁷ 51:7 p 7 in 137_Mar_24_21_Ejezie J

²⁸⁹⁸ 54:18 p 5 in 002_Nov_19_20_CGIAR

²⁸⁹⁹ 54:35 p 9 in 002_Nov_19_20_CGIAR

²⁹⁰⁰ 60:25 p 8 in 021_Jan_27_21_Donati L

²⁹⁰¹ 63:12 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁹⁰² 63:30 p 8 in 037_Feb_12_21_Food Systems for the Future_Multi

*Data infrastructure for metrics and standardized metrics, perhaps through the ESG lens, applying success from other sectors for a pathway to impact - we open ourselves to women's empowerment, access to healthy foods and nutritious foods, etc.*²⁹⁰³

*Proposal: Systematic screening and data collection, which is nutrition insecure.*²⁹⁰⁴

*Proposal: substantial budgeting for research as a permanent part of the masterplan. Setting measurable goals in all aspects: health and nutrition, economy, welfare, education, etc.) Proposal: collecting data and researching food loss and food waste through the whole food system – from agriculture to households. Legislation of coerced treatment of food loss and food waste throughout the food systems – from livestock and plant agriculture to industrial and municipal food waste.*²⁹⁰⁵

Theme 2: the establishment of an inclusive regulatory authority for national food and nutrition Proposal: mapping and solving conflicting policies through system thinking according to the masterplan Proposal: establishing Big Data integration center to cope with the huge challenges of contradicting regulation and lack of data in significant parts of the food system in Israel (lack of data on antimicrobial resistance, food insecurity population, the nutritional composition of agriculture production) Proposal: the healthy and sustainable food basket recommendation of the Israeli ministry of health for nutrition insecure population should be the compass for policies and implementation – fields dedicated for certain plantation (allocations of agricultural land to specific yields, guidance to which food can be donated and which food cannot be donated for the nutrition insecure population and more. Theme 3: Regulation and policies

*Collecting data and more research about effective strategies for food security, awareness, industrial development, and agricultural practices.*²⁹⁰⁶

*There is a need to include animals' welfare in the general policy. 9. We have to work according to safety standards for safe food. There are gaps. We do not have enough data and transparency. There is a shortage of budget to gather the data on the complex issues of antibiotic use, infections, etc. In comparison to Europe 10.*²⁹⁰⁷

The needs reliable information sources on healthy, sustainable, and safe nutrition

*Obtain sufficient data on where food is wasted along the supply chain, to develop tailored system solutions for reducing it at the source...*²⁹⁰⁸

Ensure data driven approach: o conduct research into food waste and losses at different community levels to focus interventions on where the problem is most critical, and to tailor them to local specificities; o test the effectiveness of interventions, then promote and scale-up the most effective ones; o collect data for food aid necessity - at

²⁹⁰³ 63:49 p 11 in 037_Feb_12_21_Food Systems for the Future_Multi

²⁹⁰⁴ 64:12 p 6 in 041_Feb_17_21_Adler D

²⁹⁰⁵ 64:17 p 6 in 041_Feb_17_21_Adler D

²⁹⁰⁶ 64:68 p 11 in 041_Feb_17_21_Adler D

²⁹⁰⁷ 64:76 p 12 in 041_Feb_17_21_Adler D

²⁹⁰⁸ 66:31 p 9 in 052_Feb_25_21_EUFIC

*(inter)national, but also local and neighbourhood level - to understand where the excesses can spill over to where there is a need.*²⁹⁰⁹

*The main goals for the future are to focus, have energy and the desire to work together to build a better infrastructure that can let Food Banks collect, share and take out meaningful information throughout data.*²⁹¹⁰

*There is a lack of open access analytical data on nutrients and contaminants in aquatic foods following the value chain. The importance of accurate information on the nutrient-content of locally available aquatic foods is a prerequisite for consumers to understand their impacts on food and nutrition security.*²⁹¹¹

*Clear data showing regionalized differences across New Zealand This includes data on what people are eating, how it is grown and where it is from. It's important to look at what consumers want and to have data that takes the full food system into account. This means a broad set of data that considers differences and represents regions across New Zealand.*²⁹¹²

*Tailored education strategies In order to support the children of Aotearoa we need to ensure we have data on what and how this new generation is eating. Organizations that provide education to children around food would have better insight from new data on this generation and it would allow them to provide tailored education and measure the effectiveness.*²⁹¹³

*Emphasis was placed on the importance of climate information for decision-making. Having access to more information, coupled with good research and development, and reinforcing strategic planning, was presented as a transformative solution.*²⁹¹⁴

*Both of these (and other, such as One Health) areas will benefit from stronger, credible, well-communicated scientific evidence to inform all stakeholders, from policy makers to farmers to consumers and schoolchildren on the choices and implications as well as appropriate incentives. Presently, this is hampered by multiple very different global statistics which are often inappropriately extrapolated.*²⁹¹⁵

*Scale – innovation can be difficult to scale up, due to costs but also behaviour. It is hard to make people change their behaviour because of culture and habits. For this we need communication, data.*²⁹¹⁶

To make a commitment, business leaders must have (1) the data and evidence to understand their current baseline, (2) a vision for where they want to be in accordance

²⁹⁰⁹ 66:43 p 10 in 052_Feb_25_21_EUFIC

²⁹¹⁰ 81:5 p 7 in 145_May_6_21_Vandenschrik J_Multi

²⁹¹¹ 82:15 p 8 in 150_Apr_30_21_GANSFOIWFSN

²⁹¹² 87:14 p 8 in 173_Mar_25_21_Mayne A

²⁹¹³ 87:15 p 8 in 173_Mar_25_21_Mayne A

²⁹¹⁴ 89:17 ¶ 75 in 186a_Apr_15_21_Caballeros_eng

²⁹¹⁵ 93:5 p 6 in 227_May_18_21_Tarawali S

²⁹¹⁶ 99:25 p 8 in 285_May_20_21_TFFF_Multi

with the SDGS and (3) a well-researched plan to close the gap with reasonable probability of economic return.²⁹¹⁷

The direct and indirect utility of data sharing is emergent. While some benefit from sharing data in alignment with values, others do not. As a result, costs outweigh unclear benefits.²⁹¹⁸

Data, properly disaggregated, to benchmark and measure impact is crucial.²⁹¹⁹

Clearly establish a national sustainability benchmarking process, linked to a robust data collection framework, that transparently shows how Canadian producers perform environmentally on a global stage.²⁹²⁰

A second key enabler of change centers on the idea of 'knowledge fueling action'. This relates to leveraging science, research, collaboration, data and new technologies to enhance decision-making among all of the actors in the food chain and in policy. This will include measurement systems across the food chain to track progress and enhance transparency.²⁹²¹

We would generate unambiguous data about sustainability and our food system and solutions to problems.²⁹²²

Precision livestock farming and better use of existing data were also proposed; however, technology was not seen as a panacea and may impose higher costs on farmers.²⁹²³

It was agreed that smart technologies have a major role to play across the full supply chain, from soil to food, and that blockchain will be an important tool for enhancing transparency in the system. Critical actions to be undertaken include identifying the gaps in knowledge, data and technology, increasing engagement and supporting education in the area.²⁹²⁴

The participants identified contributions they could make through measurement and provision of real-time data, independent validation of methodologies and education for farmers on the use of smart technologies.²⁹²⁵

In summary, the participants agreed that a data-driven approach is key to identifying the best return on investment but this requires collaboration. Measurement systems are

²⁹¹⁷ 104:13 p 4 in 051a_Feb_24_21_Google

²⁹¹⁸ 104:19 p 1 in 051a_Feb_24_21_Google

²⁹¹⁹ 108:12 p 7 in 059_Feb_26_21_O'Doherty M

²⁹²⁰ 110:2 p 6 in 067_Mar_05_21_O'Doherty M

²⁹²¹ 112:12 p 6 in 074_May_18_21_O'Mara_Teagasc

²⁹²² 112:56 p 10 in 074_May_18_21_O'Mara_Teagasc

²⁹²³ 112:69 p 12 in 074_May_18_21_O'Mara_Teagasc

²⁹²⁴ 112:73 p 13 in 074_May_18_21_O'Mara_Teagasc

²⁹²⁵ 112:80 p 13 in 074_May_18_21_O'Mara_Teagasc

*required across the food supply chain, keeping in mind that transparency is important.*²⁹²⁶

*There is an urgent need for verifiable, factual information for all stakeholders.*²⁹²⁷

*Data and evidence needs to be made more readily available and fact-checking facilities created.*²⁹²⁸

*Availability of platforms to disseminate data (smart phones, infrastructure) to food system actions in an efficient manner.*²⁹²⁹

*Systems to provide data for smallholders to allow them to aggregate to sell products and export are also essential.*²⁹³⁰

*Scientific evidence or information should be made available to decision makers.*²⁹³¹

*MEASURING IMPACT, TRANSPARENCY, AND TRACEABILITY: (1) Low-cost digitization solutions to allow data gathering and increase transparency (2) Address the digital divide, by supporting farmers to access and use digital solutions.*²⁹³²

*This requires simplified tools to measure and assist on local scale. What is measured gets done; for which ways to measure natural capital and ecosystem benefits must be standardized to overcome the challenge of true pricing and reaching scale. We need to find simple measures for the different facets that are very context specific to examine the kinds of impacts achieved and measurements that have been adopted. B. In order to address the lack of evidence on the environmental and social impact of different blended instruments, different actors, such as the CGIAR Commission, should leverage evidence of the impact of different investment models on sustainable agricultural intensification. Research by SAFIN/Convergence should call to donors to focus more resources around four types of blended models that are designed to combine scale of financial mobilization and scale of development impact.*²⁹³³

*The ideal state that was mentioned included climate adaptation/resilience risk analysis into ESG approaches and financial risk approaches. One of the examples to reach this ideal state was the KPI directory for the sustainable land-use finance done by UNEP, this to exemplify how indicators can be harmonized and how to start using some metrics that could be applied to investment.*²⁹³⁴

²⁹²⁶ 112:81 p 13 in 074_May_18_21_O'Mara_Teagasc

²⁹²⁷ 112:94 p 14 in 074_May_18_21_O'Mara_Teagasc

²⁹²⁸ 112:102 p 16 in 074_May_18_21_O'Mara_Teagasc

²⁹²⁹ 113:8 p 6 in 075_Mar_10_21_IFAN

²⁹³⁰ 113:42 p 11 in 075_Mar_10_21_IFAN

²⁹³¹ 117:22 p 10 in 109_Apr_13_21_Jacobs-Mata I

²⁹³² 118:17 p 6 in 117_Apr_22_21_Dinesh D_Multi

²⁹³³ 118:37 p 10 in 117_Apr_22_21_Dinesh D_Multi

²⁹³⁴ 118:57 p 12 in 117_Apr_22_21_Dinesh D_Multi

*The need for more data and evidence to better understand the risks of mass cultivation for carbon sequestration.*²⁹³⁵

*The only obstacle to this in their view was the need to overcome uncertainty in the industry with data and evidence.*²⁹³⁶

*Increase data collection efforts.*²⁹³⁷

*Data collection & value chain mapping are priority actions in the short term.*²⁹³⁸

*Data collection and value chain mapping efforts were seen as priority actions. These could begin with a comprehensive mapping of edible seaweed species, the regions in which they are produced, how much is available, and how it can be used. This process can lead to accountability and help ensure that producers receive a fair price for their work.*²⁹³⁹

*Data and metrics: Identifying metrics for measurement for programs is important and will contribute to availability of data, measuring success, identifying problems and improving programs. Quality disaggregated data should be built into programs before developing metrics for program.*²⁹⁴⁰

*Gather and standardize gender disaggregated data (sex, age, all categories) so that there is objective and scientific information to work with.*²⁹⁴¹

*Gender disaggregated data will facilitate not only the understanding of actual issues women face but would also be very useful to direct attention and efforts into areas that require support.*²⁹⁴²

*Establish a multi-centered research initiative involving all island food system stakeholders to assess nutritional content and pricing of local food as an urgent public health measure.*²⁹⁴³

*This revealed we need more data to comprehensively understand the risks as well as the benefits but so far research demonstrates that these practices can introduce contaminants into our agricultural systems.*²⁹⁴⁴

A holistic approach and reliable database on water resources and their use across Pakistan is the key to achieving food, water, and energy security in the fifth most climate-

²⁹³⁵ 119:13 p 7 in 121_Apr_28_21_Doumeizel V

²⁹³⁶ 119:18 p 7 in 121_Apr_28_21_Doumeizel V

²⁹³⁷ 119:51 p 14 in 121_Apr_28_21_Doumeizel V

²⁹³⁸ 119:55 p 15 in 121_Apr_28_21_Doumeizel V

²⁹³⁹ 119:60 p 15 in 121_Apr_28_21_Doumeizel V

²⁹⁴⁰ 120:8 p 5 in 127_May_13_21_IAFN_CWFS

²⁹⁴¹ 120:42 p 15 in 127_May_13_21_IAFN_CWFS

²⁹⁴² 120:54 p 19 in 127_May_13_21_IAFN_CWFS

²⁹⁴³ 121:21 p 7 in 130_May_22_21_Foronda R_Gloria C

²⁹⁴⁴ 124:2 p 6 in 142_May_11_21_Carter L_Dennis S

*vulnerable country in the world, participants of the UN Food Systems Summit Independent Dialogue (Pakistan) have reported.*²⁹⁴⁵

*The group concluded that our institutions could engage in developing WEF models further and can assist in designing protocols for data collection and management (including sharing of data).*²⁹⁴⁶

*We need to create more demand for independent, verifiable data. Greater demand for independent data that isn't just provided by companies who are self-reporting...*²⁹⁴⁷

*Collecting more data that describe how water and food security interact at farm level in Egypt.*²⁹⁴⁸

*Targeting research to understand the needs of the community and collect data on the most important actions and interventions including co-designed-and informed decision tools.*²⁹⁴⁹

*Gather on-the-ground data and information related to water scarcity and develop relevant tools.*²⁹⁵⁰

*Data and evidence i. Provide one-stop-shop for gender indicators and sex-disaggregated data across the food systems. ii. Ensure that young people have access to data and accurate data to make a precise decision and scale up their business across the continent.*²⁹⁵¹

*It matters who is using and managing data should not be misused or captured.*²⁹⁵²

*Proper data management is urgently needed to accelerate equitable support systems.*²⁹⁵³

*Any collaborative initiative needs to start with an identification of needs, before solving the problem. Also, it is necessary to bring evidence to the table in policy-making and design processes.*²⁹⁵⁴

*Another key aspect for well-functioning MSPs is to provide quality information and data along the whole value chain, to improve measuring, monitoring, and learning.*²⁹⁵⁵

²⁹⁴⁵ 127:1 p 7 in 159_Apr_21_21_Hafeez M

²⁹⁴⁶ 127:47 p 14 in 159_Apr_21_21_Hafeez M

²⁹⁴⁷ 128:10 p 7 in 168_May_18_21_Food Foundation_Multi

²⁹⁴⁸ 132:33 p 9 in 193_Apr_19_21_Ringler_Kassim

²⁹⁴⁹ 132:36 p 10 in 193_Apr_19_21_Ringler_Kassim

²⁹⁵⁰ 132:40 p 10 in 193_Apr_19_21_Ringler_Kassim

²⁹⁵¹ 137:28 p 8 in 212_May_04_21_Akinbamijo Y

²⁹⁵² 138:28 p 12 in 214_May_05_21_50by40

²⁹⁵³ 139:9 p 6 in 216_May_06_21_Ben_Aniabi

²⁹⁵⁴ 141:13 p 10 in 229_May_18_21_NFP_Rabobank_Multi

²⁹⁵⁵ 141:20 p 11 in 229_May_18_21_NFP_Rabobank_Multi

*In order to overcome extreme gender inequality within food systems, participants suggested the need for gender-sensitive data collection, gender empowerment programs at the state level and legislative action to involve women in policymaking.*²⁹⁵⁶

*Methods discussed to advance equitable livelihoods in local food systems by working with international and state governments, local communities, and men and boys included: *collecting measurable gender-sensitive data, especially around women's work *supporting international agreements to measure gender data in farming (and other activities).*²⁹⁵⁷

*Such collaboration will allow to have more data and therefore to develop more efficient policies. Assessments will help municipalities to understand local realities and needs (Need to have a clear picture of quantity, quality and seasonality of products, and of number of trucks circulating).*²⁹⁵⁸

*Recognise and guarantee land titles for pastoralists. Information technology can be used to provide data on pastoralists' populations and their land use.*²⁹⁵⁹

*Creating economic incentives, selecting appropriate data baselines, and recognizing local and regional context will strengthen engagement in sustainability measures.*²⁹⁶⁰

*Center climate change in all decisions and support SSF communities in preparing for climate change impacts with funding, capacity building initiatives, and increased access to data on impacts.*²⁹⁶¹

*There is a need to show the impacts of improved practices - needs to be improved evidence on how changes in farmer practice can drive improvements in sustainability. This is going to be a crucial for building sustainable markets for nature-positive agriculture.*²⁹⁶²

*Collect and utilize community-generated data, and ensuring community members are informed about management decisions.*²⁹⁶³

*Support participatory, equitable data collection that uses technologies/instruments that are adaptable and flexible to different contexts.*²⁹⁶⁴

²⁹⁵⁶ 143:13 p 6 in 231_May_19_21_MCD

²⁹⁵⁷ 143:33 p 11 in 231_May_19_21_MCD

²⁹⁵⁸ 151:35 p 9 in 261_May_03_21_Carrara_Le More

²⁹⁵⁹ 152:33 p 8 in 262_May_04_21_ILC_Multi

²⁹⁶⁰ 153:9 p 6 in 263_May_06_21_CCGA

²⁹⁶¹ 155:24 p 6 in 272_May_12_21_Battista W

²⁹⁶² 158:15 p 6 in 279_May_18_21_Yoovatana M_Multi

²⁹⁶³ 161:25 p 6 in 296_May_25_21_Battista W

²⁹⁶⁴ 161:36 p 8 in 296_May_25_21_Battista W

*Participants noted that social media platforms could translate into data using back-end analytics and that google forms could then be used to enter profiles of engagers on social media.*²⁹⁶⁵

*...gathering additional data on some of the most pressing issues to inform policymaking,*²⁹⁶⁶

*Data governance.*²⁹⁶⁷

*The need to establish a clear strategic plan for food systems data. Data is “the lifeblood of decision-making and the raw material for accountability”.*²⁹⁶⁸

*A clear road map for data is needed in Africa. At the moment, there’s an ad hoc approach to data collection and use across Africa.*²⁹⁶⁹

*Data financing. Government agencies and the private sector need to find resources to build local capacity for data.*²⁹⁷⁰

*Transparency and accountability in sharing of data. Data should be made accessible to all the actors along the food systems and the private sector should share their rich sources of data for food systems decision-making.*²⁹⁷¹

*The need to establish a clear strategic plan for data. Data is “the lifeblood of decision-making and the raw material for accountability” and for leading the changes required.*²⁹⁷²

*Data financing. Government should allocate both institutional and financial resources; and the private sector must put together mechanisms of contributing resources to building local capacity for data. Measurements/data generation is costly.*²⁹⁷³

*There should be a clear and deliberate roadmap for food systems data collection. This involves the use of data to guide actions and policies (on all components of the food system). The role of data in informing policies for better food systems cannot be overstated. Food systems actions, practices, and policies must be evidence-informed. Advocacy informed by data can play a role in promoting development on positive policy instruments.*²⁹⁷⁴

²⁹⁶⁵ 167:41 p 9 in 311_June_14_21_NCD Child

²⁹⁶⁶ 167:55 p 10 in 311_June_14_21_NCD Child

²⁹⁶⁷ 170:95 p 17 in 328_May_19_21_Lalor_Teagasc

²⁹⁶⁸ 177:15 p 6 in 335_May_26_21_Laar_Multi

²⁹⁶⁹ 177:16 p 6 in 335_May_26_21_Laar_Multi

²⁹⁷⁰ 177:17 p 6 in 335_May_26_21_Laar_Multi

²⁹⁷¹ 177:19 p 6 in 335_May_26_21_Laar_Multi

²⁹⁷² 177:29 p 7 in 335_May_26_21_Laar_Multi

²⁹⁷³ 177:30 p 7 in 335_May_26_21_Laar_Multi

²⁹⁷⁴ 177:33 p 7 in 335_May_26_21_Laar_Multi

*All food systems actors (including SMEs) should be involved in the data value chain. They need data to help monitor actions or inactions of food systems actors, and to help facilitate the transformations that we request of our food systems.*²⁹⁷⁵

*Diets are primary endpoint in food systems. But there is scarce data on diets, in national food systems and sub-national food systems. The following questions are important: Can we track with robust indicators of diet quality? Can we monitor diet quality on ongoing basis? How do we know that the population is eating? How do we know that the population is healthy? We need data to answer all these questions. We need data for planning, and also for decision-making at every level of the food systems.*²⁹⁷⁶

*Also, data is very important in influencing politicians.*²⁹⁷⁷

*Recognition of indigenous peoples' lands; starting from collecting data on indigenous peoples and their living spaces, then recognizing the existence of indigenous peoples by providing clear and legal legitimacy for their existence and living space areas to minimize cases of expropriation of customary law communities' territories by companies and the state.*²⁹⁷⁸

*Prepare a database of biodiversity, especially those related to local food and its nutritional content to the community. Thus, positive perceptions and knowledge regarding local food will be built.*²⁹⁷⁹

*Involving and supporting Indigenous Peoples in the process of gathering data and evidence that supports the need to preserve their knowledge, lands, and waters. Those processes should also be led by Indigenous Peoples.*²⁹⁸⁰

*Implementation of low-cost technology solutions may be shared with indigenous populations to improve data quantity and quality.*²⁹⁸¹

*The availability of space-based data may be used to substantially improve such plans when combined with information from indigenous populations.*²⁹⁸²

*The frequency and availability of space-based data may aid indigenous populations in making better decisions about crop management/resilience.*²⁹⁸³

*Incorporate digital data and models into education to encourage better decision-making.*²⁹⁸⁴

²⁹⁷⁵ 177:34 p 7 in 335_May_26_21_Laar_Multi

²⁹⁷⁶ 177:35 p 7 in 335_May_26_21_Laar_Multi

²⁹⁷⁷ 177:36 p 7 in 335_May_26_21_Laar_Multi

²⁹⁷⁸ 185:32 p 8 in 343_May_28_21_Abdullah_S

²⁹⁷⁹ 185:50 p 10 in 343_May_28_21_Abdullah_S

²⁹⁸⁰ 188:35 p 9 in 346_May_31_21_CANEUS_Multi

²⁹⁸¹ 188:36 p 9 in 346_May_31_21_CANEUS_Multi

²⁹⁸² 188:38 p 9 in 346_May_31_21_CANEUS_Multi

²⁹⁸³ 188:39 p 9 in 346_May_31_21_CANEUS_Multi

²⁹⁸⁴ 194:4 p 7 in 352_June_04_21_Troughton J

*Use digital data to make decisions easier for farmers.*²⁹⁸⁵

*How we can build it - IoT sensors can push precision environmental data to the cloud for every farm/ modern farm equipment/automated drone flights/ privacy can be built in so users use their own data.*²⁹⁸⁶

*Continental scale datasets enable amazing things with ML/AI.*²⁹⁸⁷

*Capturing lots of Data creating data insights.*²⁹⁸⁸

*Conduct soil monitoring and evaluation, and develop a database.*²⁹⁸⁹

*Conduct soil monitoring and evaluation, and develop a database • Commodity management and soil nutrient balance calculation.*²⁹⁹⁰

*The absence of specific data to measure the contributions of women in food systems, as well as their specific challenges and needs (e.g. their exclusion from necessary productive resources like financial instruments, technology, training, etc.), places them at greater risk of being left behind by development processes. Speakers affirmed the need for desegregated data to measure and give visibility to the work done by women (both formal and informal), so as to target national policies and budgets to their special needs and support their leadership in ensuring food security.*²⁹⁹¹

*The panel was completed by Gabriella Arrigo, Head of International Relations at the Italian Space Agency (ASI) and Susie Snyder, International Campaign to Abolish Nuclear Weapons (ICAN) who gave testimonies of successful international cooperation projects involving women in leadership positions in fields normally reserved to men. The novelty of their presentations was the relation between space missions and nuclear disarmament to the promotion of sustainable and inclusive food systems, particularly through the collection of data and the promotion of peace.*²⁹⁹²

*Speakers affirmed the need for desegregated data to measure and give visibility to the work done by women (both formal and informal), so as to target national policies and budgets to their special needs and support their leadership in ensuring food security.*²⁹⁹³

*1. The creation of an online database with food safety and food source information that could be accessed by multiple stakeholders including consumer.*²⁹⁹⁴

²⁹⁸⁵ 194:8 p 7 in 352_June_04_21_Troughton J

²⁹⁸⁶ 194:32 p 11 in 352_June_04_21_Troughton J

²⁹⁸⁷ 194:36 p 11 in 352_June_04_21_Troughton J

²⁹⁸⁸ 194:45 p 12 in 352_June_04_21_Troughton J

²⁹⁸⁹ 196:15 p 6 in 354_June_07_21_NAMAC

²⁹⁹⁰ 196:32 p 7 in 354_June_07_21_NAMAC

²⁹⁹¹ 200:5 p 6 in 359_May 17_21_FAO_IFAD

²⁹⁹² 200:8 p 6 in 359_May 17_21_FAO_IFAD

²⁹⁹³ 200:10 p 8 in 359_May 17_21_FAO_IFAD

²⁹⁹⁴ 207:15 p 8 in 366_May_27_21_Cumbers S

*Enhancing availability of and access to data on key elements of food systems and outcomes is important for facilitating evidence-based discussion and policy development.*²⁹⁹⁵

*To design these policies, quality statistical data is needed which clearly measures the different contributions of family farmer.*²⁹⁹⁶

*...generation and use of evidence for decision making...*²⁹⁹⁷

*...data to inform and predict future scenarios...*²⁹⁹⁸

*Evidence: generating it, sharing it, using it...*²⁹⁹⁹

*Data: to inform and predict future scenarios of decisions...*³⁰⁰⁰

*With regional FAO initiatives run by multidisciplinary teams operating in various countries, it is essential for institutions to have a joint knowledge base to ground strategies upon.*³⁰⁰¹

*It is important for the UN system to translate siloed research into a multi-goal format with principles, standards, and time-based deliverables, and; o Human empathy is required to communicate science, without judgement, in order to convene diverse stakeholders (e.g., Syngenta, BASF, Mars, Ben's Original, etc.) • Food systems refer to the entwined relationships between humans and natural biophysical resources in systems. It is important, therefore, to have trained professionals who can: 1. Listen and understand other disciplines; 2. Discuss clearly with stakeholders, and 3. Present findings and participate effectively in policymaking. The lack of transferable skills in current professionals in the space (i.e., listening, discussing, and presenting) constitutes a capacity gap.*³⁰⁰²

*It was noted that recent progress in establishing standardized rigorous ways of collecting statistics (eg. UN SEEA; business reporting standards) can enhance a broader recognition of holistic food systems evaluations, while at the same time making them more robust and credible. There is a need to be able to capture externalities and assign value in a way that is tangible and comparable. The TEEBAgriFood Evaluation Framework was highlighted as an internationally accepted harmonized framework for holistic food systems evaluations, which was developed by 150 scientists from 33 countries. The uptake of comprehensive food systems evaluations in the context of the Food Systems Summit process is needed.*³⁰⁰³

²⁹⁹⁵ 212:5 p 6 in 371_June_01_21_Güngören A

²⁹⁹⁶ 214:10 p 7 in 374_June_03_21_DG INTPA

²⁹⁹⁷ 215:4 p 6 in 376_June_04_21_IFAD_Multi

²⁹⁹⁸ 215:7 p 6 in 376_June_04_21_IFAD_Multi

²⁹⁹⁹ 215:18 p 12 in 376_June_04_21_IFAD_Multi

³⁰⁰⁰ 215:20 p 12 in 376_June_04_21_IFAD_Multi

³⁰⁰¹ 216:2 p 7 in 377_June_07_21_Arden_Caucci

³⁰⁰² 216:4 p 7 in 377_June_07_21_Arden_Caucci

³⁰⁰³ 220:2 p 6 in 381_June_08_21_UNEP_Multi

The private sector calls for the creation of a measurement matrix that values both positive steps but also targets negative interventions. This will allow different stakeholders to compare each of these diverse aspects and make decisions based on more 'complete' information, not just between businesses, but across the full value chain from farmer to consumer.³⁰⁰⁴

Need for information and data generation with transparency and for combatting false narratives. Need for regular indicators on the nutritional status of the population, as well as clear and reliable data on the production and consumption chains of safe/nutritious food.³⁰⁰⁵

The opinion of science has to count. There are numerous scientific proofs that support the need for nutrients in meat for adequate nutrition and proper development and health.³⁰⁰⁶

The group agreed that there needs to be more reliable scientific information coming from academics and objective third parties on what the best sustainable practices are for aquaculture. These then need to be disseminated to the public in smart and effective ways (e.g. social media, documentaries, information in supermarkets to guide purchasing decisions) to change demand, sentiment, and behaviour. Many felt that large producers will eventually be judged in the court of public opinion, and that this opinion needs to be shaped well.³⁰⁰⁷

2. Bionutrient Food Association has been working on figuring out the variation of nutrient density within food items to define the spectrum variation and averages, correlating that with growing practices, and building the instruments needed to figure out nutritional information in real time. We have the ability now to develop the data at scale around plant compounds, growing practices, and human health outcomes.³⁰⁰⁸

Nobody owns the oceans, but if we all collaborate, we can make real change and avoid tragedy of the commons - There is a clear role of science for achieving the SDGs – without science-based decisions/data, we cannot have effective fisheries management and won't achieve the targets.³⁰⁰⁹

In policy frameworks for sustainable food production, it is worth considering developing indicators for industry to provide data on nutrition per kg/ton produced as well as climate or biodiversity footprint per kg/ton produced.³⁰¹⁰

A reoccurring challenge faced by attendees was the need for better standardized measurement of food waste to further quantify and deepen understanding of where food waste occurs. Whilst in some countries there has been more research and data made

³⁰⁰⁴ 220:8 p 9 in 381_June_08_21_UNEP_Multi

³⁰⁰⁵ 228:14 p 6 in 222a_May_11_21_FTI_ZHI_English

³⁰⁰⁶ 237:12 p 11 in 284a_May_19_21_INTERPORC_English

³⁰⁰⁷ 240:32 p 11 in 319_June_30_21_Fredriksson O

³⁰⁰⁸ 249:22 p 10 in 485_June_22_21_Levesque_SD

³⁰⁰⁹ 251:5 p 6 in 487_June_29_21_Selwyn_Multi

³⁰¹⁰ 251:19 p 8 in 487_June_29_21_Selwyn_Multi

available, it was acknowledged that more data on food waste can help actors realize where interventions can best be made. For example, attendees argue that it's difficult to track data on individual behaviors on food waste within the home, because natural household behaviors are not easily observable, and service providers are usually hesitant to share or make public detailed data related to waste management. To effectively address the food waste challenge, publicly available data related to the measurement of food waste is critical, with countries building on each other's learnings to develop a strong global framework for measurement and sharing of food waste information.³⁰¹¹

The group argued that more information on the total scale of food loss at different stages is needed to ensure interventions can be targeted in the best places. Through capturing more and better data in relation to food waste, actors can then decide where they should best target their interventions to lead to impactful change. This sentiment was echoed by all stakeholders looking to reduce waste across their respective target areas. Across the breakout group the different actors acknowledged that the behaviors that cause food waste amongst the target actors they work alongside can vary significantly. However, the group believed that through more data on where waste is generated, and a deeper understanding of these actors and the individual behaviors that can generate food waste we can better target interventions and develop long term behavior change solutions.³⁰¹²

Good quality data is necessary, and care must be exercised to ensure that the data provided does not mask inequalities and lead to mismatched policy priorities. Policy interventions must also be guided by a food systems approach, bringing in multiple disciplines and providing multiple pathways to address solutions.³⁰¹³

Innovative new uses of data (including satellite data) could help to make companies more accountable. Even if a comprehensive framework for assessing sustainability can be agreed, this will require solid metrics and accurate data collection, which could put pressure on producers.³⁰¹⁴

Focus on finding the right ways to collect the data we need that are affordable, cheap and efficient for small producers - including innovative new approaches.³⁰¹⁵

More data on the role of women in aquatic food systems (e.g. from the Illuminating Hidden Harvest study) to make it more visible.³⁰¹⁶

before we begin to extensively work within the ecosystem, we must have baseline data to work with to know how much can be harvested sustainably. We must collate this data before launching an industry around it.³⁰¹⁷

³⁰¹¹ 253:3 p 6 in 489_June_22_21_Rare China Centre_Multi

³⁰¹² 253:11 p 8 in 489_June_22_21_Rare China Centre_Multi

³⁰¹³ 254:5 p 6 in 490_June_22_21_Yasmi Y

³⁰¹⁴ 256:26 p 11 in 492_June_23_21_Liu JA

³⁰¹⁵ 256:28 p 11 in 492_June_23_21_Liu JA

³⁰¹⁶ 263:45 p 9 in 499_June_25_21_GANSF

³⁰¹⁷ 264:36 p 10 in 500_June_26_21_Edible Issues

*To create a sustainable supply chain we need to know where and what species of seaweed is present to better conserve them. Discovering tide pools, marine creatures, documenting species in the particular area will help provide an understanding of the intrinsic and ecosystem value of the seaweed forests.*³⁰¹⁸

*This method can be used to identify potential tide pools or sites with seaweed. Satellite data and aerial drones are flown over the potential areas to collect the data. A tide pool mapping can be as short as 20-30 mins. Processing the data requires bandwidth and some technical skills.*³⁰¹⁹

*.The data collected does not have to be technical, it can be done with a community of people as a learning experience. A GPS tagged photo is valuable as well in seaweed mapping or identifying sites.*³⁰²⁰

*Identifying the species present in these areas are also incredibly important to the mapping process. Photos of marine species can be added to any citizen science platforms like iNaturalist helps you identify what you see can be a good learning experience and data for others.*³⁰²¹

*All of these methods will lead to more comprehensive data.*³⁰²²

*FAO collects some data, but it's very unreliable because it relies on country information, therefore local data is needed.*³⁰²³

*Research and data records.*³⁰²⁴

*Research and data on mapping locations and suitable species of seaweed.*³⁰²⁵

*...harness artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data to not only fill knowledge and data gaps but to also boost agricultural productivity and address the numerous threats facing food systems...*³⁰²⁶

*...invest in better data, policy implementation capacities, and technical and vocational training of Africa's growing youth population...*³⁰²⁷

*Such platforms can include e-learning platforms for farmers to share and exchange on innovations, data, and technologie.*³⁰²⁸

³⁰¹⁸ 264:37 p 10 in 500_June_26_21_Edible Issues

³⁰¹⁹ 264:41 p 10 in 500_June_26_21_Edible Issues

³⁰²⁰ 264:43 p 10 in 500_June_26_21_Edible Issues

³⁰²¹ 264:45 p 10 in 500_June_26_21_Edible Issues

³⁰²² 264:47 p 10 in 500_June_26_21_Edible Issues

³⁰²³ 264:75 p 12 in 500_June_26_21_Edible Issues

³⁰²⁴ 264:87 p 13 in 500_June_26_21_Edible Issues

³⁰²⁵ 264:90 p 13 in 500_June_26_21_Edible Issues

³⁰²⁶ 271:8 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

³⁰²⁷ 271:11 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

³⁰²⁸ 271:17 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

*Harnessing and providing access to innovative technologies and digital solutions such as improved seed, mechanization, and ICT, that can allow farmers, policymakers, and practitioners to convert precise data into actionable knowledge and lead to better farming and investment decisions and improve agricultural productivity, competitiveness, better address the effects of climate change, and transform food systems. In particular, artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data are providing innovative ways to not only fill knowledge gaps but to also boost agricultural productivity and address the numerous threats facing food systems. In addition, there is need to ensure that technologies from outside Africa are contextualized.*³⁰²⁹

*Most importantly, regenerative agriculture needs to be easy to understand for farmers and lower levels of administrative burden by building the reporting and data collection systems into the existing ones rather than creating new reporting grids.*³⁰³⁰

*Data collection and centralization: establishing National and Regional food Councils that can be a centralized body for advising all and creating protocols to guide food systems transitions including data measurement and certification.*³⁰³¹

*Data collection needs to work for farmers. That might mean thinking of data as “data interaction” rather than collection – it’s a two-way process, and producers are at the front lines. Data collection and interaction methods need to develop basic levels of trust, especially because farmers are the decision-makers at the field level.*³⁰³²

*Data architecture and infrastructure is a recurring and critical problem in the food systems space. We need improved coordination across scales and methodology.*³⁰³³

*We need to develop better adaptive management for data and evidence systems.*³⁰³⁴

*We need adaptive management of our data and evidence systems to ensure that they are responsive to the changing needs of the food system and ongoing food systems transformation.*³⁰³⁵

*To build effective data systems, we need to understand the end user. Who is data trying to influence? For example, there is limited appetite for consumers to drive change, but companies could drive change in the supply chain to have a larger impact on consumer choice. To translate data into effective decision-making, we need to understand who the decision-makers are, and what types of outputs they will listen to.*³⁰³⁶

We need more refined metrics and data for measuring food transitions. There are extensive metrics and datasets focused on production, but there are less clear for the

³⁰²⁹ 271:24 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

³⁰³⁰ 273:14 p 6 in 509_June_30_21_FFA_Nestlé

³⁰³¹ 273:19 p 6 in 509_June_30_21_FFA_Nestlé

³⁰³² 274:1 p 6 in 510_June_30_21_ACF SR_Multi

³⁰³³ 274:2 p 6 in 510_June_30_21_ACF SR_Multi

³⁰³⁴ 274:5 p 6 in 510_June_30_21_ACF SR_Multi

³⁰³⁵ 274:7 p 6 in 510_June_30_21_ACF SR_Multi

³⁰³⁶ 274:8 p 6 in 510_June_30_21_ACF SR_Multi

*consumption side of the system. We need to discuss and refine the role of corporations in driving corporate transitions, food labelling systems, and purchasing patterns to better understand what drives consumer choice.*³⁰³⁷

*There are a lot of data gaps in this field still.*³⁰³⁸

*We also need further work on aligning data across scales and being able to integrate datasets and develop datasets that allow us to see a systems perspective.*³⁰³⁹

*...coalition should help equip practitioners with the information and data that they need. For instance by unlocking the power of data science, and further developing research methods to analyse food systems resilience.*³⁰⁴⁰

*Data aspect of AT5 Conflict & Hunger proto-coalition is appealing to donors. Yet donors also need data presented in a more neutral way than is currently the case, so that they can really rely on the data. Methodical approach is sometimes too thin to support claims made.*³⁰⁴¹

*When talking about independent analysis, better data that is more grounded and rapidly delivered. The investment in this compared to the actual costs of humanitarian assistance is minimal.*³⁰⁴²

*AT5 Conflict & Hunger coalition should link up better to what is already going on in countries in terms of planning. If the data and analytical centres are there, make sure that people at local level are aware of how to get the data and can act on it.*³⁰⁴³

*Where local data is not of the best quality, we can use reputable organizations to help. Also, by these communities generating more data, it keeps improving and being refined.*³⁰⁴⁴

*Making sure the current engagement programme has data science implemented by having incubation spaces for innovation and co-creation which will take longer term commitments.*³⁰⁴⁵

*Information and data – equipping practitioners to monitor situations as they conduct their activities, and investing in gathering accurate real-time data to inform flexible planning and programming.*³⁰⁴⁶

³⁰³⁷ 274:9 p 6 in 510_June_30_21_ACFSR_Multi

³⁰³⁸ 274:10 p 6 in 510_June_30_21_ACFSR_Multi

³⁰³⁹ 274:11 p 6 in 510_June_30_21_ACFSR_Multi

³⁰⁴⁰ 278:15 p 7 in 514_July_01_21_Bolling_Multi

³⁰⁴¹ 278:19 p 8 in 514_July_01_21_Bolling_Multi

³⁰⁴² 278:20 p 8 in 514_July_01_21_Bolling_Multi

³⁰⁴³ 278:22 p 8 in 514_July_01_21_Bolling_Multi

³⁰⁴⁴ 278:35 p 9 in 514_July_01_21_Bolling_Multi

³⁰⁴⁵ 278:38 p 9 in 514_July_01_21_Bolling_Multi

³⁰⁴⁶ 278:63 p 13 in 514_July_01_21_Bolling_Multi

*In addition, farmers should be encouraged to adopt new technologies such as hydroponic farming and the governments to improve on data management especially concerning households to improve on planning.*³⁰⁴⁷

*Consider how we frame and assess evidence, and subsequently incorporate this into nutrition policies and guidelines needs to be further analysed.*³⁰⁴⁸

*Need for national goals and a uniform database.*³⁰⁴⁹

*Measurement and evaluation: build a database encompassing all lifecycle data of food production and examine the carbon and water footprints across the food industry's production and supply chain.*³⁰⁵⁰

*Build a single database for managing agricultural crops, planting and growing, to enable balancing of supply and demand.*³⁰⁵¹

*Coherent, functional territorial governance can foster equitable management of food systems, integrate rural and urban food governance, promote inclusive investment for territorial governance, direct support to local food actors, increase data availability and accessibility, private sector business support, and advise on issues of food security and territorial governance at ministerial levels.*³⁰⁵²

*More timely and disaggregated data is needed to inform planning, policy and practice that meets the needs of and can be accessed by policymakers and producers to react to potential future shocks. Collecting, collating and analysing data, then preparing it for decision-makers, requires technical capacity.*³⁰⁵³

*Complete the digitalization of land lots and enhance the categorization of land to address current challenges due to the fragmentation and small size of land lots.*³⁰⁵⁴

*Farmers' incomes can be safeguarded from food shocks through emergency funding, crop insurance, and the establishment of minimum support price/buy-back policies. To help local produce compete with imports, domestic production must be supported through favourable policies and strengthened customs regulation. Investment must be made in strengthening local, regional and national supply chains to ensure adequate food supply and reduce reliance on imports. Development of up-to-date data dashboards can help improve food systems governance and inform policy development.*³⁰⁵⁵

Digitalisation of the food chain is seen to benefit both end-users and policymakers. End-users include farmers and value chain actors who are able to access updated tools and

³⁰⁴⁷ 279:21 p 10 in 515_July_01_21_EastAfricanFarmers

³⁰⁴⁸ 280:16 p 6 in 516_July-01_21_Anastasiou K

³⁰⁴⁹ 297:8 p 6 in 533_July_07_21_Gazit GS

³⁰⁵⁰ 297:9 p 6 in 533_July_07_21_Gazit GS

³⁰⁵¹ 297:11 p 6 in 533_July_07_21_Gazit GS

³⁰⁵² 299:25 p 8 in 535_July_08_UNESCO Chair on Food

³⁰⁵³ 302:27 p 10 in 538_July_09_21_IDS_Multi

³⁰⁵⁴ 310:27 p 8 in 546_July_13_21_INDEP

³⁰⁵⁵ 313:26 p 9 in 549_July_14_21_Meah N

resources that can help them make better decisions about which crops and products to cultivate, and allow them to have a broader consumer reach. For policymakers, digitalising the value chain provides access to updated data (organized in relevant dashboards) that allows for foresighting, market analysis and development of evidence-based policies for a more inclusive agriculture sector.³⁰⁵⁶

A parallel solution was also proposed: to further broaden market access, perhaps to capitalize on the new markets reached during the pandemic, through digital platforms. Market analysis and consumer research, along with stakeholder linkages, could help make production more profitable by focusing on demand-driven products that meet market needs and preferences.³⁰⁵⁷

Implement harvesting machinery quality standards reducing waste, as well as operational norms for harvesting operations, planting and agronomic norms with attention to promote land merging and appropriate grain varieties for field management standardization and efficiency. Strengthen professional qualification management for agricultural machinery operators, develop specialized and socialized service organizations and carry out regular technical exchanges and trainings, as well as provide weather warning notices, operation market conditions and other early warning information to farmers.³⁰⁵⁸

To transform the food system, a better understanding of the food market will be needed to identify the causes of food loss and possible solutions. This will include how inefficient relations between supply and demand contributes to food loss. From the demand side, awareness raising is needed and the making of accurate consumption plans in advance can reduce food loss. From the supply side, in case food prices are undervalued, price adjustments are required; mismatch of demand and supply leads to loss and waste, which can be addressed by promoting more closely demand-driven production, including by using digital platforms to make agricultural product sales efficient and to mitigate asymmetric supply and demand information.³⁰⁵⁹

Access to Data: Potential to increase value in dryland food systems requires better policies accounting connectivity and infrastructure to govern access to and use of digital technologies and related data in the agriculture sector. As data is key to digital innovations, governments may follow open data system as a means for promoting innovations which enable effective stakeholder decision making.³⁰⁶⁰

Start-ups need an industry partner who could help penetrate their technologies for large-scale adoption. A collaborative approach of bringing stakeholders together to implement data driven solutions and prepare a global action plan on research, technology, market and policy interventions is essential for improving dryland food systems. A Global Centre of Excellence in Biofortification could be established to develop research programs, to

³⁰⁵⁶ 313:28 p 10 in 549_July_14_21_Meah N

³⁰⁵⁷ 313:35 p 11 in 549_July_14_21_Meah N

³⁰⁵⁸ 315:19 p 8 in 551_July_15_21_FAO_ESCAP_Multi

³⁰⁵⁹ 315:28 p 10 in 551_July_15_21_FAO_ESCAP_Multi

³⁰⁶⁰ 321:17 p 12 in 558_July_16_21_RICH_ICRISAT

*promote biofortified food, advocate policy amendments and contribute to nutrition security of the malnourished population.*³⁰⁶¹

*Data and Evidence remains critical to assess progress against the Pro Poor Agenda for Prosperity and Development and SDGs.*³⁰⁶²

*Improved indices on hunger index studies, malnutrition rates and stunting.*³⁰⁶³

*Increased consumption of locally grown foods and produce - also requires tracking of annual production quantities.*³⁰⁶⁴

*Improved statistics on women and child malnutrition, anemia and stunting.*³⁰⁶⁵

*Availability and transparency of data and the sharing of pre-competitive information across value chains could better redirect food for human consumption and eliminate a significant amount of food waste.*³⁰⁶⁶

*Assessments need to be based on data. Collecting data is expensive. If already existing data is shared, researchers can focus on collecting missing data. Such efforts would benefit everyone: consumers, producers, distributors, and regulators.*³⁰⁶⁷

*Not all data is needed; the goal of this platform would be for stakeholders (government, industry, the scientific community, and others) to agree on what data is needed to measure impact, determine what data is already being collected, find ways to bring in missing data, and work toward greater data sharing and understanding.*³⁰⁶⁸

*Innovation and technology as great allies. All participants stressed its importance during the discussion, and indeed, innovation will be key in the future to ensure more efficient, productive, resilient, and safer crops. Therefore, it is essential to promote R&D initiatives to develop this type of crop at an affordable price for small producers. On the other hand, the digitization and scalability of technological solutions along the supply chain represent a great opportunity, both in terms of natural resources optimization and traceability, data reliability, and collaboration.*³⁰⁶⁹

Data and information collection systems based on the type of nutritional consumption/nutrition of the population in Kairouan (men, women, and by age group; and handling of data. These indicators will enable us to act in a more rapid and effective manner and to make timely and adequate decisions to reinforce access to healthy and

³⁰⁶¹ 321:23 p 14 in 558_July_16_21_RICH_ICRISAT

³⁰⁶² 330:14 p 6 in 568_July_21_21_Cooper-Liverpool M

³⁰⁶³ 330:42 p 9 in 568_July_21_21_Cooper-Liverpool M

³⁰⁶⁴ 330:43 p 9 in 568_July_21_21_Cooper-Liverpool M

³⁰⁶⁵ 330:81 p 13 in 568_July_21_21_Cooper-Liverpool M

³⁰⁶⁶ 331:5 p 2 in 139a_May_27_21_WBCSD

³⁰⁶⁷ 333:2 p 1 in 313a_June_15_21_Narrod_Multi

³⁰⁶⁸ 333:3 p 1 in 313a_June_15_21_Narrod_Multi

³⁰⁶⁹ 337:8 p 9 in 132a_May_27_21_Forética_Eng

*balanced nutrition. The human resources required for this collection and this handling of data must be identified because they are not currently available and are costly.*³⁰⁷⁰

Knowledge sharing

In addition, the Vice-Chancellors committed to reimagining the role of our universities for transdisciplinary knowledge co-creation and in particular the role of science and innovation in defining the food systems that Africa wants.

*Investments, partnerships, and support to implement lessons learned can help increase global sustainable practices across the board and help smaller businesses and farmers thrive sustainably while alleviating burdens on the environment and the food system.*³⁰⁷¹

*This platform can facilitate and promote possible innovative knowledge and practices in the state.*³⁰⁷²

*Knowledge sharing is essential – through Extension and research; field days; collaboration throughout agriculture and among different silos; cooperatives, up and down the value chain.*³⁰⁷³

EDUCATION AND KNOWLEDGE-SHARING.³⁰⁷⁴

*Knowledge-sharing based on these types of solutions can be the most effective way to promote widespread change.*³⁰⁷⁵

*Conduct knowledge exchange events, to help in exchange experiences and information with women farmers.*³⁰⁷⁶

*The Dialogue was organised through a collaboration between Dr Liz Genever (independent beef and sheep consultant) and the British Society of Animal Science to start the conversation about how research and knowledge exchange activities need to be tailored towards the opportunities and challenges for the beef sector.*³⁰⁷⁷

*The debate was aiming to highlight any research and knowledge gaps; this could include failure to translate current knowledge into accessible formats or relevant information for farmers or processors to use.*³⁰⁷⁸

³⁰⁷⁰ 338:15 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

³⁰⁷¹ 4:38 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

³⁰⁷² 7:24 p 6 in 167_Apr_13_21_Welthungerhilfe_Multi

³⁰⁷³ 8:10 p 6 in 169_Apr_6_21_Shea E

³⁰⁷⁴ 8:39 p 8 in 169_Apr_6_21_Shea E

³⁰⁷⁵ 8:40 p 9 in 169_Apr_6_21_Shea E

³⁰⁷⁶ 9:29 p 8 in 171_Mar_31_21_Atilano C

³⁰⁷⁷ 11:12 p 3 in 184_Apr_14_21_Genever_Multi

³⁰⁷⁸ 11:13 p 3 in 184_Apr_14_21_Genever_Multi

*Finally, the participants committed to promote and contribute to the vision, objectives and the final outcomes of the Food Systems Summit with their indigenous knowledge, skills and experiences.*³⁰⁷⁹

*The dialogue strategically focused on developing and scaling up indigenous knowledge and capacities peculiar to the culture and traditions of the indigenous people to inform decision makings, policy and governance at all levels for a sustainable food system.*³⁰⁸⁰

*Collect and share traditional knowledge about these crops.*³⁰⁸¹

*Participants has also highlighted the role of academic and research institutions who generates knowledge for policy through applied research.*³⁰⁸²

*Thanks to the fact that there is a team working exclusively on the Bites of Transfoodmation project, a lot of information and knowledge sharing is able to take place both among the participants, and between the participants and the organizing team – all this based on a high degree of mutual trust.*³⁰⁸³

*This allows for participant's feedback and continued interaction after the workshops and Dialogue so that the ideas can be further refined, and knowledge further shared.*³⁰⁸⁴

*All agreed that the production chains must become more transparent so that rural and urban areas can experience proximity and can exchange knowledge more easily.*³⁰⁸⁵

*Establish a regional platform to support SLWM, invest in north-south and south-south cooperation, knowledge exchange, best practices sharing and capacities building for all.*³⁰⁸⁶

*Knowledge sharing and digital technology are crucial for innovation in the agri-food and fisheries sectors to promote and sustain the MedD.*³⁰⁸⁷

*Such networks have a critical role not only to raise awareness and exchange experiences and knowledge, but also to push the change in policies, legislations and consumers perceptions.*³⁰⁸⁸

*Promote knowledge sharing, in particular of innovative practices on citizen-driven food system transformation and other existing good practices and local experiences in leveraging the role of cities for more sustainable food systems.*³⁰⁸⁹

³⁰⁷⁹ 12:15 p 3 in 192_Apr_19_21_Okafor_A

³⁰⁸⁰ 12:17 p 3 in 192_Apr_19_21_Okafor_A

³⁰⁸¹ 16:29 p 10 in 251_Jan_25_21_World Vegetable Center

³⁰⁸² 17:53 p 9 in 164_Apr_15_21_Anarbekov_Akramov

³⁰⁸³ 22:29 p 3 in 191_Apr_16_21_Donati L

³⁰⁸⁴ 22:30 p 3 in 191_Apr_16_21_Donati L

³⁰⁸⁵ 22:31 p 4 in 191_Apr_16_21_Donati L

³⁰⁸⁶ 23:64 p 10 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁸⁷ 23:65 p 11 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁸⁸ 23:66 p 13 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁸⁹ 23:67 p 13 in 205_Apr_27_21_CIHEAM_Multi

*A first step could be to map and consolidate what is known already (including from traditional systems, policy, governance, technologies, etc.) within a knowledge platform on Mediterranean cities and local food systems.*³⁰⁹⁰

*Another channel is organizing city-to-city exchanges and knowledge sharing events.*³⁰⁹¹

*Investing in those competences and profiles would enhance the transfer of knowledge from research centres to applied fields.*³⁰⁹²

*To manage this aspect, it was recognized that it would be useful to promote innovation-transfer pathways, co-creation experiences (e.g. living labs), knowledge-exchanges, and greater recognition of different professional development for researchers and academics.*³⁰⁹³

*Women's SHGs and farmers could be considered as the unit of knowledge transfer.*³⁰⁹⁴

*Sharing knowledge.*³⁰⁹⁵

*All these groups must work together to enable the many millions of farming families, especially smallholders, to grow more productively and sustainably through effective markets, more collaborative research and committed knowledge sharing.*³⁰⁹⁶

*Improve knowledge sharing and exchange of experiences between governments and organizations.*³⁰⁹⁷

They highlighted the following key areas where they requested support from the UNFSS:

- *Technical support through data, tools, technology, and knowledge exchange for improved scenario planning and decision-making.*³⁰⁹⁸

*Thanks to the fact that there is a team working exclusively on the Bites of Transfoodmation project, a lot of information and knowledge sharing is able to take place both among the participants, and between the participants and the organizing team.*³⁰⁹⁹

Moreover, some participants were more convinced than others about the importance of data in the transformative process: some considered that data are a "must" to tackle the major structural challenges of current food systems, while others believed that change

³⁰⁹⁰ 23:68 p 13 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁹¹ 23:69 p 13 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁹² 23:70 p 15 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁹³ 23:71 p 16 in 205_Apr_27_21_CIHEAM_Multi

³⁰⁹⁴ 27:47 p 10 in 044_Feb_18_21_Bharat K S

³⁰⁹⁵ 28:15 p 3 in 064_Mar_4_21_Farming First

³⁰⁹⁶ 28:16 p 3 in 064_Mar_4_21_Farming First

³⁰⁹⁷ 30:55 p 6 in 071_Mar_11_21_ESCWA_FAO

³⁰⁹⁸ 37:22 p 8 in 097_Mar_30_21_EcoAgriculture Partners

³⁰⁹⁹ 39:25 p 3 in 175_Mar_16_21_Donati L

must also originate from traditional knowledge sharing (school, education, workshops, etc.)³¹⁰⁰

Large corporates can use their convening power to mobilize and align value chain actors, and participate in the development and circulation of knowledge around agriculture production and financing practices.³¹⁰¹

World Bank and EU) can contribute through funding, influence over policies and knowledge sharing across regions.³¹⁰²

Measuring success: a) Success for a convening alongside the FSS would be measured by the range of actors involved, including FSPs and technology companies, farmer organizations, governments, inter-ministerial agencies, and private investors, as well as youth groups. Success would also be measured by the depth of knowledge and experience sharing across different regions. b to f) For the other game-changers, success would be measured by access of small entrepreneurs to new investor networks and improved product offering among FSPs.³¹⁰³

The importance of knowledge building and co-creation of solutions across stakeholder groups, to increase awareness through transparent knowledge building.³¹⁰⁴

³¹⁰⁵Increasing cooperatives and social groups among workers helps build knowledge sharing and facilitates co-creation of solutions, empowering workers and creating social responsibility among consumers.

Tools like Telephones for interactive voice response, Computers and websites for agricultural information and markets, Broadcasting for expertise sharing, advisory and information dissemination in communities, Satellite for weather, universal accessibility and remote sensing, Internet and broadband for knowledge sharing, social media, e-community, market platform, trading and so on.³¹⁰⁶

Thanks to the fact that there is a team working exclusively on the Bites of Transfoodmation project, a lot of information and knowledge sharing is able to take place both between the participants, and between the participants and the organizing team.³¹⁰⁷

Knowledge about food systems must come from many different fields to enable us to resolve the issues.³¹⁰⁸

³¹⁰⁰ 39:26 p 10 in 175_Mar_16_21_Donati L

³¹⁰¹ 46:35 p 9 in 049_Feb_23_21_SAFIN_Multi

³¹⁰² 46:36 p 9 in 049_Feb_23_21_SAFIN_Multi

³¹⁰³ 46:37 p 12 in 049_Feb_23_21_SAFIN_Multi

³¹⁰⁴ 49:37 p 6 in 086_Mar_20_21_Rosatan B

³¹⁰⁵ 49:38 p 8 in 086_Mar_20_21_Rosatan B

³¹⁰⁶ 51:10 p 7 in 137_Mar_24_21_Ejezie J

³¹⁰⁷ 60:34 p 2 in 021_Jan_27_21_Donati L

³¹⁰⁸ 66:86 p 8 in 052_Feb_25_21_EUFIC

To build this demand for sustainably produced food, wholesale markets must continue to promote the benefits and implementation of sustainable production methods through knowledge-sharing, capacity-building, and advocacy among food actors especially the producers, markets, and consumers.³¹⁰⁹

This issue can only be resolved collectively, by gathering all food sector stakeholders, throughout best practices platforms, as sharing experience and knowledge among centers of supply is critical to understand the ins-and-outs of food waste and what role they can have.³¹¹⁰

Training of trainers, for example through universities or organizations, can play a key role in sharing knowledge and best practices.³¹¹¹

Holistic knowledge and food system approaches are needed to ensure access to sufficient amounts of aquatic foods that is sustainably produced, nutritious and safe to eat and consumed as part of healthy diets for generations to come.³¹¹²

There is a lack of open access analytical data on nutrients and contaminants in aquatic foods following the value chain. The importance of accurate information on the nutrient-content of locally available aquatic foods is a prerequisite for consumers to understand their impacts on food and nutrition security.³¹¹³

Holistic knowledge on food system approaches is needed to ensure access to aquatic foods that is sustainably produced, nutritious and safe to eat and consumed as part of healthy diets for generations to come.³¹¹⁴

In the theme of science & technology, participants called for publication of scientific data, with particular emphasis on its availability, transparency and readability. These further encourage the data to be acquired and understood cross-sectionally, cross-regionally and internationally. There are several specific areas which require advancement: understanding in productivity, accessibility, safety, traceability, accountability and transparency of aquatic food at regional and global scales, technologies to increase productivity and farmer-friendly technologies. For aquaculture specifically, AMR, seed development and quality feed are essential and all required attention. Lastly, a special focus on the waste and loss of product is needed including food process and storage.³¹¹⁵

There are 5 main themes suggested by the participants including: advancing science & technology;, policy making and reinforcement;, improving awareness and education; enhancing collaborations and business development. Improving the science and technology including research on nutrient benefits, environmental impacts, data

³¹⁰⁹ 76:27 p 5 in 103_Apr_8_21_Carrara E_Multi

³¹¹⁰ 76:28 p 10 in 103_Apr_8_21_Carrara E_Multi

³¹¹¹ 79:57 p 7 in 118_Apr_21_21_Huvio T

³¹¹² 82:2 p 6 in 150_Apr_30_21_GANSFOIWFSN

³¹¹³ 82:15 p 8 in 150_Apr_30_21_GANSFOIWFSN

³¹¹⁴ 82:16 p 8 in 150_Apr_30_21_GANSFOIWFSN

³¹¹⁵ 82:21 p 9 in 150_Apr_30_21_GANSFOIWFSN

*transparency and sharing, policy making, diversifying marine resources (e.g. seaweed), technologies of food processing and knowledge transfer.*³¹¹⁶

*Continuous improvement requires stronger support from public research and better mechanisms for knowledge-sharing to bolster innovation and make operations more sustainable.*³¹¹⁷

*They discussed several opportunities to help address this need: cost-share programs, economic assessments, social support and knowledge-sharing amongst farmers, technical assistance and financial incentives.*³¹¹⁸

*While salmon alone will not feed the world, it is an important part of the solution in providing healthy, sustainable protein while also sharing knowledge with developing sectors.*³¹¹⁹

*GSI's model of knowledge sharing, transparency and innovation for environmental improvement is a blueprint that could be replicable across other sectors.*³¹²⁰

*Participants emphasized that progress cannot simply occur in a private sector silo. There's a critical need to link science-based regulations, knowledge transfer from big to small companies, and holistic business policy frameworks. Ideally, this approach will enable momentum, collaboration and accountability from the United Nations as well. Participants saw a clear role for private sector to partner with the United Nations and public institutions; they recognized that each of these groups has a unique and vital role to play.*³¹²¹

*Participants agreed that to reduce food system impacts, private sector stakeholders must discover and implement more eco-friendly feed ingredients for aquaculture and other protein sectors. One example came from Grieg Seafood, where their team is working with World Wildlife Fund to assess 400+ feed ingredients across many ESG indicators and mitigate the highest risk ingredients. As the aquaculture sector adopts feed innovations, participants saw an opportunity to apply learnings across the value chain and even to other protein sectors.*³¹²²

*Able to act in a more focused way Having baseline data will enable solutions to be put in place that are realistic, tailored to that community/region and measurable. Data provides insight and in Aotearoa, local insight is key. There would be increased transparency in what people and groups are doing around the country, not needing to reinvent the wheel but to learn from each other.*³¹²³

³¹¹⁶ 82:26 p 9 in 150_Apr_30_21_GANSFOIWFSN

³¹¹⁷ 84:28 p 7 in 153_Apr_28_21_GCNEF_Multi

³¹¹⁸ 84:29 p 11 in 153_Apr_28_21_GCNEF_Multi

³¹¹⁹ 85:1 p 6 in 160_20_Apr_21_GSI

³¹²⁰ 85:2 p 6 in 160_20_Apr_21_GSI

³¹²¹ 85:5 p 6 in 160_20_Apr_21_GSI

³¹²² 85:12 p 11 in 160_20_Apr_21_GSI

³¹²³ 87:6 p 8 in 173_Mar_25_21_Mayne A

Actions to impact this topic include: - Communication and knowledge sharing actions, such as peer-to-peer learning experience among farmers, knowledge sharing, exchange and transfer of best practices through global platforms.³¹²⁴

With the aim of disseminating up-to-date knowledge and proven concepts on the role of grains and oilseeds in sustainable food systems, the webinar will promote the Western Hemisphere's perspective on sustainable production practices in preparation for the 2021 United Nations Food Systems Summit (UNFSS).³¹²⁵

Objectives: Share current scientific knowledge and expert perspectives on the important role grains and oilseeds play in a sustainable food system.³¹²⁶

Learn to connect R&D with farmers and other implementers (knowledge transfer).³¹²⁷

Record protocols and be more transparent about sustainability efforts and outcomes within agriculture; sharing best practice but recognising that different situations need different approaches.³¹²⁸

Participants recommended that in order to build capacities appropriate for AR4D, there is the need to strengthen the capacities of farmers and SMEs to profitably adopt technologies, strengthen the capacities of African institutions to generate new knowledge and technologies and adapt those generated from elsewhere, and the strengthen the institutional and physical infrastructure for scaling up innovations in the food system.³¹²⁹

A second key enabler of change centers on the idea of 'knowledge fueling action'. This relates to leveraging science, research, collaboration, data and new technologies to enhance decision-making among all of the actors in the food chain and in policy. This will include measurement systems across the food chain to track progress and enhance transparency.³¹³⁰

Knowledge for society will be needed to communicate the transformations led by farmers to enhance environmental indicators and animal health and welfare in sustainable farms. Knowledge for adoptive and adaptive capacity will support rural livelihoods through enterprise evolution and transformation. Knowledge for policy will ensure that decision-making is founded on the scientific evidence base.³¹³¹

As seen during the Covid-19 crisis, scientists remain a trusted source of information for society and they will need to play an ever increasing role in public discourse to ensure that data and evidence on food systems is available and easily understood.³¹³²

³¹²⁴ 93:68 p 11 in 227_May_18_21_Tarawali S

³¹²⁵ 97:12 ¶ 22 in 258a_Apr_23_21_IICA_eng

³¹²⁶ 97:13 ¶ 23 in 258a_Apr_23_21_IICA_eng

³¹²⁷ 99:49 p 13 in 285_May_20_21_TFFF_Multi

³¹²⁸ 110:8 p 7 in 067_Mar_05_21_O'Doherty M

³¹²⁹ 111:42 p 7 in 070_Mar_09_21_Akinbamijo,O

³¹³⁰ 112:12 p 6 in 074_May_18_21_O'Mara_Teagasc

³¹³¹ 112:14 p 6 in 074_May_18_21_O'Mara_Teagasc

³¹³² 112:17 p 6 in 074_May_18_21_O'Mara_Teagasc

Secondly, knowledge exchange and capacity development will be critical: knowledge for policy measures and for society – communicating the transformations led by farmers to enhance air and animal health and welfare, water quality, biodiversity, carbon sequestration and knowledge for adoptive and adaptive capacity, through enterprise evolution and transformation.³¹³³

There is also a need for rapid knowledge transfer in implementing what is already known across the value chain. There is currently a huge amount of mixed messages and we need to work towards a consensus view.³¹³⁴

To enable these actions to come to fruition, reliable data should be available to the public, including through a fact-checker website.³¹³⁵

Making evidence more readily available, including solid data sources and fact-checking capabilities, was also deemed critical.³¹³⁶

Bringing together partners at a regional and global level is promising. We can promote the creation of a food “Silicon Valley” which will attract multidisciplinary talent, operate efficiently and promote out-of-the-box thinking. The formation of national and regional innovation hubs will also promote cross-pollination of ideas and technology. These hubs enable active knowledge transfer between researchers, business, government and farmers.³¹³⁷

Convening of a coalition of PDBs to share knowledge and experiences, including, but not limited to, mobilization and application of green finance in the food and agriculture sector. Such a group could help to set and promote the adoption of shared standards for the measurement and verification of what constitutes ‘green’ finance in the sector.³¹³⁸

Greater inclusivity in agricultural modernization programs as well as dissemination of knowledge and practices that can increase yields for crops.³¹³⁹

Other outcomes from the discussions included the need for data sharing across sectors and across countries; integrated scaling pathways and even the pull through of WEF nexus tools and products to scaling.³¹⁴⁰

Information sharing was highlighted as a strong entry point for improved coordination, especially to address conflicts of priority.³¹⁴¹

Strengthen competency of stakeholders through knowledge-sharing and access to science-based information on organic agriculture, nutrition, food safety, health and

³¹³³ 112:46 p 9 in 074_May_18_21_O'Mara_Teagasc

³¹³⁴ 112:50 p 10 in 074_May_18_21_O'Mara_Teagasc

³¹³⁵ 112:87 p 14 in 074_May_18_21_O'Mara_Teagasc

³¹³⁶ 112:98 p 16 in 074_May_18_21_O'Mara_Teagasc

³¹³⁷ 113:37 p 10 in 075_Mar_10_21_IFAN

³¹³⁸ 115:6 p 6 in 085_Mar_17_21_IFAD_FSFS

³¹³⁹ 116:3 p 6 in 093_Mar_25_21_Adeboye_T

³¹⁴⁰ 117:2 p 7 in 109_Apr_13_21_Jacobs-Mata I

³¹⁴¹ 117:49 p 12 in 109_Apr_13_21_Jacobs-Mata I

*sustainable food systems plus economic, environmental and social value to boost demand and encourage farmers to increase availability of organic products for all.*³¹⁴²

*Early Warning Systems and data sharing system need to be improved and provide sufficient early information to end-users to protect them and their livelihoods from negative impacts of extreme events such as floods, droughts, and extreme temperatures including heatwaves.*³¹⁴³

*Through knowledge sharing, they can develop consensus and trust building among various stakeholders.*³¹⁴⁴

*The group concluded that our institutions could engage in developing WEF models further and can assist in designing protocols for data collection and management (including sharing of data).*³¹⁴⁵

*The need to generate what a Common understanding of what Food Systems Resilience implies. This will include communication and the need for coordination in capturing and disseminating information and data across all levels and geographies.*³¹⁴⁶

*Provides quality information for women to scale up modern agriculture practices and enhance access to farm inputs.*³¹⁴⁷

*When there is competition around sharing data or open/closed source code, a middle way can be found by sharing some types of data or working with partly open/closed source. It is not all or nothing.*³¹⁴⁸

*Share learnings within and beyond the MSP (i.e. with other MSPs and sector actors) to drive further change.*³¹⁴⁹

*It is key to build trusted coalitions and share knowledge.*³¹⁵⁰

*Share knowledge capturing practices from other countries to resolve issues.*³¹⁵¹

*...promotion information sharing and collaboration and use of technologies...*³¹⁵²

*Utilize data and traditional knowledge held by SSF communities.*³¹⁵³

³¹⁴² 122:28 p 8 in 135_June_08_21_Calub_Gregorio

³¹⁴³ 127:19 p 10 in 159_Apr_21_21_Hafeez M

³¹⁴⁴ 127:42 p 13 in 159_Apr_21_21_Hafeez M

³¹⁴⁵ 127:47 p 14 in 159_Apr_21_21_Hafeez M

³¹⁴⁶ 133:21 p 9 in 196_Apr_20_21_Attah-Krah K

³¹⁴⁷ 137:25 p 8 in 212_May_04_21_Akinbamijo Y

³¹⁴⁸ 141:25 p 12 in 229_May_18_21_NFP_Rabobank_Multi

³¹⁴⁹ 141:39 p 14 in 229_May_18_21_NFP_Rabobank_Multi

³¹⁵⁰ 141:41 p 15 in 229_May_18_21_NFP_Rabobank_Multi

³¹⁵¹ 152:52 p 10 in 262_May_04_21_LC_Multi

³¹⁵² 154:11 p 7 in 265_May_07_21_CSONA

³¹⁵³ 155:13 p 6 in 272_May_12_21_Battista W

*Investment in state-of-the-art data science methodologies and collection systems.*³¹⁵⁴

*Create a universal database for food system non-profit database to share data.*³¹⁵⁵

*Establishing connections between agricultural scientists/researchers and smallholder farmers so they could share knowledge and data on how to deliver sustainable agricultural practices through optimal resource use with smallholder farmers through training and workshops.*³¹⁵⁶

*Creating a channel between environmental scientists/researchers and consumers so they could communicate their findings with the general consumers (everyone, basically) (each to their level of understanding) about the positive impact of responsible consumption and lowering the ecological footprint in the long run on the environment.*³¹⁵⁷

*Knowledge sharing remains the biggest challenge, particularly from private consultants who feel they are not getting enough information to disseminate from research and demonstration farms – these links need to be strengthened to build and strengthen links within the AKIS.*³¹⁵⁸

*Data sharing between relevant agencies will be critical for monitoring but will need to be formalized (e.g. between Department of Environment (DoE), Soil Resource Development Institute (SRDI), Ministry of Water, Ministry of Industries, etc.).*³¹⁵⁹

*As a sector, we have the knowledge and practices to create positive change, but we need to improve the open sharing and utilising of this information universally.*³¹⁶⁰

*Transparency and accountability in sharing of data. Data should be made accessible to all the actors across food systems and the private sector should share their rich sources of data for food systems decision-making.*³¹⁶¹

*Greater transparency and sharing of data, transferable through the use and development of appropriate technology, is the winning strategy to achieve this goal.*³¹⁶²

*How we architect infrastructure has a huge impact on outcomes - we need to build an "Internet" layer for data sharing, then innovate on top of that.*³¹⁶³

*Knowledge sharing.*³¹⁶⁴

³¹⁵⁴ 158:39 p 9 in 279_May_18_21_Yoovata M_Multi

³¹⁵⁵ 163:118 p 15 in 300_May_27_21_Alesso_Pommeret

³¹⁵⁶ 166:7 p 6 in 355_June_14_21_FAO

³¹⁵⁷ 166:8 p 6 in 355_June_14_21_FAO

³¹⁵⁸ 170:19 p 7 in 328_May_19_21_Lalor_Teagasc

³¹⁵⁹ 174:8 p 6 in 332_May_24_21_FAO_UNDP

³¹⁶⁰ 175:22 p 8 in 333_May_25_21_GMA_Multi

³¹⁶¹ 177:32 p 7 in 335_May_26_21_Laar_Multi

³¹⁶² 179:11 p 8 in 337_May_26_21_CI_WFO

³¹⁶³ 194:37 p 11 in 352_June_04_21_Troughton J

³¹⁶⁴ 198:42 p 6 in 357_Apr 14_21_Harfouche S

*Evidence: generating it, sharing it, using it.*³¹⁶⁵

*Assessing progress is critical and entails governance, data and transparency, and cross-sector alignment.*³¹⁶⁶

*...information systems that undergird social policies. This information and data must be shared and there must be networking between several key actors, with the support of universities, to promote meetings, exchanges, and sharing, such as a map of active networks and a gathering of the work of different local and national social observatories.*³¹⁶⁷

*The group agreed that there needs to be more reliable scientific information coming from academics and objective third parties on what the best sustainable practices are for aquaculture. These then need to be disseminated to the public in smart and effective ways (e.g. social media, documentaries, information in supermarkets to guide purchasing decisions) to change demand, sentiment, and behaviour. Many felt that large producers will eventually be judged in the court of public opinion, and that this opinion needs to be shaped well.*³¹⁶⁸

*All stakeholders agreed in recognising the importance and the necessity of a strong regional cooperation, through a shared approach to SFS. To this effect, the SFS-MED Platform was welcomed as an ideal tool to bring together stakeholders from all shores of the Mediterranean, fostering dialogue at several levels to leverage the potential of local knowledge and data sharing, exchanges of best practices, to catalyse knowledge and collective action for more SFS. The Platform shall build on the existing frameworks present in the Mediterranean region, complementing and integrating them through a shared, context-specific SFS approach in which stakeholders can rely on mutual support.*³¹⁶⁹

*Application of crop models, social-economic – transforming the knowledge into making good decisions; food systems involve everyone.*³¹⁷⁰

*...harness artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data to not only fill knowledge and data gaps but to also boost agricultural productivity and address the numerous threats facing food systems...*³¹⁷¹

Harnessing and providing access to innovative technologies and digital solutions such as improved seed, mechanization, and ICT, that can allow farmers, policymakers, and practitioners to convert precise data into actionable knowledge and lead to better farming and investment decisions and improve agricultural productivity, competitiveness,

³¹⁶⁵ 215:18 p 12 in 376_June_04_21_IFAD_Multi

³¹⁶⁶ 228:34 p 10 in 222a_May_11_21_FTI_ZHI_English

³¹⁶⁷ 228:36 p 10 in 222a_May_11_21_FTI_ZHI_English

³¹⁶⁸ 240:32 p 11 in 319_June_30_21_Fredriksson O

³¹⁶⁹ 244:10 p 6 in 480_June_21_21_CiHEAM_Multi

³¹⁷⁰ 268:19 p 8 in 504_June_30_21_Susumu_Leiva

³¹⁷¹ 271:8 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

*better address the effects of climate change, and transform food systems. In particular, artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data are providing innovative ways to not only fill knowledge gaps but to also boost agricultural productivity and address the numerous threats facing food systems.*³¹⁷²

*Establishing knowledge platforms where policy, institutional, and technological innovations, best practices and lessons in successfully transforming food systems can be made available to different stakeholders so as to learn from the past and avoid past mistakes.*³¹⁷³

*The general consensus was that data and sharing data is absolutely critical to transition. We are able to share data, not only because it provides transparency trust to prevent the authenticity of the journey of the transition progress, but also because the sharing of the story and building positive momentum around regenerative agriculture would inspire further ones.*³¹⁷⁴

*Then, sharing data is crucial because it can furnish really good agronomic advice back to farmers, which is a critical point here. Indeed, data should be shared in two directions, this isn't just from farmers to some measurement reporting body, but farmers need to see that they are getting something back which is useful for them as well in terms of knowledge and advice.*³¹⁷⁵

*Unlocking the power of data science as an important tool: Integrating learning knowledge development by learning from mistakes and adapting interventions.*³¹⁷⁶

*Transparency – If there is a real desire for cooperation through a common set of principles a lot more is possible. Actors should start by broadly sharing data they have available. For instance, share what you are planning in more detail so that coordination can take place. This should also include UN agencies.*³¹⁷⁷

*Evidence and stories from different sectors need to be combined to create change.*³¹⁷⁸

*Rebuild local knowledge systems to have a systems approach. We need knowledge-based systems rather than science-based solutions with academia as an active partner to co-create and share knowledge within sectors and across similar territories.*³¹⁷⁹

Co-create and re-design agricultural extension services which integrate local and indigenous knowledge to ensure contextual understanding and needs. Institutionalizing

³¹⁷² 271:20 p 7 in 507_June_30_21_AKADEMYA2_FANPRAN

³¹⁷³ 271:21 p 7 in 507_June_30_21_AKADEMYA2_FANPRAN

³¹⁷⁴ 273:78 p 12 in 509_June_30_21_FFA_Nestlé

³¹⁷⁵ 273:79 p 12 in 509_June_30_21_FFA_Nestlé

³¹⁷⁶ 278:26 p 9 in 514_July_01_21_Bolling_Multi

³¹⁷⁷ 278:72 p 14 in 514_July_01_21_Bolling_Multi

³¹⁷⁸ 280:22 p 6 in 516_July-01_21_Anastasiou K

³¹⁷⁹ 299:44 p 9 in 535_July_08_UNESCO Chair on Food

these services with cross-ministerial collaboration to ensure incentive and expenditure efficiencies.

*Bring Indigenous communities and those using traditional practices to the table as decision makers to include knowledge that has supported sustainable food systems for millennia. Document and support different knowledges and different diets that are adapted to territorial circumstances.*³¹⁸⁰

*Actions proposed: a) Develop coherent laws for community cooperatives at national level
b) Define transparent principles for redistributing value added among CC members, and for monitoring and evaluation.*³¹⁸¹

*Create toolkits to facilitate knowledge transfer and peer-to-peer learning.*³¹⁸²

*We call upon the UNFSS to embrace the idea and practice of Farmer Research Networks (FRNs), where adaptive learning, diverse evidence such as farmer's traditional and Indigenous knowledge, and the recognition that holistic understanding of food systems impacts are all essential. This should also include well-planned participatory methodologies of disseminating research findings coming from undertaking research based on community needs.*³¹⁸³

*Role and partnerships between the private sector AND government, local partners, farmers, academia, education etc. to understand the interests and needs of all stakeholders along with the food system.*³¹⁸⁴

*Such linkages can increase their bargaining power as value chain actors and also help producers develop demand-based products that meet consumer needs and preferences. Multi-stakeholder cooperation and participatory monitoring and evaluation contribute to making value chains more inclusive.*³¹⁸⁵

*To transform the food system, a better understanding of the food market will be needed to identify the causes of food loss and possible solutions. This will include how inefficient relations between supply and demand contributes to food loss. From the demand side, awareness raising is needed and the making of accurate consumption plans in advance can reduce food loss. From the supply side, in case food prices are undervalued, price adjustments are required; mismatch of demand and supply leads to loss and waste, which can be addressed by promoting more closely demand-drive production, including by using digital platforms to make agricultural product sales efficient and to mitigate asymmetric supply and demand information. Recent innovations in this area provide information to be used in big data calculations and AI-based food demand analysis to better predict demand and adjust production accordingly.*³¹⁸⁶

³¹⁸⁰ 299:73 p 12 in 535_July_08_UNESCO Chair on Food

³¹⁸¹ 306:10 p 6 in 542_July_12_21_ProtA_L

³¹⁸² 306:18 p 7 in 542_July_12_21_ProtA_L

³¹⁸³ 309:17 p 7 in 545_July_13_21_Mbenya R

³¹⁸⁴ 310:13 p 7 in 546_July_13_21_INDEP

³¹⁸⁵ 313:21 p 8 in 549_July_14_21_Meah N

³¹⁸⁶ 315:28 p 10 in 551_July_15_21_FAO_ESCAP_Multi

Farmer-to-farmer digital technologies represented by Digital Green. Through digitalization and data farmers strengthen their position and gain voice to engage in constructive ways to change pre-existing power imbalances, such as top-down agricultural extension approaches. Farmers understand the value of their own data and have control/agency over it. Farmers use the cumulative information to make informed decisions and become empowered. This is possible through: • Targeting of elder, women, poor and landless farmers to work with them in equal pairing to build resilience and increase their empowerment.³¹⁸⁷

Local financial opportunities for indigenous women represented by Earth Empower.

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: o Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems. o Embrace the complexity of food systems transformation and other global challenges – such as climate change and its impact, which require integrating systems thinking and dealing with uncertainties. o Promote the role of evaluators as engaged participants: evaluators should position themselves in a more dialogic and partnership role in order to facilitate support decision-making, and engage in open communication to help form solutions and stimulate transformative change. o Innovate methods and approaches making a case for non-traditional and creative ones. These may include developmental, participatory and other approaches, which are more suited to help understand the complexity around food systems, while ensuring that the focus on quality is preserved. o Continue to develop capacities of evaluators so that they are equipped with the necessary skills and confidence in making the right choices on methods and approaches. o Ensure more inclusive and equitable evaluations: cross fertilize research and evaluation with local and indigenous food systems and practices and involve different stakeholders in the process- leave no one behind.³¹⁸⁸

It is important to advocate for strengthening the evaluation culture and to balance accountability and learning, aiming for evaluation to become everyone's business. Evaluators come from different educational and professional backgrounds, and addressing systems, complexity, and uncertainty may require a mindset shift, as we are not evaluating a linear process. Linked to this is the choice of appropriate methods, making a case for non-traditional and creative approaches to be encouraged: this may be difficult sometimes for evaluators to select and promote, though we need to move away from the notion of a gold standard to appreciating participatory, developmental, adaptive approaches... “in complex systems, it's really difficult to be an independent evaluator with a fixed set of questions and say this is right and this is wrong – participatory approaches need to be embedded in the evaluation” – said a participant The context for applying “new” methods does not always exists and we need to have key elements on

³¹⁸⁷ 317:12 p 7 in 554_July_15_21_Lopez DE

³¹⁸⁸ 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

*leadership, resources, donors' flexibility and organizational culture as mentioned earlier.*³¹⁸⁹

*Technology and Knowledge Exchange: India and Africa face common challenges – among others, low volumes at individual farm gates, long and often inefficient value chains and value webs, inadequate storage capacities (especially cold storage for cold chains of perishable products), absence of efficient, transparent, well-regulated markets. India has been pioneering in developing improved agricultural technologies and improved varieties of dryland crops. Under the South-south collaboration, institutes like ICRISAT have been playing a major role in exchanging technologies between two continents. Technology exchange should also happen amongst different States in India. Research institutions have been creating knowledge banks which could be integrated into a Global Knowledge Bank on Dryland Food Systems.*³¹⁹⁰

*Knowledge exchange: Creation of intercontinental knowledge exchange platform for India and Africa would help researchers and other stakeholders. Peer-to-Peer learning: Projects and policies enabling peer-to-peer model of learning can be implemented between states and countries. States can implement technologies learnt from such models to reduce crop loss and reduce the total cost of production.*³¹⁹¹

*The main outcome was the need for more scaled awareness on the contexts of respective stakeholders and what drives their decision-making. Causal Loop mapping has been tested and through this exercise identified as a useful tool.*³¹⁹²

*A pivotal role has to be played by governments and institutions for providing affordability, distribution of technologies, and technical assistance, promote research and development of new practices, dissemination of results, contribution to capacity building and training of farmers.*³¹⁹³

*From the side of research and academia, it is important that research questions are co-developed with local communities since the early beginning of project cycles so that the results are appropriate and useful for farmers and they can continue beyond single interventions/projects. This will also reduce farmers' resistance to implement and use technologies or new ways of working.*³¹⁹⁴

Difficulties in reaching farmers with technologies and limited know-how. To overcome this obstacle, sharing knowledge among farmers and within farmers groups on how to use technologies is important. It is also important to work on a bottom-up process that takes into consideration farmers' needs, a process that involves all steps of the food

³¹⁸⁹ 320:14 p 9 in 557_July_15_21_EvalForward_FSRD

³¹⁹⁰ 321:3 p 7 in 558_July_16_21_RICH_ICRISAT

³¹⁹¹ 321:11 p 9 in 558_July_16_21_RICH_ICRISAT

³¹⁹² 322:3 p 7 in 559_July_19_21_Choucair_Multi

³¹⁹³ 324:19 p 7 in 561_July_19_21_OCCAM

³¹⁹⁴ 324:20 p 7 in 561_July_19_21_OCCAM

*chain, from the preparation of seeds and soil to the distribution of products to their disposal and recycling.*³¹⁹⁵

*New ways to deliver production data from local crops and to improve crop protection knowledge will be found by improving the use of ICTs and mobile-linked tools.*³¹⁹⁶

*From the side of research and academia, it is important that research questions are co-developed with local communities since the early beginning of project cycles, so that results are appropriate and useful for farmers and they can continue beyond single interventions/projects. This will also reduce farmers' resistance to implement and use technologies or new ways of working.*³¹⁹⁷

*There is need to enhance nutrition information sharing between professionals and the general public. Devise information sharing tactics that will influence people to make healthy food choices, preserve and prepare foods in ways that will preserve their nutritional value and yet meet food preferences of many people.*³¹⁹⁸

*The need for new knowledge and understanding as critical enabler of change: beyond identifying the problems and challenges, we need both sophisticated research and analysis to understand future scenarios and pathways (such as the Land Use Futures program LUTO modelling, part of the global FABLE initiative), as well as frameworks for the measurement and valuation of natural capital, including via the Taskforce for Nature Related Financial Disclosures.*³¹⁹⁹

*Platforms for stakeholder engagement and as “space” or “hubs” to influence change, foster collaborative action, and deploy knowledge resources and tools for supporting transformative action. This is key to fostering engagement between line ministries (e.g. agriculture, forestry, environment, and water resources) and between government agencies, businesses, and financial institutions. The challenge is ensuring the long-term efficiency of such platforms, which requires time for building trust with professional facilitation.*³²⁰⁰

*Knowledge sharing and learning particularly amongst farmers, fishers, and smallholders at the base of the food production system. It was stressed, however, that while new experience and knowledge is an important ingredient to achieving sustainable food systems, what is being learned and transferred must also be relevant to the context within which producers are operating.*³²⁰¹

³¹⁹⁵ 324:28 p 9 in 561_July_19_21_OCCAM

³¹⁹⁶ 324:35 p 10 in 561_July_19_21_OCCAM

³¹⁹⁷ 324:47 p 11 in 561_July_19_21_OCCAM

³¹⁹⁸ 325:20 p 7 in 562_July_19_21_Zombe K

³¹⁹⁹ 326:14 p 9 in 563_July_20_21_ClimateWorksAustralia

³²⁰⁰ 27:7 p 6 in 564_July_20_21_Bakarr_MI

³²⁰¹ 3327:4 p 6 in 564_July_20_21_Bakarr_MI

*Availability and transparency of data and the sharing of pre-competitive information across value chains could better redirect food for human consumption and eliminate a significant amount of food waste.*³²⁰²

*Assessments need to be based on data. Collecting data is expensive. If already existing data is shared, researchers can focus on collecting missing data. Such efforts would benefit everyone: consumers, producers, distributors, and regulators.*³²⁰³

*Establish under the adverse conditions entailed by climate change the productive capacity of our main aquifers, communicate and educate producers based on these results and promote participatory and scientifically-based measures that allow sustainable production.*³²⁰⁴

*It is necessary to find a solution for the problems of irrigation, hydraulics and the exploitation of vulnerable resources necessary for the agronomic system.*³²⁰⁵

*Many public institutions have gathered information, however, there is still no common repository or initiatives promoting inter-ministerial programs and projects.*³²⁰⁶

*There is a need for a national inter-institutional repository with free access to statistics and censuses regarding the state of Food and Nutrition Security (FNS). There is also a need for programs and projects to coordinate actions.*³²⁰⁷

*...although it was considered that monitoring and compliance are always major challenges in public policy, it was suggested that statistics be gathered (originating from both the donor and the recipient), as well as monitoring in order to let donors know what is being done with their donated product. It is believed that technology such as real-time data feed apps could be a great asset. The importance of doing inventory of existing initiatives inside and outside of Costa Rica was mentioned, as well as looking at successful cases and their monitoring mechanisms for consideration in the country's own situation, and to generate protocols, norms and guides for good practices that will allow for compliance checklists. Transparency with the end beneficiary (while being careful regarding their anonymity at the public level) is also necessary because if aid "falls into the wrong hands," this would be a disincentive for the donor.*³²⁰⁸

³²⁰² 331:5 p 2 in 139a_May_27_21_WBCSD

³²⁰³ 333:2 p 1 in 313a_June_15_21_Narrod_Multi

³²⁰⁴ 348:1 p 6 in 422a_June_28_21_PROLIDER_Eng

³²⁰⁵ 348:12 p 7 in 422a_June_28_21_PROLIDER_Eng

³²⁰⁶ 351:4 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

³²⁰⁷ 351:16 p 7 in 552a_July_15_21_Frente_Parlamentario_Eng

³²⁰⁸ 352:10 p 8 in 567a_July_21_21_FLWRN_FBN_Eng

Monitoring and evaluation

*Also, to evaluate the impact of technology to mitigate the carbon footprint, always bringing it to the national reality. Finally, we ended by raising awareness of the importance of monitoring, and how this is vital to continue advancing in the region.*³²⁰⁹

*Creation of an evaluation system for investment incentive policies in the agricultural sector based on compliance with the following measures: o Resource preservation o Project profitability o Respect for the production chain o Project stability.*³²¹⁰

*It is necessary to create a unified database platform (DB) and develop an information system. These aspects have been proposed by the members of the group and ways in which progress could be assessed, it has been indicated necessity to develop and implement a monitoring system to assess the actions taken.*³²¹¹

*These aspects have been proposed by the members of the group and ways in which progress could be assessed, it has been indicated necessity to develop and implement a monitoring system to assess the actions taken.*³²¹²

*There are reclamation expeditions in the countries that monitor the processes of land degradation (salinization, groundwater levels, the state of the drainage network) - it is necessary to strengthen the technical potential of these services in order to move from simple monitoring to real management of reclamation regimes.*³²¹³

*It is necessary to raise the status of protected areas of groundwater deposits, groundwater monitoring should become part of ecosystem management.*³²¹⁴

*Research and data generation to sustain policies and programs that enhance cultural approaches to food systems require data systems, but these must belong to communities who should own and use data for their own informed decision-making.*³²¹⁵

*Promoting Regional Network and supporting actions and plans for the monitoring activities on marine litter (on the sea and biota) and anthropogenic activities impacts o Supporting the decarbonization and maritime activities more eco-friendly o Promoting and drafting regional recommendations for improving the national legislative frameworks for the marine litter collection by fishermen o Design of innovative landing site for the proper management of the seafood value chain and marine litter management on land.*³²¹⁶

³²⁰⁹ 516:4 ¶ 285 in 098a_June_10_21_Caballeros C_Eng

³²¹⁰ 520:34 p 10 in 107a_June_22_21_Trimarchi A_Eng

³²¹¹ 17:16 p 8 in 164_Apr_15_21_Anarbekov_Akramov

³²¹² 17:64 p 8 in 164_Apr_15_21_Anarbekov_Akramov

³²¹³ 17:65 p 11 in 164_Apr_15_21_Anarbekov_Akramov

³²¹⁴ 17:66 p 11 in 164_Apr_15_21_Anarbekov_Akramov

³²¹⁵ 19:8 p 6 in 115_Apr_24_21_Foronda_Multi

³²¹⁶ 23:80 p 8 in 205_Apr_27_21_CiHEAM_Multi

*Define Standardized/harmonized indicators for monitoring of land and water degradation at region level.*³²¹⁷

*Apply Economic evaluation of food systems approaches and trade-offs: cost/benefit analysis help decision making to identify appropriate action on water/land management for food systems.*³²¹⁸

*There are concerns on monitoring of producers, processors and food vendors -the lapses linked to weak coordination of governance support systems in driving implementation of policy and regulation frameworks on nutrition, food safety and hunger eradication.*³²¹⁹

*Smallholder farmers lack the capacity to conduct proper monitoring and evaluation.*³²²⁰

*There is need to engage the communities in a citizen science regime and the data from the regime deposited in a national database to allow for strategic monitoring and decision making.*³²²¹

*Financing regimes should include ongoing coaching, mentorship and advisory support to help de-risk projects and encourage strong partnerships in design, execution, monitoring and improvement of science based, data inclusive, high impact mitigation, adaptation and resilience projects More thought and emphasis has to be placed on the positive social impacts of agricultural production and how a healthier environment can have a better impact on the way of life for all.*³²²²

*For the facility to ultimately help achieve positive impact on women entrepreneurs, the metrics it is expected to use and to encourage recipient financial intermediaries to adopt should include gender-focused metrics. Examples to be considered include a “gender equity/quality scorecard” mentioned during the panel discussion by Agnes Dasewicz of SEAF, focusing both on performance by financial intermediaries and on performance by their investees or clients.*³²²³

*For example, an effective framework in the first bold action requires farmer and farm staff participation, business recognition and distribution of the value created, policy that supports the creation of new markets and adoption of practices, and research to inform program design and evaluation.*³²²⁴

Solving challenges of post-harvest value chain • Supporting youth innovation Measuring success: a) Annual Tracker of progress on the various activity lines of the Platform, compiled into an annual publication (similar to the African Investment Outlook Report) Such a Tracker would allow demonstration of impact e.g., development of human capacity, number of employees, turnover, demonstrate the changes and growth of

³²¹⁷ 23:81 p 10 in 205_Apr_27_21_CIHEAM_Multi

³²¹⁸ 23:82 p 10 in 205_Apr_27_21_CIHEAM_Multi

³²¹⁹ 33:11 p 7 in 084_Mar_17_21_UnyimeAbasi B

³²²⁰ 33:43 p 11 in 084_Mar_17_21_UnyimeAbasi B

³²²¹ 35:2 p 8 in 095_Mar_27_21_Chinapoo C_Multi

³²²² 35:105 p 7 in 095_Mar_27_21_Chinapoo C_Multi

³²²³ 42:13 p 8 in 178_Apr_8_21_AGRA_Multi

³²²⁴ 43:10 p 6 in 003_Nov_23_21_Posner S

individual entrepreneurs, development in sectors of activity etc. Efficiency of training may also be measured by evaluating knowledge before and after (several organisations already do this). b) Measurement of impact would focus on the community level, but much impact is expected to be of intangible value. Tangible metrics would include: number of work working with start-ups that have built programs directed to them; analysing the social improvement of the life of women once they improve their livelihoods and education (e.g. changes in domestic violence for instance, psycho-social impact, social cohesion); number of women's groups created; impact on child nutrition; jobs created; access to markets. Who can contribute/realize these game changers...³²²⁵

Measuring success: a) Level of uptake of information/use of the system (app?), but also success stories of information shaping entrepreneurs' decisions and number of young people that managed to get funding. b) Relevant metrics would be: • Successful transactions and deals closed on the platform • Matches made between investors and agriSMEs • Number of agribusinesses registered and able to access resources on the platform • New jobs created by the SMEs • Sales and revenue growth recorded by the SMEs. Who can make this happen, and what can each of us contribute?³²²⁶

Measure the number of farmers that are able to continue operating, including those that are able to grow their operations. • Supply and demand for education: Compare a measurement of the amount and nature of information (i.e. training, knowledge sharing, etc.) that is being offered to FSPs and Producers, as compared to that of the demand for information. • Fund disbursement time: Track the variations in the time required for funds to be disbursed, especially to younger entrepreneurs, starting from the moment an application is made.³²²⁷

Measuring success: a) For bankability metrics, success would be measured by adoption rate, reduced transaction cost and due diligence cost, and adaptation/improvement on the FAO EXACT impact tool related to climate and enterprise investments. b) For the platform of partners, success would be measured by improved transparency and synergies created around investments and by increased investment of different types of finance matching the various SME needs. c) For the fifth proposal on donor coordination, success would be measured by improved transparency around donor interventions and number of synergies among donor-funded projects. Who can make this happen, and what can each one of us contribute? All participants in the group stated their interest, and also noted the need for broad-based support from the FSP and agri-SME communities and from key donors to agriculture, potentially led by IFAD given its credibility in the space and its experience in leading financial coordination efforts in the agricultural finance ecosystem (global and at country level).³²²⁸

Measuring success: a) Success for a convening alongside the FSS would be measured by the range of actors involved, including FSPs and technology companies, farmer organizations, governments, inter-ministerial agencies, and private investors, as well as

³²²⁵ 46:9 p 7 in 049_Feb_23_21_SAFIN_Multi

³²²⁶ 46:14 p 8 in 049_Feb_23_21_SAFIN_Multi

³²²⁷ 46:18 p 9 in 049_Feb_23_21_SAFIN_Multi

³²²⁸ 46:27 p 11 in 049_Feb_23_21_SAFIN_Multi

youth groups. Success would also be measured by the depth of knowledge and experience sharing across different regions. b to f) For the other game-changers, success would be measured by access of small entrepreneurs to new investor networks and improved product offering among FSPs. Who can make this happen, and what can each one of us contribute? ³²²⁹

Active engagement in the solution finding, solution design and solution execution and joint action in monitoring (studying) and improving actions implemented. ³²³⁰

Measuring progress is still hard and therefore indicators or monitoring and evaluation systems should be implemented or improved to measure progress and success. ³²³¹

Scale innovative solutions. To advance progress in achieving the SDGs, stakeholders will need to measure, evaluate, and report the data and evidence that is required to iteratively improve food systems. This will include ongoing assessments to balance food security, public health, the environment and climate change, farmer livelihoods, and the needs of women, youth, and underserved groups. ³²³²

There is a need to harness assets and technologies that were not available 5 or 10 years ago to develop out-of-the-ordinary solution thinking: use of satellites/drones to monitor progress across multiple small holding reserves; and cheap monitoring sensors that were not previously available to help with issues like fertilizer, water, soil carbon etc. ³²³³

Global theory of change for investing in nutrition SMEs to identify pathways to impact: along the lines of Lancet series that sets out best practices/ pathways across contexts (which will require very rigorous pilot level M&E), which would then allow us to use more process level/ intermediary indicators for larger-scale ongoing investments that are made according to that evidence-based roadmap. What are the lighter touch ways we can get more of a sense of what works? • Pick a few investments to spend a lot of money on M&E. ³²³⁴

Identifying and credentialing new metrics that privilege nutrition and purpose, alongside profit, to uplift social enterprises and entrepreneurs who are creating solutions specifically for poor communities. ³²³⁵

Measure the environmental impact: encourage manufacturers and retailers to measure the environmental impact of food they are selling. ³²³⁶

To make a difference, the following recommendations were proposed: • Promoting research and innovation and coalition building o Food research and innovation are key for making informed decisions, but also for monitoring success. o The value of

³²²⁹ 46:32 p 12 in 049_Feb_23_21_SAFIN_Multi

³²³⁰ 52:40 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

³²³¹ 53:47 p 4 in 001_Nov_5_20_CGIAR

³²³² 54:17 p 5 in 002_Nov_19_20_CGIAR

³²³³ 59:18 p 5 in 020_Jan_26_21_IFAN

³²³⁴ 63:51 p 11 in 037_Feb_12_21_Food Systems for the Future_Multi

³²³⁵ 63:52 p 12 in 037_Feb_12_21_Food Systems for the Future_Multi

³²³⁶ 66:72 p 13 in 052_Feb_25_21_EUFIC

*information sharing, communities of practice, coalition building on food systems transition was recognized.*³²³⁷

*However, to obtain better results and ensure the sustainability of the assets generated by this dialogue of experts in multiple specific sectors, better organization and capacity building of national, regional, and local communities through training and monitoring in the various CSA food system intervention areas and action tracks checked (1, 2, 3, 4, and 5) is necessary and urgent for the DRC.*³²³⁸

*Although there are actions that can be implemented in the short term and others that require more time for implementation, all of them should have a holistic approach and a long-term vision with citizen participation and monitoring.*³²³⁹

*In what concerns traceability, control of the supply and food safety, technology can play an important role to have accurate monitoring and to collect information's on food life cycles, quality, and food safety.*³²⁴⁰

*Incorporate One Health approach into solutions, which may include guidelines for |eld agents, capacity building, creation of local or regional "One Health" associations, using an evaluation system adopted by everyone with common, multiple criteria.*³²⁴¹

*Among the findings it was pointed out that it is necessary to constantly monitor and analyze the state of the food systems and supply chains across countries and continents.*³²⁴²

*The strategy is recognised as the first step in offering a direction but resources should be directed towards implementation and monitoring and evaluation of the strategy.*³²⁴³

*Continuous monitoring of the food chain from the farmers to the consumer (surveillance) so that the food chain can be evaluated from time to time and enhance sustainability.*³²⁴⁴

*The strategy is recognised as the first step in offering a direction but resources should be directed towards implementation and monitoring and evaluation of the strategy.*³²⁴⁵

*Also, improving evaluation and monitoring programs...*³²⁴⁶

Effectiveness and accountability: Additionally, MSPs also raise questions related to the effectiveness and accountability of these kinds of mechanisms. In this sense, the dialogue identified as crucial recommendations: (1) defining clear responsibilities for each

³²³⁷ 66:96 p 12 in 052_Feb_25_21_EUFIC

³²³⁸ 70:8 ¶ 20 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

³²³⁹ 75:61 ¶ 38 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

³²⁴⁰ 76:40 p 9 in 103_Apr_8_21_Carrara E_Multi

³²⁴¹ 93:50 p 12 in 227_May_18_21_Tarawali S

³²⁴² 94:4 p 6 in 228_May_18_21_Kovnat K

³²⁴³ 101:6 p 7 in 325_May_19_21_ICLEI Africa_Multi

³²⁴⁴ 101:26 p 9 in 325_May_19_21_ICLEI Africa_Multi

³²⁴⁵ 101:42 p 7 in 325_May_19_21_ICLEI Africa_Multi

³²⁴⁶ 116:16 p 9 in 093_Mar_25_21_Adeboye_T

*stakeholder involved; (2) having a clear shared agenda and goals (with time frame) based on a shared analysis; (3) having internal mechanisms in place to make partners accountable; (4) focus on concrete solutions; (5) monitor and evaluate impact; and (6) invest in (mutual) learning about multi-stakeholder approaches.*³²⁴⁷

*Monitoring and evaluation must pay attention to potential trade-offs that could occur as a result of project selection criteria: some criteria for effectiveness may limit the inclusion of certain farmers or consumers.*³²⁴⁸

*Measurement - we can only manage what we can measure. Needs to use indicators that are holistic and impact-focused (e.g. measure health outcomes).*³²⁴⁹

*Participants felt that progress could be assessed through: (1) rates and trends of malnutrition in all its forms, (2) levels of dietary diversity at the household level and (3) changes to school feeding programmes. Participants also stated that assessments should involve youth, use both qualitative and quantitative methods, and would benefit from effective monitoring from planning to implementation.*³²⁵⁰

*There is a need for frequent monitoring by extension service providers.*³²⁵¹

*Monitoring and reporting can be initiated in connection with SDG 6.3.2 Proportion of bodies of water with good ambient water quality, which is currently not monitored in Bangladesh.*³²⁵²

*There should be more economic evaluations of ecosystem services and natural resources with emphasis on water and the benefits of all actors of the food system needs to be taking into account.*³²⁵³

*First, an evidence base must be built which demonstrates the impacts of agriculture sector on the environment, especially more extensive and reliable monitoring of river ecosystems.*³²⁵⁴

Smart metrics are needed to establish planetary health and human health simultaneously. Such an index should be valid for both individual foods and complete diets and applicable to diverse regional and economic situations. Currently, foods and food systems are often measured on gross rather than net environmental impact and without any consideration of contribution to human health in terms of protein and essential nutrients required for development and optimal wellbeing. If we are truly to understand

³²⁴⁷ 141:10 p 8 in 229_May_18_21_NFP_Rabobank_Multi

³²⁴⁸ 141:30 p 13 in 229_May_18_21_NFP_Rabobank_Multi

³²⁴⁹ 163:31 p 6 in 300_May_27_21_Alesso_Pommeret

³²⁵⁰ 167:28 p 7 in 311_June_14_21_NCD Child

³²⁵¹ 173:36 p 10 in 331_May_24_21_LNFU

³²⁵² 174:7 p 6 in 332_May_24_21_FAO_UNDP

³²⁵³ 174:19 p 6 in 332_May_24_21_FAO_UNDP

³²⁵⁴ 174:35 p 8 in 332_May_24_21_FAO_UNDP

*what sustainable, healthy diets look like we need these metrics to simultaneously track net environmental impact and nutrient density and diversity.*³²⁵⁵

*Smart metrics are needed to establish planetary health and human health simultaneously. Currently, foods and food systems are measured on environmental impact without any consideration on contribution to human health in terms of protein and essential nutrients required for development and optimum wellbeing.*³²⁵⁶

*Globally, industry need to align on this and push for net annual GHG emissions to be measured.*³²⁵⁷

*Globally there is a need for industry to align on measurements and initiatives to improve environmental impacts.*³²⁵⁸

*To monitor food systems transformation in Africa, Africa needs to develop a national or regional index/classification of countries based on their food systems transformation efforts.*³²⁵⁹

*Policy: Suggested a compulsory M&E.*³²⁶⁰

*...participants identified a lack of follow-up to existing investment actions, suggesting that indicators that measure and evaluate investments and results are necessary for sustainable food systems...*³²⁶¹

*Additional recommendations include monitoring the credit granted to small producers to avoid over-indebtedness.*³²⁶²

*Increased monitoring of the quality of food delivered through the Home-Grown School Feeding Program and associated feedback.*³²⁶³

*Fortification compliance monitoring, coupled with regulation.*³²⁶⁴

*Increased enforcement of standards through sustainable and adequate funding mechanism, larger manpower, and technical capacity for the regulatory system to achieve faster monitoring and evaluation and feedback.*³²⁶⁵

*Create digital twins of farming land to monitor change over time (e.g. nutrient yields).*³²⁶⁶

³²⁵⁵ 175:9 p 6 in 333_May_25_21_GMA_Multi

³²⁵⁶ 175:28 p 11 in 333_May_25_21_GMA_Multi

³²⁵⁷ 175:29 p 11 in 333_May_25_21_GMA_Multi

³²⁵⁸ 175:34 p 11 in 333_May_25_21_GMA_Multi

³²⁵⁹ 177:71 p 13 in 335_May_26_21_Laar_Multi

³²⁶⁰ 182:88 p 14 in 340_May_27_21_Mamba_L

³²⁶¹ 184:19 p 6 in 342_May_28_21_Peralta T

³²⁶² 184:22 p 6 in 342_May_28_21_Peralta T

³²⁶³ 193:17 p 8 in 351_June_03_21_CIF_Multi

³²⁶⁴ 193:30 p 9 in 351_June_03_21_CIF_Multi

³²⁶⁵ 193:46 p 10 in 351_June_03_21_CIF_Multi

³²⁶⁶ 194:6 p 7 in 352_June_04_21_Troughton J

*Conduct soil monitoring and evaluation, and develop a database.*³²⁶⁷

*Conduct soil monitoring and evaluation, and develop a database • Commodity management and soil nutrient balance calculation.*³²⁶⁸

*Furthermore, it is important to ensure adequate participatory monitoring and evaluation of projects and activities, especially with young people.*³²⁶⁹

*It was stressed the importance of participatory monitoring and evaluation of projects and activities, especially with young people.*³²⁷⁰

*...monitoring system...*³²⁷¹

*It was noted that recent progress in establishing standardized rigorous ways of collecting statistics (eg., UN SEEA; business reporting standards) can enhance a broader recognition of holistic food systems evaluations, while at the same time making them more robust and credible. There is a need to be able to capture externalities and assign value in a way that is tangible and comparable. The TEEBAgriFood Evaluation Framework was highlighted as an internationally accepted harmonized framework for holistic food systems evaluations, which was developed by 150 scientists from 33 countries.*³²⁷²

*Uptake of comprehensive food systems evaluations in the context of the Food Systems Summit process: the wide socialization of concepts and issues; ensure national and regional momentum and ownership; strengthening a growing coalition of practitioners and policy champions; and highlighting best-practice examples at different levels: policy, region, business, investment or product; engage with smallholder farmer groups to understand the diversity of what farmers and farmer workers value and possible lock-ins; Ensure a multi-value perspective in particular to the role of Indigenous and local knowledge on biodiversity and ecosystem services (including cultural values, knowledge on local varieties); develop a multi-stakeholder platform/coalition supported by strong data and information.*³²⁷³

*In order to assess progress, it is essential that the monitoring processes of existing educational programs in schools are fulfilled. Social control within communities is also a good monitoring strategy.*³²⁷⁴

By using successful measurement programs and methods that must be readjusted and ensured. Frequent surveys should be carried out to monitor progress indicators in the fight against hunger. Civil society will be able to monitor these actions and to do so,

³²⁶⁷ 196:15 p 6 in 354_June_07_21_NAMAC

³²⁶⁸ 196:32 p 7 in 354_June_07_21_NAMAC

³²⁶⁹ 215:11 p 6 in 376_June_04_21_IFAD_Multi

³²⁷⁰ 215:14 p 9 in 376_June_04_21_IFAD_Multi

³²⁷¹ 218:9 p 6 in 379_June_08_21_KAMMPIL

³²⁷² 220:2 p 6 in 381_June_08_21_UNEP_Multi

³²⁷³ 220:10 p 10 in 381_June_08_21_UNEP_Multi

³²⁷⁴ 228:41 p 12 in 222a_May_11_21_FTI_ZHI_English

*spaces for participation, such as the Brazilian Food and Nutritional Security Councils, should be strengthened.*³²⁷⁵

*The Human Development Index is emerging as a tool for assessing progress. Indeed, this tool is used to measure long-term progress in three fundamental dimensions: a long and healthy life, access to knowledge and a decent standard of living.*³²⁷⁶

*Sustainability indicators must be introduced over the mid and long term.*³²⁷⁷

*At government level, a more active monitoring is needed in order to enforce the law against wrong-doers and to inhibit traditional harmful practices such as burnings in specific areas of Brazil.*³²⁷⁸

*Clear/Objective metrics in order to benefits from the investments and current existent sustainable footprint. That would benefit the entire agri chain...*³²⁷⁹

*Have tool to properly measure the sustainable impact/footprint is the key. Some potential good measurements that might be interest to be adopted: (i) Meat production/carbon emission; (ii) Meat production/native biome preserved.*³²⁸⁰

*Develop efficient monitoring systems to be able to track progress and identify gaps to be addressed.*³²⁸¹

*Need to strengthen capacities for policy implementation and monitoring and evaluation as well as to invest in technical and vocational training of Africa's youth population.*³²⁸²

*Understanding the baseline from which the farmer can start applying regenerative practices is crucial to measuring progress.*³²⁸³

*It was also stressed that the focus should be placed on 'what' and 'how' is measured to achieve a set of goals rather than on agreeing on a narrow definition of principles based on a fixed set of practices.*³²⁸⁴

*It is critical to first establish a robust baseline so that farmers can get started on the journey. Without this anchoring point is can be difficult for farmers to know where to get started.*³²⁸⁵

The importance of taking a holistic system view is at the heart of the debate, which encompasses environmental, social and economic indicators, and potentially not

³²⁷⁵ 228:47 p 14 in 222a_May_11_21_FTI_ZHI_English

³²⁷⁶ 229:12 p 8 in 226a_May_17_21_Oteyami O_English

³²⁷⁷ 237:1 p 8 in 284a_May_19_21_INTERPORC_English

³²⁷⁸ 261:19 p 6 in 497_June_24_21_Fontes_Multi

³²⁷⁹ 261:39 p 6 in 497_June_24_21_Fontes_Multi

³²⁸⁰ 261:98 p 13 in 497_June_24_21_Fontes_Multi

³²⁸¹ 262:22 p 6 in 498_June_24_21_Danquah E

³²⁸² 271:31 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

³²⁸³ 273:7 p 6 in 509_June_30_21_FFA_Nestlé

³²⁸⁴ 273:31 p 8 in 509_June_30_21_FFA_Nestlé

³²⁸⁵ 273:75 p 12 in 509_June_30_21_FFA_Nestlé

*disparate indicator, we need to think of it more broadly across the food system as well.*³²⁸⁶

*A full range of indicators was discussed, regarding soil organic matter, above ground biomass, land and resource efficiency measures, nutrient density, nutrient management, nutrient surplus, measures related to circularity, measure dedicated to farmer livelihoods, collective agreements in the sector, water retention, soil fertility and consumption related metrics.*³²⁸⁷

*More broadly, really understanding catchment area impact which can only do if you aggregate data from multiple sources. It is critical that we create clarity and alignment about what the metrics and outcomes should be.*³²⁸⁸

*There are currently no alignment and farmers may be asked for different measures from different sources – urgently need to harmonise.*³²⁸⁹

*We need to find a way and a robust system so that we ask for that data once, not multiple times from different parties with different quotes, we need to think clerkly about the efficiency of data collection and the systems that we will aggregate and then think about the multiple uses of that data from centralized system.*³²⁹⁰

*Need to align on what the data can and should be used for...*³²⁹¹

*Information and data – equipping practitioners to monitor situations as they conduct their activities, and investing in gathering accurate real-time data to inform flexible planning and programming.*³²⁹²

*First, we must operationalise flexibility / food system resilience in order to be able to recognise it within programme proposals, organisation and activities. This includes having indicators for the full response cycle (anticipation, prevention, early action, response and recovery). Thereafter, measuring flexibility within a project/programme would entail examining how they score in line with these different elements.*³²⁹³

*Measurement and evaluation: build a database encompassing all lifecycle data of food production and examine the carbon and water footprints across the food industry's production and supply chain.*³²⁹⁴

³²⁸⁶ 273:76 p 12 in 509_June_30_21_FFA_Nestlé

³²⁸⁷ 273:77 p 12 in 509_June_30_21_FFA_Nestlé

³²⁸⁸ 273:81 p 12 in 509_June_30_21_FFA_Nestlé

³²⁸⁹ 273:82 p 12 in 509_June_30_21_FFA_Nestlé

³²⁹⁰ 273:83 p 12 in 509_June_30_21_FFA_Nestlé

³²⁹¹ 273:90 p 12 in 509_June_30_21_FFA_Nestlé

³²⁹² 278:63 p 13 in 514_July_01_21_Bolling_Multi

³²⁹³ 278:66 p 13 in 514_July_01_21_Bolling_Multi

³²⁹⁴ 297:9 p 6 in 533_July_07_21_Gazit GS

*Participatory monitoring efforts which engage/validate/build trust and measure contextually established indicators for success.*³²⁹⁵

*Community participation in decision-making bodies, policy-setting and program development, along with citizen-led monitoring approaches that can drive better standards and accountability.*³²⁹⁶

*To better monitor this work we need: measurement (of what, in which way, is it effective, is it enough?), citizen-led accountability for reporting and monitoring and government involvement in developing models. Accountability is a priority where the goal is to remove overt pressure and antagonistic elements. It is possible to identify problems and barriers in collaborative ways to improve service delivery and standards, e.g. community score cards is a solution through citizen-led accountability.*³²⁹⁷

*Multi-stakeholder coalitions will be needed to design, implement and monitor systems approaches on relevant topics.*³²⁹⁸

*Strengthening local governments along with strong transparency and accountability mechanisms for decision-making on public expenditure and strategy design for communities to have adequate oversight and influence to support their needs.*³²⁹⁹

*Participatory monitoring efforts with communities serve the double function of engagement, validation, and trust building; as well as measuring contextually established indicators for success (i.e. watershed restoration, has of riparian area restored, ha under agroecology, food production, etc.).*³³⁰⁰

*To monitor change, there is a need to steer away from outcomes that can create problems and false, over-simplified understandings about the dynamics and complexity that is the food system. Instead, there is a need to focus on process and deliverables. Dynamic monitoring systems that use targets and metrics, for example, process indicators, can be really helpful at shifting the narratives.*³³⁰¹

*As the Rwanda government is willing to provide funding to youth, these strategies should be reviewed. The findings should be more accessible for youth, otherwise, money will not be used.*³³⁰²

Monitoring of the Common Agricultural Policy (CAP) by different actors, demanding that financial incentives be better adapted to the national context, favoring marginal areas (growing evidence of greater environmental relevance), effectively based on

³²⁹⁵ 299:20 p 6 in 535_July_08_UNESCO Chair on Food

³²⁹⁶ 299:22 p 6 in 535_July_08_UNESCO Chair on Food

³²⁹⁷ 299:30 p 8 in 535_July_08_UNESCO Chair on Food

³²⁹⁸ 299:39 p 9 in 535_July_08_UNESCO Chair on Food

³²⁹⁹ 299:58 p 11 in 535_July_08_UNESCO Chair on Food

³³⁰⁰ 299:67 p 11 in 535_July_08_UNESCO Chair on Food

³³⁰¹ 299:75 p 12 in 535_July_08_UNESCO Chair on Food

³³⁰² 300:26 p 7 in 536_July_08_21_Musabyimana JC

results, and with greater supervision to encourage farmers to adopt more positive practices for biodiversity, rewarding them accordingly.³³⁰³

*We call upon the UNFSS to embrace the idea and practice of Farmer Research Networks (FRNs), where adaptive learning, diverse evidence such as farmer's traditional and Indigenous knowledge, and the recognition that holistic understanding of food systems impacts are all essential. This should also include well-planned participatory methodologies of disseminating research findings coming from undertaking research based on community needs.*³³⁰⁴

*There should be proper implementation of legislation in place and better monitoring mechanisms for the whole food system legislative framework.*³³⁰⁵

*Regular analysis, data collection and reporting should be conducted on consumer food basket in order to collect insights on basic nutritious values and provide evidence based policies that support sustainable food system.*³³⁰⁶

*Need to analyze the costs as well as the benefits of a healthy diet, in such a way as to prepare policy and financial support packages guided by sound and up-to-date evidence and a robust assessment of the alternatives.*³³⁰⁷

*Sustainability considerations must be incorporated into dietary guidelines in a meaningful way. This means drawing on the best available evidence to inform the recommendations that they make.*³³⁰⁸

*Proposed introducing a Lancet Countdown Indicator that monitors and measures progress towards implementation of national Dietary Guidelines. Food+Planet (foodandplanet.org) for example are developing indicators to measure the key dimensions of sustainable diets globally. This kind of initiative has great potential as a tool for both informing and monitoring guidelines.*³³⁰⁹

*Current methods for assessing strength of evidence prioritise the contribution of randomised controlled trials, but it is impossible to conduct long-term trials with diet; nor are these suitable for assessing sustainability impacts. The strength of evidence rating methodology proposed by the True Health Initiative known as HEALM (Hierarchies of Evidence Applied to Lifestyle Medicine) was proposed as an important step in the right direction.*³³¹⁰

While the goal of food systems transformation, in broad terms, can be envisioned as providing healthy, sustainably produced food on the plates of all people at all times, specific indicators for measuring the success of food system transformation have yet to be

³³⁰³ 301:18 p 7 in 537_July_08_21_ANP_WWF

³³⁰⁴ 309:17 p 7 in 545_July_13_21_Mbenya R

³³⁰⁵ 310:21 p 7 in 546_July_13_21_INDEP

³³⁰⁶ 310:26 p 8 in 546_July_13_21_INDEP

³³⁰⁷ 310:36 p 9 in 546_July_13_21_INDEP

³³⁰⁸ 312:6 p 8 in 548_July_14_21_Genoni A

³³⁰⁹ 312:13 p 8 in 548_July_14_21_Genoni A

³³¹⁰ 312:26 p 11 in 548_July_14_21_Genoni A

*clearly articulated in detail. A proposed initial step in articulating these indicators would be through establishing multi-stakeholder participatory monitoring and evaluation mechanisms to enable vulnerable groups and underserved sectors to provide grassroots perspective that can inform research and development priorities and policy recommendations.*³³¹¹

*New approaches and innovations are required to transform food systems, for a more equitable and sustainable world. Evaluation has a key role to play in supporting this, by shedding light on the complexities and interdependencies of food systems and identifying actionable and timely solutions, and ultimately contributing to the 2030 Agenda for Sustainable Development.*³³¹²

*The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: o Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems... Continue to develop capacities of evaluators so that they are equipped with the necessary skills and confidence in making the right choices on methods and approaches... Ensure more inclusive and equitable evaluations: cross fertilize research and evaluation with local and indigenous food systems and practices and involve different stakeholders in the process- leave no one behind.*³³¹³

*Participants agreed that evaluation is able to deliver the knowledge and evidence needed to inform decision-making leading to transformation of food systems. For this to happen and for the evaluation community to fully release its potential, the field of evaluation needs to keep up to and evolve as much as are the development challenges we are confronted to, which are becoming increasingly complex and urgent.*³³¹⁴

Evaluation tools and frameworks have to be adapted to address and to analyze the complexity of the food systems and make a difference. This is already happening and participants shared two examples moving in this direction: i) The CGIAR is developing its new research programme cycle, in which they revised methods used, approaches, areas to analyze, among others. This revision led to enhancing the way in which evaluations should be carried out, and what they should prioritize. ii) The Nourish for flourish diagnostic evaluation/needs assessment, provides an example of a diagnostic evaluation to determine food security needs, carried out at the provincial level in Cape Town in partnership with Academia and other stakeholders, leading to a multilevel stakeholder discussion, which enhanced the engagement among stakeholders towards food systems key areas of improvement. Outcomes were taken by the provincial government to develop a strategy for improving food systems. This exercise, which can be

³³¹¹ 313:14 p 6 in 549_July_14_21_Meah N

³³¹² 320:5 p 6 in 557_July_15_21_EvalForward_FSRD

³³¹³ 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

³³¹⁴ 320:7 p 7 in 557_July_15_21_EvalForward_FSRD

*seen as a process use evaluation, helped create community and government led groups to discuss and address food security issues.*³³¹⁵

Participants emphasized that to address complexity it is important to use participatory approaches and the engagement of stakeholders, particularly small-scale farmers. For instance, the qualitative impact protocol (QUIP) puts the farmers at the center of the system, helps to understand the contribution of other actors and linkages. Inclusive and equitable evaluations were also suggested to address root-causes of inequalities: indigenous evaluations and feminist approaches in particular. Realist evaluation type approaches are important to contextualize findings. These do not exclude other approaches such as theory of change evaluation and impact evaluation. The best team would consist of a team that understands the principles behind each of these and use them for usual reinforcement. Other evaluation approaches suggested were Contribution analysis, Outcome Harvesting. Outcome mapping and outcome harvesting help us to better understand unintended consequences and are quite useful in supplementing some of our traditional approaches” added a participant

*Regarding specific tools and methods that evaluators can use to address the complexities of food systems and their transformation, Theories of Change were mentioned, and in particular new nested approaches to Theories of Change design, which are important for bringing stakeholders together. In the toolbox of evaluators, there should also be a place for Stakeholder mapping, and in order to deepen and expand on specific stakeholders input and influence, influence mapping in decision-making.*³³¹⁶

*For policy evaluations, and considering that food systems cuts across different ministries/ authorities, observations and immersion, that consists of immerse evaluators in the policy making process to understand the people embedded in the systems.*³³¹⁷

*Last but not least, smart technologies and data tools are useful assets in evaluations of food systems, which can be constrained by capacities of evaluators themselves.*³³¹⁸

*In addition, while applying new tools and methods more suitable to addressing systems transformation and complexities, it will be important not to lose track of quality. All of this calls for having capacity development for all actors to understand and for evaluators to be confident in proposing methods and approaches.*³³¹⁹

This group agreed on the need to evaluate the outcomes of the Food Systems Summit and discussed how the summit and its outcomes could be evaluated. Evaluating a summit may have potentially many unintended and complex effects. To evaluate the usefulness of the Summit we need to assess: i) the diversity in type of producers and consumers represented: e.g. small holders need to have voice and influence in this summit: degree to which the summit was open to different voices including smallholders; ii) how much did

³³¹⁵ 320:8 p 7 in 557_July_15_21_EvalForward_FSRD

³³¹⁶ 320:10 p 8 in 557_July_15_21_EvalForward_FSRD

³³¹⁷ 320:12 p 8 in 557_July_15_21_EvalForward_FSRD

³³¹⁸ 320:13 p 8 in 557_July_15_21_EvalForward_FSRD

³³¹⁹ 320:15 p 9 in 557_July_15_21_EvalForward_FSRD

the Summit influence the narrative, the conceptual focus, but also the actions : did the summit have a ripple effect in media, public opinion etc.. It was also added that the language deployed in the FSS would be one indicator of change taking place thanks to the summit; iii) include the regional level in GLOCAL language and action: The regional level is ideal for knowledge aggregation and dissemination adaptation of global ideas to the local level and to learn from local level. System-wide reviews of progress towards the 2030 Agenda could be done regionally. “The FSS should have institutional arrangements to monitor and evaluate what it achieves,” added a participant.³³²⁰

Subsequently, participants identified indicators and best practices that could effectively measure the successfulness of these technologies and practices: • Time, in addition to quality and quantity, could be an indicator to measure technologies successfulness. Example: It is important to respect yields rotation/irrigation time and technologies could help in simplifying this process.³³²¹

To raise ambition and accelerate positive trends towards a sustainable food and land use future, a combination of coordinated public policy, market solutions, strong institutions and measurement and valuation of nature is needed.³³²²

Ways in which progress could be assessed: 1. Reduction in malnutrition and stunting rates 2. Increase in first 1000 days of life indicators 3. Uptake in exclusive breastfeeding for up to 6 months 4. Improved Human Development Indices for Liberia.³³²³

Ways in which progress could be assessed: 1. Increased national and agency budget allocations to direct nutrition-related interventions 2. Articulation of an integrated, multi-sectoral nutrition strategy 3. Established local food standards for food fortification and safety 4. Increased local production and processing of diversified food crops 5. Improved statistics on women and child malnutrition, anemia and stunting 6. Improved educational attainment.³³²⁴

Reinforcement of monitoring systems: public services play a fundamental role in implementing the necessary incentives and frameworks in the long term (authorization/prohibition of pesticide use, chemical fertilizers, medication, antibiotics; governance and management of natural resources, etc.). The current economic situation in Tunisia has seen a weakening of public services which have encountered more and more difficulties in carrying out their sovereign roles. Within the context in which these control systems are considered to be priorities to achieve healthy nutrition, adequate political and budget choices must be made at the national level and on a decentralized level.³³²⁵

The current economic situation in Tunisia has seen a weakening of public services which have encountered more and more difficulties in carrying out their sovereign roles. Within

³³²⁰ 320:16 p 10 in 557_July_15_21_EvalForward_FSRD

³³²¹ 324:23 p 9 in 561_July_19_21_OCCAM

³³²² 326:4 p 6 in 563_July_20_21_ClimateWorksAustralia

³³²³ 330:31 p 7 in 568_July_21_21_Cooper-Liverpool M

³³²⁴ 330:76 p 13 in 568_July_21_21_Cooper-Liverpool M

³³²⁵ 338:12 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

*the context in which these control systems are considered to be priorities to achieve healthy nutrition, adequate political and budget choices must be made at the national level and on a decentralized level...*³³²⁶

*Data and information collection systems based on the type of nutritional consumption/nutrition of the population in Kairouan (men, women, and by age group; and handling of data. These indicators will enable us to act in a more rapid and effective manner and to make timely and adequate decisions to reinforce access to healthy and balanced nutrition. The human resources required for this collection and this handling of data must be identified because they are not currently available and are costly.*³³²⁷

*We were able to empirically measure satisfaction from students and families, considered a good indicator of the outcome. After the process is evaluated, continuous improvements – quantitative and qualitative – are implemented, specifically: (i) matching the size of PARCELS in relation to the number of family members; (ii) inclusion of produce from family farmers in large cities (GREEN PARCELS) in 2021; (iii) inclusion of new foods (seasonal fruits) and biscuits and natural yoghurts from family farms in the PARCELS; and (iv) joint delivery of the School Meal PARCELS and Learning Materials.*³³²⁸

*How can progress be evaluated? The use of questionnaires is an important and versatile tool to follow up and monitor the progress made. It allows us to accompany students' nutritional profile, and at the same time it can help with self-assessment processes for actions by those involved.*³³²⁹

*The strengthening and continuity of the implementation of public food policies and the training of public agents, nutritionists, teachers, etc. are indicators of progress. Monitoring the use of funds from the National School Meals Program - PNAE; on-site monitoring of the actions actually carried out, including surveys with the students – the main audience – on both axes of the Program, i.e. the school meals service and Nutritional Food Education.*³³³⁰

*Monitoring by the FNDE, with support from the CECANE, to understand the local reality of the states and cities, including evaluating the distribution of parcels and their frequency and composition.*³³³¹

*Establish a food and nutrition monitoring system with the purpose of strengthening the creation of policies and programs. Also, incorporating this type of system into the proposed legislation being discussed would allow measurements of the results of these proposals to be taken.*³³³²

³³²⁶ 338:13 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

³³²⁷ 338:15 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

³³²⁸ 339:15 p 7 in 393a_June_01_21_Food of Tomorrow_Eng

³³²⁹ 339:45 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

³³³⁰ 339:54 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

³³³¹ 339:67 p 15 in 393a_June_01_21_Food of Tomorrow_Eng

³³³² 351:28 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

Research

*Co-design and co-create research and initiatives.*³³³³

*Embrace diversity and inclusivity to enrich research project design and expected outcomes...*³³³⁴

*Ensure ongoing relevance of our research, in line with changing societal needs, with appropriate translation into practice for sustainable and resilient food systems...*³³³⁵

*Research opportunities / Capacity Building o Transdisciplinary research teams from different departments within Universities Public health problem is a problem that needs to be solved in real life and not only by research and academics, focus on production to consumption, include all the different departments to work on food system.*³³³⁶

o Some attempts to link universities with agricultural colleges and ATVETs so that innovations will flow through the whole system and have impact

*Research / ICT o Linking research, extension and the end users o Leverage technology to enable connection.*³³³⁷

*Focus on applied research rather than basic research, in view of the transition we want to achieve.*³³³⁸

*Participants agreed that greater consideration is needed for measuring outputs and incentivizing improvements, as well as for the incredibly difficult nature of measuring carbon output and sequestration. Discussion included creating consistent terminology and metrics for understanding improvements like emission reductions, carbon sequestration, and protecting natural resources and creating programs to adequately pay for and reward achievements in these areas.*³³³⁹

*Participatory Action Research (PAR) on crop performance/cost benefit analysis in control plots systems help in building confidence of small holder farmers. Along with this, vulnerability of the landless people also needs to be addressed adequately.*³³⁴⁰

Agricultural research needs to become more holistic – as well as better-funded – in terms of both applied and much-needed basic research. Farmers need integrated research that studies a new method's benefits to multiple outcomes: nutrition content soil quality, water quality, air quality, renewable-energy generation. Research investment must go

³³³³ 1:6 p 6 in 072_Mar_09_21_Sibanda L

³³³⁴ 1:7 p 6 in 072_Mar_09_21_Sibanda L

³³³⁵ 1:9 p 6 in 072_Mar_09_21_Sibanda L

³³³⁶ 1:21 p 8 in 072_Mar_09_21_Sibanda L

³³³⁷ 1:24 p 10 in 072_Mar_09_21_Sibanda L

³³³⁸ 1:35 p 12 in 072_Mar_09_21_Sibanda L

³³³⁹ 4:22 p 10 in 104_Apr_8_21_Animal Agriculture Alliance

³³⁴⁰ 7:4 p 6 in 167_Apr_13_21_Welthungerhilfe_Multi

*beyond commodity crops. Changing tastes and great variety will require specialized research to assist growers of specialty crops.*³³⁴¹

*In terms of the Food Systems Summit and nature-positive practices, farmers and others in the group want a clearer understanding of what the goal of the United Nations is. Producers share the view that all forms of agriculture need continual improvement. But they worry about recommendations that might seek to do away with one type of agriculture or some common practices: “What is the true end goal, and what are they or we trying to achieve and why? Is it a full transformation or is it continual improvement? As producers, we need more context and want to be involved in the process of developing solutions.” Rather than being told what not to do, farmers want the research, support, and incentives to help them with continual improvement and new options.*³³⁴²

*They see continued need for research into bee disease – an environmental challenge with significant implications. Not all strategies work for all grower situations – that’s why there is a need for a “dynamic, robust toolbox” to accommodate different crop conditions.*³³⁴³

*Collective effort. Identify the gaps, they identify common resources that the companies can work on, and collaborate in building, scaling, and leveraging on these resources to help farmers have access to market, financing, training, and capacity building.*³³⁴⁴

*For WEF Nexus approaches to result in better socio-economic outcomes, first, national and research institutions should put more effort into disseminating and implementing research findings in collaboration with government and with support from international research/education organizations. For example, data on water management could greatly improve through micro-level assessments (e.g. household surveys), and tools/models could be developed so policy making entities have a greater base of evidence.*³³⁴⁵

*Participants agreed on the importance of completing projects that expand low carbon irrigation (e.g. gravity and solar irrigation, repairing inefficient infrastructure), carried out by government/development organizations like the World Bank with research institution support.*³³⁴⁶

*There is strong necessity to develop cooperation between national and regional research and academic institutions in the field of climate change.*³³⁴⁷

³³⁴¹ 8:8 p 6 in 169_Apr_6_21_Shea E

³³⁴² 8:29 p 11 in 169_Apr_6_21_Shea E

³³⁴³ 8:32 p 12 in 169_Apr_6_21_Shea E

³³⁴⁴ 9:20 p 8 in 171_Mar_31_21_Atilano C

³³⁴⁵ 17:5 p 6 in 164_Apr_15_21_Anarbekov_Akramov

³³⁴⁶ 17:6 p 7 in 164_Apr_15_21_Anarbekov_Akramov

³³⁴⁷ 17:11 p 8 in 164_Apr_15_21_Anarbekov_Akramov

*Develop joint research programs on intensive technologies, the creation of drought-resistant crops, agricultural diversification, rotational water use and other innovative approaches for the rational use of water and land resources ...*³³⁴⁸

*Participants has also highlighted the role of academic and research institutions who generates knowledge for policy through applied research.*³³⁴⁹

*Finally, the capacity of the agricultural workforce to produce healthy, nutrient-dense, food products on ecologically and economically viable holdings would be increased by greater efforts to share examples of best practice and ideas, and the ability to gain access to research activities and results.*³³⁵⁰

*All participants are encouraged to keep speaking with government on behalf of farmers and farming, and also engage with research and evidence-gathering processes.*³³⁵¹

*Concerning the youth, Christian Frutiger highlighted the importance of “getting the science right” in order to have true definitions. He felt like the Food Systems Summit will be the beginning (and not the end) of a journey of change of food systems, even though he wished something like an IPCC of food systems as the outcome of the Summit. For this, Frutiger stressed the importance of involving all sectors from academia, the public sector, the private sector, the multilateral system (IOs, IFIs), governments, civil society, etc.*³³⁵²

*Research and evidence generation to identify and upscale resilient and sustainable solutions and to advice investors/policy makers on sustainable choices.*³³⁵³

*Directing trans-disciplinary science to involve the civil society...*³³⁵⁴

*Supporting research on organic aquaculture o Supporting research and private investments on low trophic species, and new seafood products (i.e.: algae).*³³⁵⁵

*Promoting research on low-impact fishing and aquaculture practices (i.e.: bio-plastic nets for mussels, selectivity of fishing gears).*³³⁵⁶

*Research on nutritional properties of new species and improving the general awareness – Basket of new seafood products.*³³⁵⁷

³³⁴⁸ 17:15 p 8 in 164_Apr_15_21_Anarbekov_Akramov

³³⁴⁹ 17:18 p 9 in 164_Apr_15_21_Anarbekov_Akramov

³³⁵⁰ 20:3 p 6 in 116_Apr_21_21_Hein JR

³³⁵¹ 20:10 p 7 in 116_Apr_21_21_Hein JR

³³⁵² 22:24 p 10 in 191_Apr_16_21_Donati L

³³⁵³ 23:24 p 6 in 205_Apr_27_21_CiHEAM_Multi

³³⁵⁴ 23:32 p 7 in 205_Apr_27_21_CiHEAM_Multi

³³⁵⁵ 23:42 p 8 in 205_Apr_27_21_CiHEAM_Multi

³³⁵⁶ 23:45 p 8 in 205_Apr_27_21_CiHEAM_Multi

³³⁵⁷ 23:48 p 8 in 205_Apr_27_21_CiHEAM_Multi

Indigenous knowledge and traditional production practices should be conserved and promoted, as they are nature-friendly and sensitive to local ecologies. This is often validated by modern science as well.

*Thus, indigenous and scientific knowledge should be considered equally important in research and policymaking.*³³⁵⁸

*Use innovative methods for food production (research - preproduction) (Most voted on).*³³⁵⁹

*Increase budget (public and private) provided for research on agriculture production.*³³⁶⁰

*Increase interest in agricultural research and extension.*³³⁶¹

*The Dialogue called for concerted efforts by the Government and other stakeholders to catalyze agro-zones, reactivate localized investments and upgrade smallholder farmers (especially women, youth, the disabled) to become investable through adequate training and support, advisory services and access to research opportunities.*³³⁶²

*Identify the biggest problems and target those with ambition to tackle them first. • Invest in research on how we can deliver affordable sustainable food.*³³⁶³

*Budgets for research need to be aligned with a vision for where our food system will be in 10 years.*³³⁶⁴

*Improve skilled professional and provide the necessary infrastructure • Enhance the role of research and encourage scientific agricultural studies to solve problems of agricultural production, especially applied research • Improve regional cooperation in scientific research, Arab partnerships, and exchange of capabilities according to the comparative advantage of agricultural production • Promote genetic improvement programs for quantitative and qualitative production.*³³⁶⁵

*The session explored innovative food system solutions that can be replicated and scaled, such as: o Innovative market mechanisms to enable farming practices that regenerate soil health; o A pioneering farmworker-driven labor standards program in the U.S. dairy industry; o Research programs on the social dimensions of food systems that show how and why farmers adapt to environmental change.*³³⁶⁶

Improving data management systems and information sharing systems to ensure a fair and up to date flow of research for all agriculture stakeholders. This initiative also

³³⁵⁸ 27:19 p 6 in 044_Feb_18_21_Bharat K S

³³⁵⁹ 30:3 p 6 in 071_Mar_11_21_ESCWA_FAO

³³⁶⁰ 30:23 p 6 in 071_Mar_11_21_ESCWA_FAO

³³⁶¹ 30:32 p 6 in 071_Mar_11_21_ESCWA_FAO

³³⁶² 33:25 p 10 in 084_Mar_17_21_UnyimeAbasi B

³³⁶³ 34:24 p 9 in 089_Mar_22_21_Gee S

³³⁶⁴ 34:33 p 9 in 089_Mar_22_21_Gee S

³³⁶⁵ 36:33 p 9 in 096_Mar_29_21_ESCWA

³³⁶⁶ 43:2 p 6 in 003_Nov_23_21_Posner S

*stimulates much beneficial dialogue and provides feedback to focus on relevant areas of research and development. Improving on biomass conversion, sustainable waste management and investing in energy efficient technologies to lower the total dependency on commercial monopoly type energy sources. Improving on the research and information of agrometeorological work done by several organisations to increase the chances of healthier food production, less wastage and a higher chance of managing climate risks in agriculture.*³³⁶⁷

*Research as well.. we need to fund and publish work and IP value that can add to the conversation on how our diets can be supplemented effectively Explore opportunities in salt water agriculture. R&D intro seaweed.....explore need in other markets... Need to control pests.*³³⁶⁸

*Research, education, and civil society to advance the SDGs.*³³⁶⁹

*There should be sufficient investment into Food Systems Research and Developments...*³³⁷⁰

*Research for alternative sources for protein in animal feed to reduce the feed cost. This will contribute towards affordability.*³³⁷¹

*Follow the Food Systems Dialogues at the national level and find country-owned solutions, including demand-driven research.*³³⁷²

*Proposal: substantial budgeting for research as a permanent part of the masterplan. Setting measurable goals in all aspects: health and nutrition, economy, welfare, education, etc.) Proposal: collecting data and researching food loss and food waste through the whole food system – from agriculture to households. Legislation of coerced treatment of food loss and food waste throughout the food systems – from livestock and plant agriculture to industrial and municipal food waste.*³³⁷³

*Simultaneously, it is important to regulate unhealthy and processed food advertisements and educate for better consumption patterns. Alongside these, we need more information– research on health, dietary consumption, and dietary patterns in the Arab sector.*³³⁷⁴

*Research is needed to understand why there is a decline in production.*³³⁷⁵

³³⁶⁷ 50:25 p 10 in 087_Mar_20_21_Chinapoo C_Multi

³³⁶⁸ 52:26 p 6 in 080_Mar_13_21_Impact Youth Sustainability_Multi

³³⁶⁹ 54:19 p 5 in 002_Nov_19_20_CGIAR

³³⁷⁰ 61:9 p 6 in 030_Feb_4_21_CAFS_CSAYN

³³⁷¹ 63:4 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

³³⁷² 63:25 p 7 in 037_Feb_12_21_Food Systems for the Future_Multi

³³⁷³ 64:17 p 6 in 041_Feb_17_21_Adler D

³³⁷⁴ 64:64 p 11 in 041_Feb_17_21_Adler D

³³⁷⁵ 64:89 p 13 in 041_Feb_17_21_Adler D

*This all, acknowledging that there is a need for more evidence on sustainable diets.*³³⁷⁶

*Promoting research and innovation and coalition building o Food research and innovation are key for making informed decisions, but also for monitoring success.*³³⁷⁷

*Changing behaviour: More research is needed to understand the choices people make, and how their behaviour can be influenced. A prerequisite to stimulate any change is to make alternative choices accessible and palatable.*³³⁷⁸

*Conduct action based research as an entry to programme planning and design on food and nutrition programs targeting youth and women.*³³⁷⁹

*It must be noted that there are not really points of contention to the point of identifying two trends, but some have argued that despite the modest budget allocated to the rural development and agricultural sectors, an emphasis must be placed on scientific research through grants from the country's National Institutes of Agricultural Research.*³³⁸⁰

*Conduct a diagnosis of the Mérida food system, with relevant and updated information which allows us to improve the current situation.*³³⁸¹

*Creating an enabling environment for research to connect with policy to ensure sustainable production and consumption of safe and nutritious aquatic foods.*³³⁸²

*Creating an enabling environment for research to connect with policy to ensure sustainable production and consumption of safe and nutritious aquatic foods.*³³⁸³

*Strive for innovations: Research and funding are needed to address environmental challenges — including identifying and measuring the impact of specific innovations. Small farmers in particular need access to this research and funding. Governments can incentivize and invest in researching sustainable and innovative practices.*³³⁸⁴

*Farmers acknowledge their role in applying responsible production practices and have made tremendous strides to do so. Continuous improvement requires stronger support from public research and better mechanisms for knowledge-sharing to bolster innovation and make operations more sustainable.*³³⁸⁵

Public sector investment in research or pre-competitive research were considered key to identify and scale, but that information must be available publicly so that all farmers can

³³⁷⁶ 66:23 p 8 in 052_Feb_25_21_EUFIC

³³⁷⁷ 66:59 p 12 in 052_Feb_25_21_EUFIC

³³⁷⁸ 66:83 p 14 in 052_Feb_25_21_EUFIC

³³⁷⁹ 68:24 p 9 in 057_Feb_26_21_YES

³³⁸⁰ 70:5 ¶ 22 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

³³⁸¹ 75:9 ¶ 65 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

³³⁸² 82:10 p 6 in 150_Apr_30_21_GANSFOIWFSN

³³⁸³ 82:32 p 6 in 150_Apr_30_21_GANSFOIWFSN

³³⁸⁴ 84:9 p 7 in 153_Apr_28_21_GCNEF_Multi

³³⁸⁵ 84:10 p 7 in 153_Apr_28_21_GCNEF_Multi

*benefit. Sharing best practices among farmers globally could be another opportunity to support farms of all sizes, but participants recognized that regional and local differences must be considered.*³³⁸⁶

*The first short-term goal is increased research on nature-positive methods of agricultural production. Data collection among farmers (perhaps through federal policies) including information on soil health, carbon, and pesticide levels should be expanded. Data on measures of farmland health is crucial in crafting federal policies to aid farmer transition to nature positive production.*³³⁸⁷

*Increased funding to agricultural extensions and research programs.*³³⁸⁸

*Clear data showing regionalized differences across New Zealand This includes data on what people are eating, how it is grown and where it is from. It's important to look at what consumers want and to have data that takes the full food system into account. This means a broad set of data that considers differences and represents regions across New Zealand.*³³⁸⁹

*Tailored education strategies In order to support the children of Aotearoa we need to ensure we have data on what and how this new generation is eating. Organizations that provide education to children around food would have better insight from new data on this generation and it would allow them to provide tailored education and measure the effectiveness.*³³⁹⁰

*Governments can play a key role in research for cross-cutting environmental information (i.e. valuation of ecosystem goods and services as one example) which the private sector can then use for benchmarking. Flowing therefrom, governments can provide assistance with respect to research & technology transfer and ensuring producers are correctly incentivized to adopt beneficial practices.*³³⁹¹

*The role of government is also critical in the ongoing research and information transfer that is needed to develop and disseminate sustainability metrics and benchmarks.*³³⁹²

*BIPOC and traditional agriculture need to be uplifted through research and academia which influences policy. Models should also shift to empower women and girls.*³³⁹³

There is a need to support more BIPOC and people from the Global South in research and academia, to contribute to the papers that make their way into policy proposals. Too

³³⁸⁶ 84:24 p 10 in 153_Apr_28_21_GCNF_Multi

³³⁸⁷ 86:19 p 10 in 162_Apr_16_21_Fountain G

³³⁸⁸ 86:24 p 10 in 162_Apr_16_21_Fountain G

³³⁸⁹ 87:14 p 8 in 173_Mar_25_21_Mayne A

³³⁹⁰ 87:15 p 8 in 173_Mar_25_21_Mayne A

³³⁹¹ 90:7 p 6 in 206_Apr_27_21_CCANCC

³³⁹² 90:13 p 8 in 206_Apr_27_21_CCANCC

³³⁹³ 91:7 p 5 in 217_May_6_21_Schwartz A

*many governments favor corporations, and there is too much reliance on pesticides and antibiotics in the food supply, while not enough traditional practices are supported.*³³⁹⁴

*Better evidence can inform action by governments, retail, procurers (eg schools, hospitals), processors, livestock keepers.*³³⁹⁵

This should include research on the role of animal sourced foods in improving nutrition and its contribution to obesity (distinguishing between correlation vs causation).

*Develop and support mountain-specific research and innovation.*³³⁹⁶

*Multilevel governance and coordination across departments, civil society actors, private sector actors, researchers. Importantly partner with researchers, innovators and Implement innovation informed by research.*³³⁹⁷

*Researchers: Whereas the farmers may be visualising what is needed, sometimes they need researchers to articulate this in order to drive innovation. Funding is critical in order for impactful research to be undertaken. This can be facilitated by government and donor agencies.*³³⁹⁸

*He suggested that more studies should be done in this area to support trends and analyses.*³³⁹⁹

*Enhance the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation.*³⁴⁰⁰

*A full contribution of the linkages of climate change in agriculture to food systems, markets and energy should also be explored. Naturally, nature-positive solutions are context-specific and based on bottom-up and territorial processes, and can be strengthened by science, technology, and innovation as well as by enabling policy environments and improved governance systems.*³⁴⁰¹

*The discussions on the first topic yielded recommendations including strengthened advocacy through the preparation and presentation to policy makers evidence on returns to investment in research and innovation. Also, getting beneficiaries and users of AR4D products to contribute towards research and innovation was recommended.*³⁴⁰²

A second key enabler of change centers on the idea of 'knowledge fueling action'. This relates to leveraging science, research, collaboration, data and new technologies to enhance decision-making among all of the actors in the food chain and in policy. This

³³⁹⁴ 91:17 p 6 in 217_May_6_21_Schwartz A

³³⁹⁵ 93:28 p 9 in 227_May_18_21_Tarawali S

³³⁹⁶ 98:19 p 8 in 282_May_18_21_Romeo R

³³⁹⁷ 101:20 p 9 in 325_May_19_21_ICLEI Africa_Multi

³³⁹⁸ 102:19 p 8 in 326_May_5_21_ICLEI Africa_Multi

³³⁹⁹ 103:59 p 35 in 007a_Dec_18_20_NAAGD

³⁴⁰⁰ 111:15 p 5 in 070_Mar_09_21_Akinbamijo,O

³⁴⁰¹ 111:25 p 6 in 070_Mar_09_21_Akinbamijo,O

³⁴⁰² 111:40 p 7 in 070_Mar_09_21_Akinbamijo,O

*will include measurement systems across the food chain to track progress and enhance transparency.*³⁴⁰³

*Research on higher welfare and performance is needed, in addition to risk assessments along the food chain.*³⁴⁰⁴

*Enabling policies and increased funding for national research institutions will enhance output. Private research institutes and foundations should connect to carry out more research in an accountable manner and with all due diligence. Research must be demand-driven.*³⁴⁰⁵

*Increasing research and innovations and delivering it in the indigenous languages.*³⁴⁰⁶

*Applied research that supports the development of models and tools which can respond to local needs and broader national policies.*³⁴⁰⁷

*Key areas for action and research over the coming years are therefore incentives and policies that target behaviour change.*³⁴⁰⁸

*(3) Work towards standardization of impact measurement, building on KPIs being developed by the research and innovation ecosystem, e.g. avoided emissions, water productivity, etc., but considering that measuring impact can be very costly as it may require specialized people (4) Aim for a standard impact matrix that is science-based and can be certified (5) Rely on local organizations to measure baselines and impact (after providing technical assistance.*³⁴⁰⁹

*This requires simplified tools to measure and assist on local scale.*³⁴¹⁰

*Advocates for public health and sustainable island food systems of the world need to demand that research funds flow toward expanding the knowledge base on island diets and the assessment of the nutritive value of local produce.*³⁴¹¹

*This is going to require research outputs to be disseminated to regulators and presented in an accessible format.*³⁴¹²

More research is needed to understand currently overlooked issues such as the potential for contaminants to desorb and release slowly into the environment, ecotoxicology

³⁴⁰³ 112:12 p 6 in 074_May_18_21_O'Mara_Teagasc

³⁴⁰⁴ 112:68 p 12 in 074_May_18_21_O'Mara_Teagasc

³⁴⁰⁵ 113:31 p 9 in 075_Mar_10_21_IFAN

³⁴⁰⁶ 116:10 p 7 in 093_Mar_25_21_Adeboye_T

³⁴⁰⁷ 117:56 p 14 in 109_Apr_13_21_Jacobs-Mata I

³⁴⁰⁸ 117:62 p 15 in 109_Apr_13_21_Jacobs-Mata I

³⁴⁰⁹ 118:18 p 6 in 117_Apr_22_21_Dinesh D_Multi

³⁴¹⁰ 118:37 p 10 in 117_Apr_22_21_Dinesh D_Multi

³⁴¹¹ 121:16 p 7 in 130_May_22_21_Foronda R_Gloria C

³⁴¹² 124:7 p 6 in 142_May_11_21_Carter L_Dennis S

(earthworms mortality rate with high biochar %) and the bioavailability of contaminants adsorbed to biochars.³⁴¹³

In order to overcome potential risks we need to integrate research and industry application and have integrated planning to move forwards.

Academia: • More research on quantifying the impact of climate change on different dimensions of food security as well as water security • Research on institutional mechanism and networking with a particular focus on climate change adaptation.³⁴¹⁴

Pakistan's crops have become political crops. Decisions are based on political will and not on scientific research or macro-economic priorities. Incorporating political economy in research and policy discussion is essential for highlighting the negative consequences of political decisions.³⁴¹⁵

The institutions can help develop water accounting for all the sectors, can provide solutions – simple to complex issues and can provide science based evidence for addressing those issues through conducting adoptive research.³⁴¹⁶

There is a need for a comprehensive review of the state of the art in WEF modelling, which seems to be sparse and partial given our discussions. Although there are models on water, energy, and food subjects (economic models, hydrological models, crop models, etc.), they are disciplinary and do not provide adequate, integrated insights and solutions. Hence, fully integrated WEF models are needed for synergy and trade-off analyses, and to assess water-energy-food interdependencies in an integrated way. Currently, many organizations are working on developing multidisciplinary models with a system approach. However, WEF models are still too often academic exercises and, therefore, the implementation of WEF models for policy and investment purposes is limited.³⁴¹⁷

The participants agreed that more effort is needed to invest in water-saving technologies and support farmers in the application of such technologies. The example of farmers in Indonesia shifting from flood to drip irrigation was mentioned. Use of digital tools—to improve irrigation scheduling—and support to extension services by connecting them to the research community to ensure a more steady flow of innovation from research to farmers and from farmers to researchers was also recommended.³⁴¹⁸

The potential of land consolidation, of running canals like utilities, and of paying farmers for using less irrigation water were all discussed and it was agreed that more studies and pilots are needed in this area.³⁴¹⁹

³⁴¹³ 124:23 p 9 in 142_May_11_21_Carter L_Dennis S

³⁴¹⁴ 127:24 p 10 in 159_Apr_21_21_Hafeez M

³⁴¹⁵ 127:30 p 12 in 159_Apr_21_21_Hafeez M

³⁴¹⁶ 127:39 p 13 in 159_Apr_21_21_Hafeez M

³⁴¹⁷ 127:43 p 14 in 159_Apr_21_21_Hafeez M

³⁴¹⁸ 132:11 p 6 in 193_Apr_19_21_Ringler_Kassim

³⁴¹⁹ 132:13 p 6 in 193_Apr_19_21_Ringler_Kassim

*Targeting research to understand the needs of the community and collect data on the most important actions and interventions including co-designed-and informed decision tools.*³⁴²⁰

*Fill the data gap between research and technology.*³⁴²¹

*Science needs to change in a way that supports the government to ask the right questions and invest in Food Systems in the face of competing needs like health, infrastructure among others.*³⁴²²

*Some areas for research include: • better understanding seasonality, both annual and decadal, research on underutilized crops and species, what products and concepts developed in Europe would 't best in Africa, and vice versa. Research on informal economies in both regions. A theme was how to democratize science, making it available to all, being inclusive.*³⁴²³

*Agricultural research institutions should investigate varieties that are resistant to the changing climate and those that have short gestation period.*³⁴²⁴

*Research must aim to solve the market's need and be in line with the need for women who are primarily involved in agricultural trade. Also, research must consider women and meet their needs. Research must, therefore, target at developing products that meet the needs of women who use agricultural services.*³⁴²⁵

*Research must aim to solve the market's need and consider women' needs. It must also be targeted at developing products that meet the needs of women who use agricultural services.*³⁴²⁶

*Increase research and investment on small grain processing equipment for smallholder farmers to ease the drudgery involved in processing small grains.*³⁴²⁷

*...invest in research that improves the economics of sustainable / nutritious food, and support international agreements to measure gender data in farming.*³⁴²⁸

*Conducting research with indigenous peoples and gathering more evidence on indigenous knowledge systems.*³⁴²⁹

Policy ideas included shifting government policy away from solely increasing production towards better natural resource management and a more nutritious and sustainable

³⁴²⁰ 132:36 p 10 in 193_Apr_19_21_Ringler_Kassim

³⁴²¹ 132:65 p 13 in 193_Apr_19_21_Ringler_Kassim

³⁴²² 133:2 p 6 in 196_Apr_20_21_Attah-Krah K

³⁴²³ 133:15 p 7 in 196_Apr_20_21_Attah-Krah K

³⁴²⁴ 134:8 p 7 in 200_Apr_22_21_HEDA

³⁴²⁵ 137:5 p 6 in 212_May_04_21_Akinbamijo Y

³⁴²⁶ 137:19 p 8 in 212_May_04_21_Akinbamijo Y

³⁴²⁷ 140:25 p 9 in 223_May_12_21_Mushita A

³⁴²⁸ 143:6 p 6 in 231_May_19_21_MCD

³⁴²⁹ 143:8 p 6 in 231_May_19_21_MCD

*system of production, reducing the energy costs for small farmers (electricity costs are too high for cooking and they contribute to deforestation), addressing monopolies by fast food companies and investing in research that improves the economics of sustainable nutritious food.*³⁴³⁰

*Gathering more evidence on indigenous peoples knowledge systems * Conducting more research with indigenous peoples * Creating a trust fund managed by indigenous people to support work.*³⁴³¹

*Research should embrace a food system approach to cover not just pre-production and production, but also processing, post-production, machinery, trade, infrastructure, nutrition, and health, among others.*³⁴³²

*Conducting research with the farmers themselves (participatory action research). Farmers must be equal partners in research design; blending of traditional and modern knowledge to give way to innovative farming practices should be considered (e.g., Farmers Field Schools or FFS).*³⁴³³

*Incorporate social dimensions in research, so adaptive capacity is checked and considered in implementing initiatives. This includes factoring in concerns such as adaption to technology, which is often difficult.*³⁴³⁴

*Looking at long-term experiments for sustainability and adopting a multidisciplinary research approach (e.g., introduce multi-disciplinarity in curriculum and teaching).*³⁴³⁵

*Reforming research and extension work, wherein farmers must participate in the whole process of co-designing agricultural technologies and innovations.*³⁴³⁶

*Incentive policy is important to motivate and attract researchers, and to work for productive research. Support from government and industry is also important as well as research support (including capital).*³⁴³⁷

*Establish a dedicated and functional research system for holistic development of forgotten foods.*³⁴³⁸

Create a regional pool of financial resources to support research and coherent development efforts on forgotten foods. Such funds should be accessible by institutions

³⁴³⁰ 143:28 p 9 in 231_May_19_21_MCD

³⁴³¹ 143:32 p 10 in 231_May_19_21_MCD

³⁴³² 157:18 p 6 in 278_May_18_21_Gregorio B

³⁴³³ 157:51 p 9 in 278_May_18_21_Gregorio B

³⁴³⁴ 157:62 p 9 in 278_May_18_21_Gregorio B

³⁴³⁵ 157:64 p 9 in 278_May_18_21_Gregorio B

³⁴³⁶ 157:65 p 11 in 278_May_18_21_Gregorio B

³⁴³⁷ 157:83 p 12 in 278_May_18_21_Gregorio B

³⁴³⁸ 159:1 p 6 in 287_May 20_21_Akinbamijo_Y

*and governments which have research topics aligned to regional priorities on forgotten foods.*³⁴³⁹

*...the establishment of a dedicated research system forgotten foods.*³⁴⁴⁰

*The issues of publicity, research system development and engagement of youth were voted to be most important priorities.*³⁴⁴¹

*The poll indicated that the research system should give prominence to Market research for the commodity, germplasm collection and conservation and agronomic integration of the underutilized commodities in the food system.*³⁴⁴²

*Transparency - is needed and can be made possible e.g. through vizualizations of food system map, audits and research.*³⁴⁴³

*Providing research grants to identify food deserts in South Florida.*³⁴⁴⁴

*We suggest research be conducted to and ways to address the bi-product waste/packaging created by restaurants providing takeout options for clients.*³⁴⁴⁵

*Post-secondary education institutions and NGOs can continue to carry out research designed to identify food waste along the value chain of locally produced food.*³⁴⁴⁶

*In Brazil, it's necessary to implement better monitoring solutions and foster research to generate reliable data and indicators.*³⁴⁴⁷

*Researchers need to work more closely with farmers, not in isolation, in order to align their work with farmer needs.*³⁴⁴⁸

*Formal and informal education and training content is very often informed by relevant research. Research policy needs to include sufficient focus on areas that will help farmers/producers to see the benefits (economic, environmental, social and people) of sustainable farming practices.*³⁴⁴⁹

Formal and informal education and training content is very often informed by relevant research. Research policy needs to include sufficient focus on areas that will help farmers/producers to see the benefits (economic, environmental, social and people) of

³⁴³⁹ 159:5 p 6 in 287_May 20_21_Akinbamijo_Y

³⁴⁴⁰ 159:18 p 7 in 287_May 20_21_Akinbamijo_Yfi

³⁴⁴¹ 159:25 p 7 in 287_May 20_21_Akinbamijo_Y

³⁴⁴² 159:26 p 7 in 287_May 20_21_Akinbamijo_Y

³⁴⁴³ 163:28 p 6 in 300_May_27_21_Alesso_Pommeret

³⁴⁴⁴ 163:100 p 13 in 300_May_27_21_Alesso_Pommeret

³⁴⁴⁵ 163:111 p 13 in 300_May_27_21_Alesso_Pommeret

³⁴⁴⁶ 163:112 p 13 in 300_May_27_21_Alesso_Pommeret

³⁴⁴⁷ 168:8 p 6 in 322_June_03_21_Apicella_Machado

³⁴⁴⁸ 169:34 p 10 in 327_May_18_21_CropLife

³⁴⁴⁹ 170:36 p 10 in 328_May_19_21_Lalor_Teagasc

*sustainable farming practices, including a new focus on efficient use of resources by less intensive producers.*³⁴⁵⁰

*Increase the number of ‘agents’ supporting farmers. Improve the links between those who are conducting research and those implementing it. Research should take its first impetus from those who will ultimately apply the findings.*³⁴⁵¹

*Informed risk taking needs to be encouraged. For example farmers or contractors may have to invest in new/different equipment. This requires support for this type of investment, in addition to research.*³⁴⁵²

*Research should be fast and reliable but filtered to communicate a straightforward practical message to farmers.*³⁴⁵³

*Interdisciplinary Research and more focused to communicate with the hard to reach farmers – the top 1/3 attend all meetings and don’t need info – how do we engage the other 2/3 that don’t attend/engage.*³⁴⁵⁴

*Prioritise multi-actor disciplinary research.*³⁴⁵⁵

*Farmers envisage a food system where research station is actively involved in generating technologies that adapt to the local environment.*³⁴⁵⁶

*To ascertain this vision, farmers recommended that adequate budgetary allocations be considered to ensure that research develops, test and adapt technologies and for extension to disseminate and equip farmers with the skills and knowledge to implement the technologies.*³⁴⁵⁷

*More evidence needs to be generated to understand the negative impacts of pollution on food systems, and the negative impacts of food systems on the environment.*³⁴⁵⁸

*More systematic studies that consider agricultural pollution impacts in major agroecological zones may also be necessary.*³⁴⁵⁹

*Use evidence and science to advocate to consumers: industry would respond to science by making highly nutritious foods available because that is what consumers prefer.*³⁴⁶⁰

³⁴⁵⁰ 170:44 p 10 in 328_May_19_21_Lalor_Teagasc

³⁴⁵¹ 170:67 p 14 in 328_May_19_21_Lalor_Teagasc

³⁴⁵² 170:73 p 14 in 328_May_19_21_Lalor_Teagasc

³⁴⁵³ 170:83 p 16 in 328_May_19_21_Lalor_Teagasc

³⁴⁵⁴ 170:85 p 16 in 328_May_19_21_Lalor_Teagasc

³⁴⁵⁵ 170:91 p 16 in 328_May_19_21_Lalor_Teagasc

³⁴⁵⁶ 173:38 p 12 in 331_May_24_21_LNFU

³⁴⁵⁷ 173:45 p 12 in 331_May_24_21_LNFU

³⁴⁵⁸ 174:10 p 6 in 332_May_24_21_FAO_UNDP

³⁴⁵⁹ 174:12 p 6 in 332_May_24_21_FAO_UNDP

³⁴⁶⁰ 177:53 p 11 in 335_May_26_21_Laar_Multi

*Identification of researchable areas.*³⁴⁶¹

*Strengthen social media use among the scientific and research community.*³⁴⁶²

*Simplification or translation (laymanize) of technical research or reports of scientists and experts.*³⁴⁶³

*It was proposed that Research should take centre stage in unravelling the impacts of this phenomenon if the food system is to be sustained.*³⁴⁶⁴

*In this regard, they recommended that a study be conducted to establish and consolidate a land inventory to assess the actual status of available arable land. The data obtained from this exercise must be used to further conduct a land classification and suitability exercise. The results will inform planners whether the country still has land that will contribute meaningfully to the food systems.*³⁴⁶⁵

*Postharvest Handling: Regarding post-harvest handling, the meeting felt that research in this field must be conducted to identify issues, from harvesting, Transportation to Storage, providing recommendations on new and improved methods of harvesting, and promote technologies, methods, and approaches that respond to postharvest needs of maize, and horticulture producers.*³⁴⁶⁶

*The group recommended that Climate research must be conducted to establish what strategies must be adopted to mitigate the impacts of climate change.*³⁴⁶⁷

*Focusing investment in public research for better results in sustainable crop production. Targeted research should be identified so that human and capital investment are geared towards pre-identified outputs (to transform the value chain).*³⁴⁶⁸

*Research is needed in local level connecting the local people and farmers and those who are involved in the food system.*³⁴⁶⁹

*Emphasize sustainable systems encompassing all the three angles of sustainability (economic, social and environmental sustainability). This can be strengthened through transdisciplinary research approaches to find the most appropriate solutions to address foods.*³⁴⁷⁰

³⁴⁶¹ 181:34 p 9 in 339_May_27_21_Sayoc_Multi

³⁴⁶² 181:39 p 9 in 339_May_27_21_Sayoc_Multi

³⁴⁶³ 181:40 p 9 in 339_May_27_21_Sayoc_Multi

³⁴⁶⁴ 182:13 p 7 in 340_May_27_21_Mamba_L

³⁴⁶⁵ 182:52 p 10 in 340_May_27_21_Mamba_L

³⁴⁶⁶ 182:55 p 11 in 340_May_27_21_Mamba_L

³⁴⁶⁷ 182:58 p 11 in 340_May_27_21_Mamba_L

³⁴⁶⁸ 183:75 p 14 in 341_May_28_21_Sewraj_KS

³⁴⁶⁹ 186:31 p 7 in 344_May_30_21_COAST

³⁴⁷⁰ 191:9 p 6 in 349_June_02_21_Ekwamu A

*The need to redefine research agenda with emphasis on Climate, Conflict and COVID-19 (3Cs) in food security.*³⁴⁷¹

*African agricultural systems need to adopt to the tripartite arrangement (Farmers-universities-Private sector) which is has been seen to be effective in Burkina Faso being championed by the Global Forum on Agricultural Research and Innovation-GFAR (<https://www.gfar.net>)...*³⁴⁷²

*Harnessing information from studies undertaken by AGRINATURA on trends technologies, conflicts and globalisations to strengthen food systems.*³⁴⁷³

*Goes beyond story-telling to story living. The XRC empowers bold new research by dissolving distance.*³⁴⁷⁴

*The XRC enables research that can lower physical, environmental or financial risk while achieving high-impact outputs with meaningful societal engagement.*³⁴⁷⁵

*Undertake more research on IPs and their land ownership showcasing their contribution to sustainable food systems.*³⁴⁷⁶

*Strengthen advocacy capacity of family farmers and local communities to fight for their land supported by research.*³⁴⁷⁷

*Need for a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North.*³⁴⁷⁸

*There is urgent need to promote research on small scale or artisanal fisheries to promote low-trophic, diversified, environmental-friendly, economically viable, and socially acceptable aquatic foods. This would involve technology/innovation generation, capacity building from production and throughout the value chain (small storage facilities, insulated transport vans to minimise post harvest losses, small landing sites in inland water areas, and quality control along the entire value chain).*³⁴⁷⁹

*Farmers' innovation (researching climate-resilient crops, upscaling a successful model on new crop variety, etc.).*³⁴⁸⁰

³⁴⁷¹ 191:16 p 6 in 349_June_02_21_Ekwamu A

³⁴⁷² 191:22 p 7 in 349_June_02_21_Ekwamu A

³⁴⁷³ 191:38 p 7 in 349_June_02_21_Ekwamu A

³⁴⁷⁴ 194:49 p 13 in 352_June_04_21_Troughton J

³⁴⁷⁵ 194:50 p 13 in 352_June_04_21_Troughton J

³⁴⁷⁶ 199:28 p 9 in 358_May_11_21_ILC_Multi

³⁴⁷⁷ 199:49 p 12 in 358_May_11_21_ILC_Multi

³⁴⁷⁸ 205:16 p 9 in 364_May_26_21_DPIHD

³⁴⁷⁹ 208:24 p 10 in 367_May_27_21_Kachulu_Thilsted

³⁴⁸⁰ 209:3 p 6 in 368_May_31_21_Lao Farmer

The participants discussed the needs for cross- country research to promote One Health • The participants discussed the needs for a systematic global effort to monitor pathogens emerging from animals³⁴⁸¹.

Most research on the impact of climate change on the nutrient content of crops has focused on staple crops; to date, very few studies have examined how climate change may influence changes in production and consumption of non-staple food groups. More research is needed on how different kinds of crops – particularly those that are nutrient-dense such as fruits, vegetables, and legumes – will fare in a +2 C degree world.³⁴⁸²

To translate science into actionable ideas for producers, IWMI-CGIAR is designing a leadership programme to directly bridge this gap, noting that a forthcoming Water-Food-Energy-Forest-Biodiversity Nexus Initiative seeks to significantly redesign research agendas.³⁴⁸³

Storytelling and case studies operationalize the science, helping it seem more relatable, and as it feeds into policy – achieve greater political uptake and stakeholder acceptance.³⁴⁸⁴

It also proposed for the creation of monitoring team involving fisherfolks and farmers that will supervise and observe good agricultural practices per municipal/provincial level.³⁴⁸⁵

Documentation and research of ethnic cuisines in urgent: The diversity of food and food habits in the HKH is immense, but there is poor documentation of this diversity and assessments of the nutritional values and efficiency of several non-conventional foods and cuisine ingredients, including aspects of food safety.³⁴⁸⁶

Speakers and participants highlighted the need for more research partnerships to highlight the nutritional values of local and ethnic cuisines so as to promote them as healthy and nutritious foods. They also called for greater support for the maintenance of local food systems, especially home gardens, for improving household food security.³⁴⁸⁷

Research and development of indigenous seeds, local food products, traditional farming systems and improved diets for communities need to be a priority for the region.³⁴⁸⁸

Improve industry-research links: Innovators and entrepreneurs need greater access to ‘accelerator’ initiatives that can facilitate the conversion of research into practice.³⁴⁸⁹

³⁴⁸¹ 212:7 p 9 in 371_June 01_21_Güngören A

³⁴⁸² 215:16 p 11 in 376_June_04_21_IFAD_Multi

³⁴⁸³ 216:6 p 7 in 377_June_07_21_Arden_Caucci

³⁴⁸⁴ 216:7 p 7 in 377_June_07_21_Arden_Caucci

³⁴⁸⁵ 218:11 p 6 in 379_June_08_21_KAMMPIL

³⁴⁸⁶ 219:2 p 7 in 380_June_08_21_Shakya_Chettri

³⁴⁸⁷ 219:8 p 7 in 380_June_08_21_Shakya_Chettri

³⁴⁸⁸ 219:17 p 10 in 380_June_08_21_Shakya_Chettri

³⁴⁸⁹ 240:21 p 9 in 319_June_30_21_Fredriksson O

*The group noted that aquaculture is incredibly diverse in both product and practice, and thus requires a locally tailored approach regarding research and innovation. Research and innovation has to be developed according to local needs and also more closely account for locally available resources (financial, personal, etc). Local producers must have the capacity to implement the innovation and also provide maintenance.*³⁴⁹⁰

*1. Increased focuses and research on nutrition from the NIH to US government agencies to the Periodic Table of Foods Initiative to catalog nutrients and their connection to growing practices. The importance of public policy bodies to learn more from existing work and build this into altered or new policies.*³⁴⁹¹

*Putting these recommendations into action would entail a baseline understanding and alignment among researchers and policymakers of their respective processes and languages. Researchers should be aware of which key areas are policy priorities, the types of evidence policymakers need and how these should be presented, while policymakers should be aware of the research process, the appropriate timeframes and success indicators, and how these can feed into the development of realistic outcomes that policy changes can help address.*³⁴⁹²

*Prioritizing research on production, whether on staples or diversified crops, would benefit from adding a lens on consumer research: understanding their knowledge, attitudes, and practices in order to shift behavior towards healthier food choices.*³⁴⁹³

*It was broadly agreed that the key factors that impede women agripreneurs' access to finance and capital are lack of collateral, high interest rates and poor collaboration between stakeholders, therefore developing gender responsive financial and business support services coupled with diverse financial schemes, interest free loans and grant to small enterprises, incentives to financial institutions to accept alternative forms of collateral. Finally, it was concluded that there is need to support innovation and research addressing gender and business success.*³⁴⁹⁴

*Usage of traceability tools to track the grains used for animal feed products, choosing good suppliers in order to produce more with less grains and less environmental impact, and to improve quality of the products to optimize the energy conversion and reduce the cattle methane emission.*³⁴⁹⁵

*Strengthen research-extension-farmer linkages.*³⁴⁹⁶

Establishment of a national research fund: We need to prioritize investment in agriculture. Government should set up a dedicated fund purposely to support research.

³⁴⁹⁰ 240:28 p 10 in 319_June_30_21_Fredriksson O

³⁴⁹¹ 249:15 p 9 in 485_June_22_21_Levesque_SD

³⁴⁹² 254:21 p 9 in 490_June_22_21_Yasmi Y

³⁴⁹³ 254:29 p 11 in 490_June_22_21_Yasmi Y

³⁴⁹⁴ 255:4 p 6 in 491_June_23_21_Dido_Otieno

³⁴⁹⁵ 261:50 p 9 in 497_June_24_21_Fontes_Multi

³⁴⁹⁶ 262:17 p 6 in 498_June_24_21_Danquah E

*Government should commit to make budgetary allocation to this fund. Private sector should be encouraged to invest in the research fund.*³⁴⁹⁷

*Need for private sector participation in collaborating and funding agricultural research. Private sector should collaborate with researchers in setting objective research agenda to drive innovation in Africa.*³⁴⁹⁸

*Commitment to strengthening the capacities within research institutions.*³⁴⁹⁹

*Apply food system governance that realigns research, policy, and incentives.*³⁵⁰⁰

*A food system approach does not just happen. For scalability to happen analysis is needed in order to match solutions with the most urgent needs. Change makers need to be identified, supported and connected.*³⁵⁰¹

*- More research and funding into seaweed production (especially native seaweed).*³⁵⁰²

*Research and data records.*³⁵⁰³

*Research and data on mapping locations and suitable species of seaweed.*³⁵⁰⁴

*More research and information needs to be published to show people the importance of seaweed in our environment and our diets and ways to incorporate it into our regular meals.*³⁵⁰⁵

*Building partnerships between producers, state and non-state actors as well as consumers will ensure sustainable production systems which lead to the development of localized research to support and address key food production systems that will work well for the Pacific people.*³⁵⁰⁶

*...promote the localization of research partnerships to include civil societies and NGOs*³⁵⁰⁷

*...improve partnerships with international organizations with research focusing and prioritizing the needs of local farmers, fishers, private sector, and country governments. Increase investments...*³⁵⁰⁸

³⁴⁹⁷ 262:32 p 7 in 498_June_24_21_Danquah E

³⁴⁹⁸ 262:33 p 7 in 498_June_24_21_Danquah E

³⁴⁹⁹ 262:39 p 7 in 498_June_24_21_Danquah E

³⁵⁰⁰ 263:13 p 6 in 499_June_25_21_GANSF

³⁵⁰¹ 263:34 p 8 in 499_June_25_21_GANSF

³⁵⁰² 264:24 p 8 in 500_June_26_21_Edible Issues

³⁵⁰³ 264:87 p 13 in 500_June_26_21_Edible Issues

³⁵⁰⁴ 264:90 p 13 in 500_June_26_21_Edible Issues

³⁵⁰⁵ 264:96 p 13 in 500_June_26_21_Edible Issues

³⁵⁰⁶ 268:7 p 6 in 504_June_30_21_Susumu_Leiva

³⁵⁰⁷ 268:21 p 8 in 504_June_30_21_Susumu_Leiva

³⁵⁰⁸ 268:22 p 8 in 504_June_30_21_Susumu_Leiva

*On this issue, the members suggested the need for research on agro-ecological zones to ensure suitability of inputs, the need for agro-ecological zoning to ensure that inputs are customized according to soil maps and the importance of creating awareness amongst farmers on the proper use of chemicals.*³⁵⁰⁹

*Discussants have identified the following potential solutions to overcome barriers: Advisory and training programs for farmers, Peer networks, Subsidies (with a shift from action to a measurable outcome), Flexibility of farmers, Access to funding and incentives, Research and scientific clarity on definitions and measurement methods.*³⁵¹⁰

*Research and scientific clarity on definitions and measurement methods.*³⁵¹¹

*Research on profit and competitiveness comparison among producers exporting/importing agricultural products.*³⁵¹²

*Conduct an in-depth study on drivers and perceptions on junk food consumption, to suggest policies on the issue.*³⁵¹³

*Research on different types of systems (wetland, upland) and management to regulate access, ensuring that vulnerable and marginalized people get access to resources.*³⁵¹⁴

*Research on the characterization of seed systems to understand the access of the poor and the ethnic minorities to farming inputs.*³⁵¹⁵

*More developed methodologies and processes of scoping for food systems resilience research.*³⁵¹⁶

*In terms of solutions, it was proposed that there is need to invest in regenerative agriculture concerning organic farming to cushion farmers in relation to unhealthy food production, there is need for proper dissemination of research data and statistics, it is important to involve young farmers in feasibility studies and the need for reliable and accurate information regarding weather patterns among others.*³⁵¹⁷

*Food systems research may benefit from removing the parts of the evidence hierarchy which are only relevant to clinical studies.*³⁵¹⁸

*Participants felt that the definition of nutrition science and having clear goals for food system transformation was important.*³⁵¹⁹

³⁵⁰⁹ 270:7 p 8 in 506_June_29_21_EAFF

³⁵¹⁰ 273:38 p 9 in 509_June_30_21_FFA_Nestlé

³⁵¹¹ 273:44 p 9 in 509_June_30_21_FFA_Nestlé

³⁵¹² 277:43 p 9 in 513_July_01_21_Weise S

³⁵¹³ 277:49 p 9 in 513_July_01_21_Weise S

³⁵¹⁴ 277:64 p 9 in 513_July_01_21_Weise S

³⁵¹⁵ 277:65 p 9 in 513_July_01_21_Weise S

³⁵¹⁶ 278:54 p 12 in 514_July_01_21_Bolling_Multi

³⁵¹⁷ 279:16 p 9 in 515_July_01_21_EastAfricanFarmers

³⁵¹⁸ 280:38 p 8 in 516_July-01_21_Anastasiou K

³⁵¹⁹ 280:42 p 9 in 516_July-01_21_Anastasiou K

*Perhaps nutrition science could be used in a better way, that doesn't focus on reductionism. E.g. the health star rating is being championed in Australia as a way to transform the food system, but this system is suboptimal. While reformulation can have public health benefits, it can also allow other foods to be determined as healthy and may distract policy makers from solutions which have bigger impacts.*³⁵²⁰

*Nutrition science used for marketing and the industry directs the research to some extent, particularly in relation to processed foods.*³⁵²¹

*The need for more research on the balance between organic and inorganic food systems was highlighted.*³⁵²²

*Lastly, it was pointed out that Government should implement further research to study the local healthy diets which are part of the culture but are not anymore visible to consumers.*³⁵²³

*Knowledge: the need to study and better understand the food consumption habits and consumption behaviours of citizens in Portugal, by involving all stakeholders to, in particular, better understand the drivers and reasons for steering away from the Mediterranean diet, particularly among youth.*³⁵²⁴

*Community involvement in project cycle (design, implementation, monitoring and evaluation) is essential for the identification of responses adapted to ecological and socio-cultural contexts.*³⁵²⁵

*TARI and other research institutions should recognize and participate in AE related research.*³⁵²⁶

*Strategies for promoting AE Research -AE research should form part of the mandate of TARI and other research institutions -Technology transfer units should develop mechanisms for the dissemination of technologies on Agroecological Intensification (AEI) -Adopt participatory programs in identifying AE technologies in collaboration with farmers and other stakeholders -Agroecology Hub in Tanzania and the Ministry of Agriculture (Lead Ministry) should prepare a document containing a variety of agroecology technologies relevant to specific geographical areas/regions in the country.*³⁵²⁷

*Conduct research on inland areas.*³⁵²⁸

³⁵²⁰ 280:55 p 11 in 516_July-01_21_Anastasiou K

³⁵²¹ 280:62 p 11 in 516_July-01_21_Anastasiou K

³⁵²² 281:15 p 9 in 517_July_03_21_Perera A

³⁵²³ 300:24 p 6 in 536_July_08_21_Musabyimana JC

³⁵²⁴ 301:7 p 6 in 537_July_08_21_ANP_WWF

³⁵²⁵ 302:21 p 9 in 538_July_09_21_IDS_Multi

³⁵²⁶ 305:9 p 8 in 541_July_12_21_AEHT

³⁵²⁷ 305:15 p 8 in 541_July_12_21_AEHT

³⁵²⁸ 306:19 p 7 in 542_July_12_21_Prota_L

*Complete the digitalization of land lots and enhance the categorization of land to address current challenges due to the fragmentation and small size of land lots.*³⁵²⁹

*Integrating issues on Food Loss and Waste as a core element of Kosovo's education system and curricula for all (e.g. local municipalities, public servants, businesses etc), including main concepts and principles to analyze where we have losses, at what levels and why but also how to reduce them.*³⁵³⁰

*Current methods for assessing strength of evidence prioritise the contribution of randomised controlled trials, but it is impossible to conduct long-term trials with diet; nor are these suitable for assessing sustainability impacts. The strength of evidence rating methodology proposed by the True Health Initiative known as HEALM (Hierarchies of Evidence Applied to Lifestyle Medicine) was proposed as an important step in the right direction.*³⁵³¹

*A parallel solution was also proposed: to further broaden market access, perhaps to capitalize on the new markets reached during the pandemic, through digital platforms. Market analysis and consumer research, along with stakeholder linkages, could help make production more profitable by focusing on demand-driven products that meet market needs and preferences.*³⁵³²

*China has established a legal and policy system to promote food saving from the government level. Major measures include cultivating consciousness for saving food, developing laws and regulations, as well as monitoring and evaluating the implementations.*³⁵³³

*Reducing food loss in international trade: • One measurable aspect of food loss is through border rejections due to non-compliance with regulations, including unnecessary delays and inconsistent decision making by border officials. Addressing unnecessary delays can also reduce food waste at retail and consumption level by prolonging shelf lives of food products. Streamlining boarder procedures both outward and inwards is crucial, however careful balance must be ensured because poor sanitary and phytosanitary measure implementation can spread diseases and pests.*³⁵³⁴

Four ongoing studies have been started in the region trying to estimate the extent, causes and propose solutions for food loss due to international trade, and pilot countries includes India, Sri-Lanka, Indonesia, and Bangladesh.

Creating nutrition-sensitive food systems in Southeast Asia is an all-of society movement, involving dialogues, actions and cooperation between different stakeholders, from

³⁵²⁹ 310:27 p 8 in 546_July_13_21_INDEP

³⁵³⁰ 310:31 p 9 in 546_July_13_21_INDEP

³⁵³¹ 312:26 p 11 in 548_July_14_21_Genoni

³⁵³² 313:35 p 11 in 549_July_14_21_Meah N

³⁵³³ 315:6 p 6 in 551_July_15_21_FAO_ESCAP_Multi

³⁵³⁴ 315:26 p 9 in 551_July_15_21_FAO_ESCAP_Multi

*government to civil society. More research and data analysis will be important to define policies and ways forward.*³⁵³⁵

*Mapping Food Consumption patterns: Mapping household food consumption patterns across all the states and continents, could help the research fraternity in framing food systems based research programs.*³⁵³⁶

*Start-ups need an industry partner who could help penetrate their technologies for large-scale adoption. A collaborative approach of bringing stakeholders together to implement data driven solutions and prepare a global action plan on research, technology, market and policy interventions is essential for improving dryland food systems. A Global Centre of Excellence in Biofortification could be established to develop research programs, to promote biofortified food, advocate policy amendments and contribute to nutrition security of the malnourished population.*³⁵³⁷

*The main outcome was the need for more scaled awareness on the contexts of respective stakeholders and what drives their decision-making. Causal Loop mapping has been tested and through this exercise identified as a useful tool.*³⁵³⁸

*To raise ambition and accelerate positive trends towards a sustainable food and land use future, a combination of coordinated public policy, market solutions, strong institutions and measurement and valuation of nature is needed.*³⁵³⁹

*Putting research realities into an achievable timeline acknowledges the time it takes to do mitigation research and bring those solutions to market. We need more research funding on various aspects of the system and that research needs to be funded, not by industry, but governments or non-profits.*³⁵⁴⁰

*It is essential to incentivize primary production at the national level, carry out a survey in each community to quantify needs and prioritize aid. Likewise, improve storage aspects when food is perishable, provide tools to guarantee greater production of food items based on economic reactivation (easier credit, technical assistance and transportation).*³⁵⁴¹

*Consumers tend to express their interest in local and sustainable food sources, 74 and stakeholder companies (fertilizers, animal production) are increasingly active 75 in collaborating and interact with scientist and research entities on impact of 76 climate change in agriculture. In Europe, future decisions of big food companies 77 would likely be very influential in LUC.*³⁵⁴²

³⁵³⁵ 319:4 p 6 in 556_July_15_21_Von Goh_GenTan

³⁵³⁶ 321:12 p 10 in 558_July_16_21_RICH_ICRISAT

³⁵³⁷ 321:23 p 14 in 558_July_16_21_RICH_ICRISAT

³⁵³⁸ 322:3 p 7 in 559_July_19_21_Choucair_Multi

³⁵³⁹ 326:4 p 6 in 563_July_20_21_ClimateWorksAustralia

³⁵⁴⁰ 328:5 p 7 in 565_July_20_21_Mitloehner_Kebreab

³⁵⁴¹ 350:6 p 6 in 424a_June_28_21_PROLIDER_Eng

³⁵⁴² 353:17 p 2 in 505a_June_29_21_Borchard_UNC

