September 2021

Synthesis of Independent Dialogues

REPORT 3
Part 2, Section 1
This supplemental report provides in-depth documentation in support of the third Independent Dialogues Synthesis Report. Specifically, the report covers Themes 1-3.
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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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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. (This report).
• **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.

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 1-3

What food systems transformations are needed and envisioned?

Guidance Theme 1.  Transformed Food Systems

Seek transformational approaches and solutions for broad societal interest and the common good…¹

The main finding of the Regional Dialogue was the need to work with gender transformative, intersectional and intersectoral approach, in all sectors. In this way, it was agreed that to achieve food and nutrition security and to contribute to the sustainable development it is fundamental to pay attention to women’s rights (SDG 5).²

Our current systems are too linear and all about taking of the resource and very little emphasis on giving back.³

He stressed the importance of acknowledging a transformative process for the people and the environment allowing to recognize the work behind food without wasting and losing it […] At the same time, he stressed the importance of not giving away the responsibility of the older generations to change the system.⁴

The need for transformational changes in the whole system…⁵

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 relevant to food and agriculture productions will significantly accelerate food systems transformative process.⁶

Besides, the transformation of the food system should deliver healthy and nutritious diets for everybody in Latin America.⁷

Transform food systems to address climate and biodiversity crises.⁸

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¹ 1:10 p 6 in 072_Mar_09_21_Sibanda L
² 1:1 p 6 in 099_Mar_31_21_FAO_IFPRI
³ 20:13 p 116_Apr_19_21_Maurer H_Rodrique N
⁴ 24:23 p 160_Apr_16_21_Donati L
⁵ 25:33 p 7 in 105_Apr_27_21_CIHEAM_Multi
⁶ 31:3 p 7 in 000_Mar_3_21_Nkengfa T
⁷ 55:29 p 6 in 001_Nov_5_20_CGIAR
⁸ 56:28 p 7 in 002_Nov_19_20_CGIAR
A fresh look into production, transformation and distribution towards a healthy and sustainable diet for all will bring us to profound systemic changes.9

... public-private money spent on seed and propagation materials as a catalyst for transformational change...10

The Dialogue showed that a social justice approach is needed when talking about food systems. Access to education, information and participation, as well as basic human rights, such as the right to a healthy environment and the right to be involved in important discussions, were addressed as key elements in the transformation of food systems.11

She suggested that the public should utilize a “systems thinking approach which is constituted by six fundamental concepts according to Leyla Acaroglu (2017). […] She believes that initiatives started from personal level could lead to institutional interventions involving schools, civil society organizations, parishes, private sector and local government. She cited three illustrative cases of good/best practices that could lead to sustainable food consumption and lifestyles.12

Support transformative approaches that strengthen women’s confidence, knowledge and skills, relations and transform structures that withhold gender-based discrimination and improve their rights to earn livelihood.13

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, financers, universities, entrepreneurs, etc. are working together at solving systematic issues.14

Participants discussed how schools are trusted food environments that can help drive food system transformation via school meal programs and more education on food/nutrition, farming and agriculture.15

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.16
We know that we need to get back on track; transforming our food systems is among the most powerful ways to change course. In essence, while many different views and objectives were expressed on how to achieve food systems transformation in the region, the role of water was critical in all of them. It was further emphasized that we have to move beyond the sectoral coordination approach, although this is very key – to examine the political transformations that are important in realizing more just systems transformation. They should be developed using transformative approaches that allow for the engagement of all stakeholders at a community level where gender norms are deeply entrenched.

The Dialogue highlighted the need for transformative approaches to promote equity and inclusion in water energy food (WEF) nexus governance for sustainable water, energy and food systems.

Building Back Better from COVID-19: 2021 presents a window of opportunity for ‘transformational change’ towards reaching the SDGs. In doing this we must ensure that we reach the furthest behind first and take a ‘food systems approach’. Policy responses to COVID-19 must also be gender sensitive if we are to ‘build back better’. One tool identified is the Gender Action Learning System (GALS) which is a practical guide for transforming gender and unequal power relations in value chains.

Focusing on agricultural transformations will help trigger further innovations all along the food chain.

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.

There was contention on how a capitalist economic model can be used to foster Food Systems Change. Some participants believed that our system could shift the current power dynamics, which create inequity if utilized in the right way. Others believe that a radical transformation in our system is necessary for true, sustainable change.

Universities themselves have to change how they do business and respond to emerging needs and advance processes and mechanisms that ensure that graduates appreciate agriculture and agribusiness as a source of employment and livelihood.
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.26

Support the strengthening of indigenous food systems by supporting community initiatives and linking them to various experts for capacity building towards social enterprise development, support/organize meaningful food festivals in schools/colleges, urban centers and in communities where they operate including creating champions for indigenous food and food systems. Indigenous community social enterprise can influence the reversion of migration for income purposes, especially among the youth; women and youth collectives and initiatives should also be encouraged to facilitate knowledge transfer noting also the roles and capacities of the youth to influence transformation towards gender equality.27

The future transformation of food systems in Africa requires innovativeness in research and education approaches that are rooted in local contexts. Universities in Africa need to adopt and create knowledge to strengthen and transform the food systems through strengthening links and improving productivity, processing, storage, transport, food quality and business that link them with consumers [...] There is need to reassess and redesign the African Universities and assist them to build their capacity to develop and deliver Africa’s food system transformation.28

There is need for collaboration beyond the boundaries of jurisdiction and in particular within the East African Region. This will enable joint efforts towards tackling a challenge cutting across several countries.29

In the face of this threat, comprehensive social, economic and political transformations are proposed, including agrarian reforms incorporating policies and legislation that can provide legal security to those who live on and from the land, and that can put an end to the dominance of the current global corporate command of the food systems, and the concentration of land in the hands of a very few. [...] A major effort that needs to be made for the transformation of the current food systems is to build bridges between the agro-ecological movement, the movement for the land and all the agrarian movements, with urban movements fighting for health, for the rights of women. youth and food.30

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.31
Specific focus will be given to the transformation of food systems by promoting an integrated approach for development, a notable departure from the rural–urban dichotomous development paradigm.\textsuperscript{32}

Some participants felt that there needs to be a greater emphasis on decision making processes result in transformative changes to current food system activities.\textsuperscript{33}

A review of recent evidence (...) shows the importance of technical innovation driven by research, development, and extension as drivers of agricultural productivity growth, and further, the catalytic role of agricultural productivity-led growth in poverty reduction, food systems resilience, and economic transformation.\textsuperscript{34}

Transformative innovation which builds on local and indigenous knowledge for sustainable local ecosystems needs to replace conservative innovation geared to support the present economic model.\textsuperscript{35}

We need a new paradigm and vision for local food strategies and policies which are integrated in a functional multi-level territorial governance system. Food regulation is a political issue and should not be delegated to the market—food must be recognized as a right not a commodity.\textsuperscript{36}

Territorial alliances to advocate action for structural challenges: Structural issues around effective landscape/ecosystem action including poverty and food insecurity are significant challenges for cities/regional governments and impose pressing demands on budgets. Recovery packages could strengthen local food provision and build from innovative modalities (e.g., participatory budgeting). Structural issues need long term solutions, including shifting the narrative around food systems so needs are at the center. 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.\textsuperscript{37}

Link actions to the SDGs through coordination across scales with public procurement as a tool to bring goals together. A food lens is needed for all the work being done with the SDGs. We are missing the interconnections between different challenges—for example, biodiversity, climate change, food and nutrition security and access to water. Territorial perspectives that work through a community-based approach can address many of these challenges at the same time while stressing the right to food.\textsuperscript{38}

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 production.\textsuperscript{39}
systems. In the past, changes were made to the benefit of some, and to the detriment of others.\textsuperscript{39}

...in order to create a just food system we need to reform our food system to address the inequities that Indigenous communities face. Participants also expressed the need to involve and listen to the voices of Indigenous people in the food system.\textsuperscript{40}

Participants identified how the understanding of sustainability has been altered to seeing surface-level changes, such as using paper straws or bamboo cutlery, as methods to maintain sustainability; in reality, it is the system as a whole that needs to change.\textsuperscript{41}

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 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.\textsuperscript{42}

Participation and Local ownership of farmers need to be at the centre of Food Systems Transformation In the spirit of “leave no one behind”, and localization, it is key to have local ownership of food system transformation.\textsuperscript{43}

With regard to the upcoming Food Systems Summit, participants look forward to continuing the conversation around building a sustainable food system in Kosovo and work together to transform a wealth of ideas, evidence and recommendations into concrete and practical solutions to advance equitable livelihoods in Kosovo’s food system. Efforts will be made to better integrate these into ongoing initiatives already taking place all over Kosovo. To name a few, these include: initiatives to reduce food waste (ex. UNDP Food Waste Challenge), municipalities’ plans to improve local livelihoods, CSO efforts to promote a culture of recycling and more responsible use of resources.\textsuperscript{44}

Dietary guidelines have an important role as part of a wider process of food system transformation that is urgently needed. The guidelines can be a catalyst for change, as many sectors access them. If the guidelines consider the impacts of diet on the Sustainable Development Goals, it is more likely that other government portfolios start engaging with them as a lever.\textsuperscript{45}

Finally, participants emphasized the need to move forward with solutions, even if they may not be perfect. Being more vocal about the barriers facing the solutions already at work can help push the dial. Often, we learn more from failures rather than successes. Pushing forward with what’s working right now, not what might work 50 years from now, should be the focus of the discussions.\textsuperscript{46}
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.47

...Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.48

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.49

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.50

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 that are good for small farmers and for the planet. This will only come about by the relevant stakeholders reimagining the current system but crucially sharing that new vision with their populations. Every member of our global society must be encouraged to rise up and demand change.51

The Dialogue focused mainly on the major challenges that exist today on the road to the sustainability of agri-food systems. However, they emphasized the fact that this transformation has already begun, showing certain parallelism with the transformation that other sectors, such as energy or mobility, are already undergoing today, at a faster pace, undoubtedly due to their high impact on the fight against climate change. Therefore, the objective must be to position the relevance of the agri-food system’s transformation at the same level on the global political agenda to join forces and accelerate the transition.52

Greater global governance. On the one hand, from the public perspective, they discussed the need to position the relevance of agri-food systems transformation at a more significant level on the world political agenda. In this sense, global governance...
appears as a crucial element in reducing system imbalances and avoiding the differences in competitiveness that may exist, depending on the production systems and place of origin of the companies. In the view of the Ministry of Foreign Affairs, European Union and Cooperation, the first step towards a faster and more efficient transformation would be for all stakeholders in the system to adopt the Voluntary Guidelines on Responsible Governance of Land and Resource Tenure (promulgated by FAO), which guide responsible and sustainable practices to ensure food security. On the other hand, from the third sector’s perspective, a paradigm shift is needed in the approach to agri-food systems governance; currently more focused on the commercialization of food than on quality food for people. This change would require greater involvement of small producers, and collaboration between all actors in the value chain.\textsuperscript{53}

Development of a new agricultural policy which breaks with the past and is participatory: a policy which defines the outlines of a change of approach is urgently needed and must result in an approach which involves the different stakeholders of the channels: farmers but also the stakeholders in the private sector must be active participants in this refelction and in the strategic choices to be implemented because they will then be those who implement it; a paradigm shift is required at the level of the ministry in charge of agriculture: it must become a ministry of sustainable agricultural production.\textsuperscript{54}

Need to adapt the existing legal and regulatory frameworks to the challenges and realities of AFCI and the transition of systems towards more sustainable systems.\textsuperscript{55}

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. 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. This implies support for countries to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.\textsuperscript{56}

Therefore, we need to talk about food sovereignty, which is defined as people's right not simply to food, but to also ensure that what is consumed is nutritious and culturally appropriate, accessible, produced sustainably and ecologically, and that they exercise their right to decide on their own food and productive system. Employing this logic, young people play a leading role in transforming the way people think about the country and the practices developed there in the search to claim and guarantee these rights; that pursuing this will return it to a livable space, reducing multidimensional inequalities by creating space with decent living conditions and for producing, which in turn establishes food systems that are healthier and fairer.\textsuperscript{57}
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. 58

It’s the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform. 59

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 framework of the Human Right to Food and Food and Nutrition Security? (Education, health, social protection, agriculture, environment, technology/innovation). 60

The food systems transformations that are made must consider the different scales of agricultural production that exist, with support for both small and medium scale agriculture. However, whatever the scale, access to water and land must be guaranteed, as well as the protection of our agri-food heritage (species, varieties, knowledge, etc.). 61

Planning future forums will help align ideas, programs, and help to identify roles of stakeholders and community members so that we can transform our food system. To ensure a more equitable food system, improving policy was an important theme throughout the dialogue. Changing policy to improve agriculture, land use, food procurement, and health disparities in our community will be key to changing the current infrastructure and roadblocks that we have in our food system. To advocate for policy change, obtaining data on our local food purchasing, production, and distribution is needed. 62

The role of compassion, care and listening in food systems transformation. Since learning to control fire, the hearth has been at the heart of what has bound Homo sapiens together. The specialisations of cooking, hunting required new skills in our ancestor’s cooperation, empathy, trust and communication. Where do these capacities for empathy reside in our food ecosystems today? Is there empathy between the consumer and producer? Between the seasonal fruit-picker and the supermarkets? Between the dairy farmer and the cow? Between the farmer and the land? How do we build a true empathy between these different nodes in our system in the next decade? Reconnecting and Listening to the Earth to guide
food systems transformation. Since Descartes split mind from body, and human from
Nature, humans from many parts of the world have learned to see themselves outside
of the natural world, and absorbed the credo that our role is to dominate, control and
exploit its

resources. A technocratic analysis of food production has served us well in maximising
yield every year- and yet now threatens to collapse the very ecosystems on which we
depend. How do we reshape our cultural connection with the natural world, and retain
our sense of embedded- ness within nature, as part of its inherent cycle, rather than its
master?

Public policies should adapt to the systemic character of food systems, moving away
from sectoral organisation and towards coherent and systemic management. Linked to
the systemic vision, careers should be cross-cutting, including concepts such as “healthy
living”. Member States are called upon to play a leading role in the transformation of
food systems. Market access should be promoted by small farmers and indigenous
peoples.

Research results should be made freely available, exchange and cross-learning should
be encouraged, transparency is key. This also ensures that existing knowledge is
considered. One of the break-out groups stated that research results should be used for
advocacy of an agroecological transformation of food systems.

Their primary motivation in participating seemed to stem from the genuine desire to be
understood, and the need and want to participate and be included in food systems
transformation.

Innovation ecosystems unlock the power of new and emerging technologies – from
social media to fintech to data and digital services – to accelerate food systems
transformation. The biggest issue participants reflected on as part of the broader topic
of “Innovation ecosystems” is the need to ensure a balance of power, and to avoid
excluding any stakeholder group. 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. Moreover, it is important to question
whom certain actions are successful for, and whose interests are being served, which
aids in protecting vulnerable groups of stakeholders.

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.
Moreover, better identifying research gaps and ensuring easy access to the right data would benefit both the public and private sectors. Participants emphasized the need to bridge evidence gaps by testing hypotheses, pulling together evidence of what works, and developing metrics to measure the level of transformation in agricultural innovation systems. We should recognize that agricultural innovation is not only about ODA (Official Development Assistance) – and that it is part of a broader story around food transformation. To do this, metrics are essential: we need to be better at understanding what counts as innovation for agriculture and have the right metrics to ensure we are on track.  

He encouraged participants to talk about the role of agroecology—in the form of organic agriculture—as a paradigm for transforming the food system to safeguard human rights, equity and food sovereignty so that no one is hungry, poor, or left behind. He and others pointed out that basically, the health of our food affects the health of people and our planet.  

One of the reasons that agroecology is so transformational is that it provides us multiple benefits from restoring ecosystems to building climate resilience, from ensuring food security and nutrition to promoting sustainable livelihoods, from protecting biodiversity to upholding human rights.  

The food systems transformations that are made must consider the different scales of agricultural production that exist, with support for both small and medium scale agriculture. However, whatever the scale, access to water and land must be guaranteed, as well as the protection of our agri-food heritage (species, varieties, knowledge, etc.).  

The way to boost the role of SMEs in food system transformation is by: Rewarding positive outcomes. SMEs felt that there needs to be way to reward consumers as well as businesses for positive behaviors. This could be reducing the price of food products that are close to their sell by date in order to reduce food waste or choosing products with smart/eco packaging. Carbon taxing will be important going forward. For any of these schemes to be possible, a more advanced measurement system needs to be developed that looks at net impacts. For example, it must be able to identify the difference of the environmental impact between a kg of ‘real’ beef compared to 1 kg of ‘cultured’ meat.  

The most effective ways to bring about transformative stakeholder change within American food systems is to start organizing at the grassroots level, as well as to utilize the value of pathos and storytelling to engage people in supporting the fight for zero hunger. As organizing can be difficult due to varying levels of access within communities, the group discussed existing barriers people may have for engaging stakeholders and expressed the need to
acknowledge power imbalances which prevent active change from occurring in the United States.\textsuperscript{74}

A call to provide space to local communities and indigenous knowledge in food systems transformation processes. The participants indicated that food transformation process pays little attention to local/indigenous knowledge about how food is traditionally produced, processed, distributed and consumed. The process to transform food systems in the country is top down. The development partners, programmers, practitioners and scholars- “experts” design, implement and evaluate the food systems projects, programmes and policies. The communities are often placed at the receiving end. As such, the food preferences as well as the enterprises and activities for making the foods available, accessible and utilized are imposed on the local people. In other words, there is no collaboration with the local communities on food systems.\textsuperscript{75}

Investors and donors should give more importance to social business and not just for profit business because it is important. Grouping necessary between SMEs (pooling) especially in the field of transformation, to achieve better results. Support processors in new technologies, innovations, training, more organic production, production quality.\textsuperscript{76}

Policy and Governance can drive the transformation for a systemic change in food systems in the ECA region. Policy makers in the ECA region face challenges which may be common to many countries, such as the need to improve the nutritional status for all, and stem the tide of overweight and obesity; providing an equitable, sustainable food system, while minimizing negative effects on the environment and reducing the contribution to climate change and GHG emissions.\textsuperscript{77}

STRONG GOVERNANCE and holistic policies in ECA are needed to develop, test and prove solutions to the challenges of a systemic transformation of food systems, particularly considering the post-COVID-19 recovery. Better food systems data will allow policy-makers make sound decisions to guide, navigate, and provide incentives for all other actors in the system, leading to better public health, a protected environment, while balancing social and economic needs. Food systems are key to accelerating changes and reaching Sustainable Development Goals including SDG 2.\textsuperscript{78}

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.\textsuperscript{79}
emphasized the role of women and gender equality in transforming food systems. She emphasized the need for providing tools to allow people to hold their governments accountable.  

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. 

...the discussion series and to develop a collective regional outlook about wild foods and the future of food systems in Asia. The emerging outlook about wild foods and transformative and inclusive food systems was the take off point of the virtual forum. Outputs from the dialogue series collectively fed into and were presented during the virtual forum, and which were enriched and validated by the diversity of the virtual forum plenary sessions (7 in total), in content and in terms of the participants... 

Food is a public good and it is essential. This point must override every conversation around the UN FSS and food systems transformation. Equity and inclusion are core principles for transformation. Women and indigenous peoples are essential to sustainable food production and biodiversity preservation; however, land tenure systems make both groups particularly vulnerable. Not only do we need to recognize those who have no choice or “plate” at the table, we need to co-create solutions with them. 

Fully integrate an understanding of the characteristics of Indigenous Peoples’ food systems into the Summit process, as well as an understanding of the importance of these food systems for food system transformation towards resilience and sustainability, into the development of new game changing solutions, policy proposals and commitments.

Behavior change is a powerful tool to empower local smallholders producers and to provide them with the agency needed to adopt and replicate agroecological approaches. Traditional approaches often focus on monetary short term benefits and regulations to encourage sustainable production methods. While these remain an important part of the solution needed, transformative change requires tapping into approaches that go beyond awareness raising and consider attitudes, motivation, background and cultural heritage of smallholder producers. This is a key ingredient of transformative change and allows local actors to leave the role as a passive recipient of knowledge and tools but empowers them to become agents of change themselves.

It was pointed out that the transformation of food systems needs to take place by acting on both supply and demand with an integrated approach on the food environment to influence consumer choices through a process known as "soft power", i.e. education and positive examples of best practices and lessons learned. The Italian
food culture, directly linked to MD, was highlighted as a fundamental resource of “soft power” to lead the transformation of the food system. However, the Italian food system is influenced by globalization and, therefore, it is necessary to redesign the transformation around territorial specificities through a convergence between social networks and the involvement of all stakeholders, in particular local ones. The transformation of the Italian food system also implies the promotion of healthier and more sustainable eating habits.86

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.87

The platform allowed for exchange of knowledge and ideas of how systems of knowledge can be complimentary as the world mobilizes towards food system transformation. Indigenous leaders emphasized the importance of relational connections to food, culture, landscape, ways of life, ecological stewardship, health, and the widespread local Indigenous led initiatives to revitalize and reconnect to their Indigenous Food Systems.88

Finally, a short and localized food value chain is needed - from production to processing/value addition and marketing. Smallholders need to access information on market dynamics, pricing of products, and general empowerment by value-chain. These will help guide a consistent transformation that seeks household food and nutrition security, imparts farmer decision-making abilities, and leads them to food sovereignty. Urban farming continues to inspire hope. It is key to the production of and access to safe, nutritious, and healthy food. It has been on the increase in cities through the pot, backyard, and multi-story gardens. It also offers additional income to the smallholders who sell their surplus production.89

In the process of transformation, smallholder farmers need access to appropriate, affordable, profit-enhancing technologies and crop systems. However, it is essential that these technological interventions be sustainable and do not perpetuate the ecological degradation or social conditions so often seen in agricultural development.90

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.91

Promote farmer-centric approach for better adoption of innovations.92

Ensure that foreign assistance truly supports communities in becoming resilient and self-sufficient rather than perpetually dependent on aid.93
Direct food relief should not be used as a long-term solution, we need to be looking at empowerment models that encourage local self-reliance.94

There is need to mainstream strategies and frameworks aimed at transforming food systems from development actors and national systems.95

Scale up effective approaches, such as: AgriCorps, Whole Child Development, and Integrated Community Development.96

In the Action Track 5 discussion, a central concern was the link between the social and environmental aspects of systems.97

Firstly, participants emphasized the need for farmer-driven and farmer-centric approaches. While recognizing the importance of top-down methods in policy-making, the different groups highlighted the key role of bottom-up approaches in ensuring research and innovation are tailored to the needs of farmers and offer practical and context-specific solutions.98

Circular economy approaches to improve both aquatic food production and other components (e.g., health, social inclusiveness, peace and justice).99

Adopt circular approaches with better integration of agriculture and aquaculture.100

Inter- and Intra-Regional Food Trade: Free Trade Agreement would expand intra-regional trade in agri-food products by 20 to 30 percent by 2040, with particular gains in sugar, fruits and vegetable, nuts, beverages and dairy products. A handful of African countries account for the massive US$ 35-40 billion food importation bill. To reverse this trend, there is need for enabling monetary and fiscal policies, trade regulations, as well as institutional and technological innovations that will catalyse infrastructural development, as well as aggressive facilitation of inter- and intra-regional trade. The top priority of AfCFTA (African Continental Free Trade Area) being food transfers from the majority African countries with a positive food balance sheet to the deficit ones.101

The Municipal Government should implement public policies that promote the importance of nutritious, healthy, and sustainable alimentation, mainly in primary schools, but also in their own community kitchens.102

Efforts should be made to develop stable and adaptive national and international regulation that promotes fair competition and reflects national conditions and the level of development of the economy and its individual sectors. It is indispensable that the imposition of excessive requirements on the production is abandoned, unless specifically needed. In this behalf, it seems necessary to ensure adequacy and commensurability of the international obligations adopted and implemented in various
forms (including standards and regulations) at the national level, with due regard to national priorities and development objectives.\textsuperscript{103}

It is vital to develop and implement a policy that would contribute to the development of staffing in key agro-business sectors and stimulate an increase in labor productivity using the digitalization potential, lifelong learning, capacity building programs, and other long-term and prompt educational solutions.\textsuperscript{104}

Ensure ease of access to technologies: It is essential to ensure ease of access to technologies and, in particular, a widespread connectivity that includes high quality networks, which is essential for the continued development of digital agriculture. Connectivity is a central aspect of digital agriculture and has become an essential element in rural life within the context of the pandemic.\textsuperscript{105}

Group 3: Important aspects that consider the ease of use of the technology; making sure the software is intuitive and can be used with minimal training. Furthermore, make clear the use and significance of the various tools. Ensure the tools can be adapted to the farmer, and not the other way around. They must be adapted with consideration to the target audience (youth, women, etc.).\textsuperscript{106}

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...\textsuperscript{107}

Policy advocacy: Guarantee and support the adoption of ambitious and stringent national policies that ensure inputs, finance, access to markets, and fair trade to reach the most vulnerable producers and consumers (women, indigenous people, persons living with disabilities, and young people).\textsuperscript{108}

Rethink agricultural policies on the use of seeds.\textsuperscript{109}

...Current assessment and post-pandemic projection of a timeslot initiative for outdoor physical activity (Elije Vivir Sano [Choose to Live Healthy] Timeslot):* Importance of an active lifestyle to promote wellness and health in families.* A space for families to develop outdoor physical activity, reducing the possibility of contagion and obtaining benefits associated with movement.* Increased use of bicycles, occupation of squares for physical activity...\textsuperscript{110}
Prioritize food safety and nutrition policies required to achieve the Sustainable Development Goals by 2030, in particular, SDG 2...\textsuperscript{111}

Focus on solving the problem with creating a solid forage base, veterinary services and targeted stock breeding of herds; organize production and state support of the industry in legislative and financial terms...\textsuperscript{112}

In the context of the growing food crisis, the financing of initiatives led by rural women reveals its importance, being the essential instrument in any agricultural development policy. It is an essential condition for the impetus of any productive dynamic, provided that other constraints on agricultural development are equally addressed. It allows for increased investment to expand agricultural production to help reduce rural poverty and improve food security.\textsuperscript{113}

Eliminate the regulatory barriers and obstacles that exist, by adapting legislation to the realities and needs of inter-sectorial coops and associations and taking their diversity into account. This means improving access to credit or development funds, creating incentives for local production, and simplifying and facilitating coops’ accountability.\textsuperscript{114}

Guidance Theme 2. Sustainability

Agricultural Practices

But we can work to ensure healthy ongoing resilient agriculture, robust sustainable farming communities, with increased food security, increased ability to feed our children and communities.\textsuperscript{115}

Several panelists noted that skill development, including digital skills, use of earth observations tools will be useful to improve access to information (market, inputs, extension), hence increase agricultural production and create the necessary transformation.\textsuperscript{116}

Efficiency in agriculture: needs to improve the efficiency of our local food production systems • Encourage and attract young people into agriculture: Our education systems in the universities...previous processes taught simply what was on offer but today, there is a switch to agriculture as business...thus...show youth that agriculture is beyond food production.\textsuperscript{117}
Revive the Yak Breeding Program in the Kyrgyz Republic...

Preserving the gene pool of Western Tianshan apple trees should be considered the most important strategic priority of Kyrgyzstan. That is why inventory taking and certification of all wild apple trees in Kyrgyzstan is essential; 43. Identify genetic reserves for conserving the species in situ in the apple tree growing areas (reserves, wildlife preserves, national parks); 44. Carry out reforestation contributing to the natural renewal of planting materials; 45. Conserve wild apple species in their natural habitats...

To cope with the growing pressure of crop diseases and water access difficulties, several actions must be taken: - Establish and / or consolidate effective agricultural advice systems at the service of producers; - Disseminate technical itineraries adapted to different production systems and strengthen the technical skills of producers and technical support mechanisms...

To cope with the growing pressure of crop diseases and water access difficulties, several actions must be taken: - Establish and / or consolidate effective agricultural advice systems at the service of producers; - Disseminate technical itineraries adapted to different production systems and strengthen the technical skills of producers and technical support mechanisms; - Promote agro-ecological practices (organic fertilizers, biopesticides, limited and reasoned use of chemical inputs, etc.) promoting sustainable production systems adapted to climate change. Good practices and educational tools (technical manuals, videos, etc.) can be shared and disseminated; - Disease control; - Awareness and effective control of sanitary procedures to limit the spread of diseases (crop rotation, access to good quality and healthy seeds, water management, etc.).


17. Wide use of post-harvest residues of cotton (crushed cotton stem), which is the basis for organic agriculture; 18. Introduce contemporary organic, soil-friendly, resource-saving practices and methods of adaptation to climate change.


Change production orientation from productivity to nutrition-sensitive agriculture.
It was highlighted the activities and cooperation that CIHEAM Bari has developed in the last ten years on the sustainability of food systems and diets, using the MD as a case study to connect production and consumption in a sustainable way, going beyond the limit of the usual agricultural production approach.\(^\text{126}\)

Improving the use of biodiversity for nutrition is seen as an opportunity for Brazil to differentiate its food production, which is heavily based on the exports of commodities; to improve income generation for extractivist communities; and to increase the offer of healthy foods for the internal market. It is linked to the need to further diversify crops utilized in crop-livestock forestry integrated systems and the opportunity of improving the nutritional value of diets based on native species.\(^\text{127}\)

It was mentioned that the adoption of good production and processing practices adds value to this production, and a cassava flour with a certificate of origin can have double the financial value for the producer. These good practices can make these populations reduce their dependence on the slash and burn system.\(^\text{128}\)

The need to improve the diversification of agricultural production was also mentioned, with special attention to production systems based on native species.\(^\text{129}\)

The increase in the diversity of integrated systems, and the design of inclusive integrated systems for other regions that do not have grains, with more attention to social metrics.\(^\text{130}\)

Reducing greenhouse gases emissions by modifying ruminant diet and embracing ranching system.\(^\text{131}\)

Organisers of multilateral summits should ensure discussions of food systems include consideration of water systems as a default.\(^\text{132}\)

The issues of food justice, racial justice, food sovereignty, community involvement, and sustainable production are all connected. As one speaker said, “today, I heard agreement across all panels and breakouts in the belief that all people and all communities should have the right and the means to produce, procure, prepare, share, and eat food that’s nutritionally and culturally affirming free from exploitation of themselves, other people and nonhuman animals, and also in harmony with the rest of the natural world.\(^\text{133}\)

Get youth interested in high value commodity production which do not require so much labor and less land enterprises.\(^\text{134}\)

Develop human capital to innovate, adopt and enable transformed food systems.\(^\text{135}\)
Discussion topic 1: Status of Food Systems In Africa: Key Drivers, Challenges And Needed Interventions

There is need to strengthen food production to consumption fundamentals through STIs. This involves the development of yield enhancing resilient technologies (New varieties, breeds); value added and post-harvest reduction for diversified urbanizing populations; renewable production systems - climate change for posterity; and, effective and efficient knowledge generation (Agricultural Education and Advisory services).\(^{136}\)

Map the actions that would lead to reduced production. Companies should have public commitments on reduced production based on food loss reduction programs. Indicators that would demonstrate this could be identified.\(^{137}\)

Integrated smallholder farming systems that have benefits for food security and income, and provide ample ecosystem services, such as those in Cambodia that also use small biodigesters to provide energy to cook food.\(^{138}\)

Research and academia are challenged to transform the education systems as well as the research agenda setting to recognise and promote production, storage, processing and consumption of the crops and livestock species which are not in the mainstream agriculture and nutrition programmes. The research and academia should produce technologies, innovations, education programmes, and evidence which in turn can be applied by the food systems actors, used to train students, and used to enrich evidence-based advocacy.\(^{139}\)

Commodities drying is an issue specially for rainy season, farmers cannot arrange drying facility so that farmers sell their produce in low price with high moisture content. Rice, maize, mung bean, sunflower seed are an example. Farmers face the postharvest loss issue, establish cold storage in local level, demand based production and training on postharvest loss can reduce the loss.\(^{140}\)

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.

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.\(^{141}\)
Addressing these issues would require 1) enhanced business management and sustainability training among farmers; 2) improved access to local and online markets coupled with community-shared production; and 3) local governments to organize dedicated days to showcase their natural/organic produce in public markets.\textsuperscript{142}

Low trophic aquatic food production for feeds, human consumptions and other related industries.\textsuperscript{143}

Participants focused on implementing initiatives to support nature-positive food production and distribution particularly during times of a natural disaster.\textsuperscript{144}

The importance of revaluing native diets, forgotten species, and underutilized crops (such as amaranth and quinoa) is recognized to promote the consumption of healthy foods and good eating habits.\textsuperscript{145}

It is also important to include product differentiation as a way of remaining competitive instead of worrying about China’s entry.\textsuperscript{146}

Set measurable targets by food companies for the reduction of livestock products, shunning those from factory farms and diversifying protein offerings.\textsuperscript{147}

...we can co-create projects that preserve foods and then be given to food pantries.\textsuperscript{148}

Sustainable farming and ways to shorten supply chain of fresh produce in China need further exploration.\textsuperscript{149}

A consultation carried out with the farmers’ community highlights the farmers’ utilisation of new improved plant varieties (71 % of the respondents) • Farmers look at new improved plant varieties with an innovation lens to ensure better yields, the economic stability of the farms, also ensuring resilience over shocks, but also to make farming easier and less labour/input-intensive; • New improved plant varieties can be key to tackle the challenges of climate change and for the sustainability of food systems: ensuring resistance to droughts, better pests and diseases management; enabling sustainable use of inputs, getting closer also to consumers demand; • New Improved varieties can be key to build trust around the farming activity with financial partners (insurance companies), ensuring reliable yields.\textsuperscript{150}

Capacity building for small producers is strongly associated with increased access to markets for products from the Brazilian biomes and territories, an expanded associative capacity, and the involvement of more smallholders in national initiatives such as the efforts to increase the use of integrated systems in agriculture.\textsuperscript{151}
v. Adaptation of crops and cropping systems to salination along coastal belt in southern Bangladesh; strengthen and utilize existing natural biodiversity to identify most suited crops.  

Sustainable farming, aquaculture, and wild foods conservation - Support community seed banking, rotational farming, observance of fallow periods, and guided fallows have the potential to improve forest quality; establish community-managed fish hatcheries and forest gardens; pursue multiple-use strategies and community-based management plans that are environmentally-sound and food-focused.

Include biodiversity strategies in farming...

Stop using chemicals.

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.

How: balancing the demand and utilization of water through solutions like the smart water system (Internet of Things). A prerequisite for the recommendation is better soil data. To improve soils, governments need to encourage the use of biodegradable products and promote the use of technology to valorise biodegradable waste. Local governments and farmer organizations should inventory and use more neglected species (with local nutritional value/agroecological virtues) as they are the ones that promote biodiversity. Communities and farmer organizations can promote ancestral practices, where importance was placed on the planting of diverse species of "lesser" economic utility but containing other values...

Various trees that shelter flora and fauna). Governments and communities should organise small areas that rebuild natural biotopes (protected micro areas).

Recommendation 5: Natural resource management and local biodiversity are key - water and soil are key elements to sustain biodiversity and lower climate impact. Poverty remains a major obstacle to proper natural resource management.

Participants of the 'main' Dialogue agreed with the FGD results highlighting the need to support small-scale producers in transitioning to organic/natural practice. It was suggested that the process could begin by letting farmers experience the benefits of natural/organic production firsthand rather than pushing for immediate full conversion. This would entail introducing the method for household consumption first.
As health and financial benefits become evident, farmers would then be encouraged to expand the practice.  

The need to focus on current livestock practices was noted as a critical area for future knowledge development, including building on lessons in the policy arena that support a shift from livestock production, looking at how to effectively support transitions (for example through improving fertilizer efficiency), and supporting both marginal / transitional and transformational improvements.

4. For their own survival, FFPOs and Indigenous Peoples territories are by necessity becoming resilient in sophisticated ways to climate change, economic shocks, pandemics, political inequalities and conflicts that embrace multiple socio-cultural, ecological, economic and physical / technological diversification strategies and both adapt to and mitigate climate change over collectively vast areas.

Apply multiple farming systems to increase resilience to changes in feeds, feeding practices, and environmental conditions.

Love and compassion is most commonly associated with the production level of the food system, particularly small farmers, who are so connected to the ebbs and flows of the land through their daily work.

It is necessary to migrate towards an efficient and comprehensive agriculture based on sustainability that is not defined based on the production system: conventional, organic, hydroponic, ecological, etc. and focus on producing in a sustainable way with the integration of the best possible practices.

Migrate towards an agriculture based on sustainability that is perceived as part of the solution. The inefficiencies of agricultural production can be solved through the integration and correct use of new and existing technologies, such as drones, NBTs, and precision agriculture, which can be measured by indicators: carbon footprint, efficiency in the use of water, nitrogen, phosphorus, potassium.

Ghana Cocoa Board and its subsidiaries are focused on mitigating climate change and other environmental sustainability threats through cocoa agroforestry practices, climate smart cocoa production and irrigation.

Our Indigenous Knowledge has sustained our peoples and our cultures for thousands of years, and our fishing, hunting, and harvesting practices should be respected and used in relation to research and policy- and decision-making concerning the interrelated dimensions of our food systems as well as intergenerational sharing and transmitting.
our knowledge to future generations in order to maintain and strengthen our knowledge.\textsuperscript{168}

The UK adopted a collaborative multi-sectoral voluntary approach to antibiotic stewardship in livestock production, involving the government, industry, civil society and the public. As a result, antibiotic sales for food producing animals in the UK has fallen and it is now one of the lowest users of antibiotics in agriculture amongst those countries with a significant livestock farming industry. Collaboration and sharing best practices is key.\textsuperscript{169}

To invest in restoration of degraded lands including boreal forests and other endangered ecosystems and lands, which are the basis of indigenous traditional knowledge, practices, medicine and nutrition systems.\textsuperscript{170}

Livelihood trainings on alternative marketing strategies including cooperatives, community supported agriculture (CSAs) strategies; high tunnels and innovative systems, agroecology- regenerative agriculture; and sustainable organic farming skills/farmer knowledges; entrepreneur training, are important to empower BIPOC small farmers and their communities and support resilient agroecology-organic livelihoods and wellbeing.\textsuperscript{171}

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;\textsuperscript{172}

2. Make good food matter a. There are many SMEs in China making effort to build a better food system, whether it’s regenerative agriculture, eco-agriculture, animal welfare, or plant-based protein, we can see a significant increase in the number of SMEs in these fields, however, consumers are still speculating and not willing to change their behaviors right away, and contrary to popular belief, the Chinese market can be quite complicated and challenging.\textsuperscript{173}

9. Biocentric ecological restoration must be urgently prioritized by Member States and relevant stakeholders, as it is the insurance for our collective future on the planet and the surest way to mitigate the impacts of climate change.\textsuperscript{174}

Agroecology and regenerative agricultural practices are key. These ecological systems that are in harmony with the environment also have social benefits and need to be scaled-up. To facilitate this, more research is needed that highlights the benefits of these systems.\textsuperscript{175}
Integrated approaches for sustainable soil management can facilitate regenerative agriculture and reap both economic and environmental benefits. \textsuperscript{176}

Support smallholder farmers in adopting evidence-based regenerative agriculture practices. \textsuperscript{177}

Regenerative food systems with a focus on regenerative foodscapes. These are meant to be food, action land- and seascapes that show the transformative impact of improved management practices which restore nature – climate freshwater-biodiversity – in ways that are attuned to the local culture, economic and biophysical situation. \textsuperscript{178}

Ensure that regenerative agriculture (RA) is defined in a way that encourages access to tools and technology. RA is about modern agriculture and about technology and innovation (this may include fertilizer and inputs). Modern agriculture can help the soil, biodiversity, etc. \textsuperscript{179}

Soil health solutions and partnerships (including regenerative agriculture and carbon storage). \textsuperscript{180}

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. \textsuperscript{181}

To implement the proposed systemic interventions, participants saw the need for the UN to take the lead in the global advocacy on natural farming, and in providing guidance to member states in adopting agroecology and regenerative agriculture. The UN should also exert their influence over large agro-industrial companies to ensure that food security is achieved via the triple bottom line approach (i.e. people, planet, prosperity for all). \textsuperscript{182}

First, this group identified two trends in agriculture today: 1. Regenerative agriculture: low tech, lots of manual labour and 2. 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. \textsuperscript{183}

Panellists believed that knowledge bases on agroecology must be shared with policymakers, who can support and help scale up agroecology and regenerative
approaches. They discussed the need for strong connections between various
generations, countries and sectors in order to scale-up agroecological practices.\textsuperscript{184}

But the conversations focused mostly on the solutions to re-establish connection and
compassion to foster food systems that are regenerative, equitable and nourishing in
all senses of the word.\textsuperscript{185}

Policy makers must seize this by encouraging regenerative approaches and pushing
action more toward the SDGs. We need to drive the the global food system in
regenerative agriculture and redefine profitability. We need to redefine basic notions:
what are health, wealth, happiness? There’s more money in circulation than ever but
we are not happier.\textsuperscript{186}

By 2030, we want to re-establish a regenerative relationship with the soil based on
traditional practices, but which also facilitates transitional systems to bring food
producers and consumers into a new economy.\textsuperscript{187}

...Shifting to agroecology and regenerative agriculture.\textsuperscript{188}

Livelihood trainings on alternative marketing strategies including cooperatives,
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systems, agroecology- regenerative agriculture; and sustainable organic farming
skills/farmer knowledges; entrepreneur training, are important to empower BIPOC
small farmers and their communities and support resilient agroecology-organic
livelihoods and wellbeing.\textsuperscript{189}

Promoting active learning between small farmers on research and quantifying
agroecology and organic farming systems farming strategies and their benefits to
farm,

Strengthening urban agriculture and local food production can improve nutrition and
access to food among the urban poor; Restoring the health of agroecological systems
will be needed to boost resilience.\textsuperscript{190}

Improving the use of biodiversity for nutrition is seen as an opportunity for Brazil to
differentiate its food production, which is heavily based on the exports of
commodities.\textsuperscript{191}

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.\textsuperscript{192}
15. We ask all parties to support scaling up agroecological and traditional systems with the same focus and resources allocated for industrial production systems.\(^{193}\)

**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:** local governments, civil society, producers, farmer organizations  
**How:** this would require in-person exchange and inclusion of the farmer communities (both small holder farmers, as well as large scale exemplary farmers).\(^{194}\)

To implement the proposed systemic interventions, participants saw the need for the UN to take the lead in the global advocacy on natural farming, and in providing guidance to member states in adopting agroecology and regenerative agriculture. The UN should also exert their influence over large agro-industrial companies to ensure that food security is achieved via the triple bottom line approach (i.e. people, planet, prosperity for all).\(^{195}\)

The role of primary producers should also be more emphasized in general and fruitful synergies could be enhanced, including with agro-ecology, Globally Important Agricultural Heritage sites (GIAHS), cooks and gastronomy networks.\(^{196}\)

To get the right support and facilitation, the campaign can assist by highlighting the need to invest in and focus on this area, showing the link with agroecology approaches, and making other links across the food system – for example through a focus on influencing and changing consumer preferences, and on food loss and waste.\(^{197}\)

Panellists believed that knowledge bases on agroecology must be shared with policymakers, who can support and help scale up agroecology and regenerative approaches.\(^{198}\)

In contrast with industrial agriculture, the patchwork forest and farm landscapes of FFPOs and Indigenous Peoples routinely produce a wide diversity of subsistence agroforestry foods (including the wood energy to cook with, and the construction materials for shelter) alongside cash crops that together are constituting an integrated approach to food security (stable, nutritious, available, accessible and sustainable).\(^{199}\)

Approaches such as agroecology and agrobiodiversity have proven to produce nutritious food with less external inputs, which means less pollution and greenhouse gas emissions, lower water consumption, reduced biodiversity loss, and healthier soils.\(^{200}\)

**Agricultural Development: Food systems improvement pathways should be built on the basis that agriculture is a key component of global food and environmental**
sustainability as well as an essential part of the solution. Without agriculture, there is no food, so the assurance that all people have access to enough food starts with healthy and productive agriculture which is able to provide for both the well-being of producers and rural communities, as well as enough surplus for feeding the rest of society...  

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 and loss.  

1. Ecosystem Restoration through the planting of crops with different characteristics together in one place will recover lost food heritages and provide abundance of different food varieties. 2. There will be restoration and recovery of various fish stocks, other aquatics in our wild rivers and trees in the forests.

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.

Improving the sustainability of fisheries and aquaculture practices in the Mediterranean basin. In spite of positive changes, the sustainability of fisheries in the region remains a critical issue. On the other hand, the continuous growth of aquaculture provides sustainability issues related to the farm models and their practices.

Use of drought resistant crops in pilots and scaling up its use in arid areas

It is necessary to promote the transition from monoculture to integrated low carbon agriculture and to move away from the plantocracy styled economic model. We must develop enhanced systems that support agricultural development, e.g. seed banks, organic fertilizers. There is need to build capabilities and more widely educate farmers and processors in good agricultural practices, good manufacturing practices, safety standards, seed production, organic fertilizers.

Effort should be made to explore permaculture design; using biogas to generate energy. It is necessary to move away from embrace in the concept of a monoculture which was an approach legitimized by slavery, and look into the ways in which varieties of plants and animals can provide sustenance and value.

Reclaim and rehabilitate agricultural lands, encourage good management of resources and increase efficiency of resources used, especially ground and surface water and agricultural lands through the use of modern technology. Enhance provisions related to technology transfer and capacity building included in the UN Climate Change Agreement.
Establish pilot projects that improve water and energy use and reduce pollution to support countries in crisis and with funds from World Bank, Green Climate Fund and FAO.\textsuperscript{210}

Build and maintain healthy soils on which crops are cultivated to enhance food security. b) Effectively manage water utilization to ensure environmental sustainability. c) Implement mitigative measures to combat and reduce climate pollutions (air and water).\textsuperscript{211}

One solution could be to start projects which create urban food systems, through techniques such as vertical farming and hydroponics, within the contexts of refugee camps. In this way, migrants and refugees would have access to job opportunities as well as quality food, re-gaining agency and independence over their food choices as well as having the possibility to share their own knowledge and help to create a thriving social fabric.\textsuperscript{212}

Transparency of best practices for farming in the era of climate change can lead to less energy required to produce food, which could reduce the cost to the consumers (increasing fresh food access for consumers at an affordable price).\textsuperscript{213}

Improving water conservation through watershed management, better use of irrigation equipment and educational programs. Improving animal health and welfare through strategic breeding and selection, practicing integrated farming systems, implementing the use of bio gas digesters on slurry type waste farms and using precision nutrition and feeding strategies to lower emissions. Improving on soil health and focusing on the beneficial microbial populations and their synergy to impact the entire environment. Improving and updating existing policies on plant and animal wildlife conservation strategies as a means of supporting a healthier and more natural environment through biodiversity. 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 chances of healthier food production, less wastage and a higher chance of managing climate risks in agriculture. Improving on the genetic selection of higher producing varieties of crops and breeds of livestock, to ensure more nutritious food, as well as relating these techniques to more conservation type agriculture techniques.\textsuperscript{214}

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. It would be critical to address need to reduce emissions, the need to address soil health, food and to assure that waste is managed in a more regenerative, sustainable and appropriate way. Food waste provides many opportunities for circularity and should also be a focus of investment. A significant emphasis should be placed on regenerative
agriculture techniques, agro forestry and generating the data on the carbon sequestered from trees in agroforestry projects that promote the reforestation of indigenous trees and the conservation of indigenous species and biodiversity. Nature based climate solutions will be critical to protection of water ways, reduction of carbon and conservation of water and energy

Wider use of permaculture Design for sustainability and resilience

Explore SMART farming/ Organic farming

Improve soil management and crop protection.

A move to Nature based solutions will require the following: efforts to achieve Zero emissions; regenerative agriculture; and emphasis on a circular bioeconomy while maintaining economic viability. Therefore, its necessary find ways to valorize nature-based solutions – such as attributing value to biodiversity, carbon sequestration (carbon trading systems exist but the methods to reliably measure are not yet available). Other options include green bond issues, carbon credits and sequestration which could all create income for farmers to cover costs of transition – for ex. planting cover trees and using their carbon sequestration capacity to generate income while other crops grow to maturity underneath.

Supporting farmer transition in adopting more sustainable agricultural practices through attributing real value to the stewardship of nature will be paramount if food systems are to respond to the Action Track work streams of protect, manage, and restore. A move to nature-based solutions will require efforts to achieve zero emissions, regenerative agriculture, and emphasis on a circular bio-economy while maintaining economic viability

For Food System Sustainability: Pests and Diseases effects should be adequately controlled

...healthy and sustainable livestock food system Proposal: creating a benchmark for the whole livestock: from agriculture to food waste. Including data collection and transparency to prevent Antimicrobial resistance and zoonotic disease development.

As leaders in research in agriculture, we can lead precise and healthier use of biological and chemical uses in agriculture.

This is why some participants in discussions proposed solutions such as finding growing techniques that could increase the production of local products on both the little arable land available and land used for cash crops like rubber trees. However, other participants remained skeptical about the idea of large-scale production on the little arable land available because they have not yet been introduced to these innovative, environmentally friendly techniques.

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion
for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing), reusing agricultural waste for composting, producing biogas, and feeding animals, among others.\textsuperscript{225}

Train local producers so that they adopt sustainable production practices. - Promote initiatives and projects for preventing contamination of aquifers and promote proper water management.\textsuperscript{226}

One of the activities with the greatest potential for agrotourism is meloponiculture, an activity of great cultural value in which women play a fundamental role\textsuperscript{227}

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.\textsuperscript{228}

Process automation (already used for food and beverage sanitary registries) was mentioned as a good practice in Central America. This practice could be expanded to new horizons.\textsuperscript{229}

Development of agroforestry systems and efficient irrigation systems were also discussed as transformative solutions, together with the adoption of clean technologies and improvement of recycling capabilities.\textsuperscript{230}

In addition to technology being available, knowledge needs to be accessible to producers. Lastly, consumers acceptance of science and innovation in agriculture needs to be maintained or gained.\textsuperscript{231}

“By using sheep, the sector helps create a biodiverse environment and reduce amount of GHGs generated vs mechanical grazing of vegetation.\textsuperscript{232}

Although it is important to focus on the commercial interests of food companies and practical methods to introduce plant-based diets, it was discussed amongst all five panelists how food as a sacred entity and gift is missing from current food practices. Without this integral emotional perspective on food, the flaws in the food system will not be solved.\textsuperscript{233}

Sustainable intensification adapted to local conditions, scaled by robust business models and producing high quality food. - Improved animal husbandry that reduces the need for antibiotics along with other social and environmental benefits. - Shift the focus of production, processing and marketing of livestock commodities more towards quality.\textsuperscript{234}

Healthier animals reduce zoonotic risks, disease spread and contribute to healthy diets.\textsuperscript{235}

Promotion of environmentally friendly food production activities such as: o Bee-keeping Through beekeeping projects, the household can earn income and lead to better food security, livelihoods and environmental regeneration. o Mushroom farming: this will
not destroy the forestry as both activities can take place mutually through agro-
forestry. The problem is to dry them - preservation. o Investment in Fish ponds to
improve nutrition status but also supplement fishing and reduce incidents of over
fishing.236

Diversification of activities in the field and on the farm is crucial for building the
resilience of mountain people’s livelihoods, and agroecological approaches can help at
different scales.237

Manufacturers need to deliver according to what the regulatory environment allows,
ensuring less packaging, regenerative agriculture, UN SDG goals238

Development partners were urged to play more active roles in providing training and
services including trainings on how nature-based solutions can be incorporated in
agriculture. There is the need to establish a farmers resource center where farmers can
learn and be shown how to farm crops in the right way. The center should be in a
position to educate and help farmers with soil management, crop production, and crop
protection challenges. It should also be a demonstration area for urban agriculture and
should have a list of alternative crops that can grow in the area. The center should also
be able to network farmers so that they can learn from each other through

networking239

Low external input – use farm waste & by-products, good seeds, and multipurpose
machines;240

Soil regeneration is very important so that no one solution adversely affects another
part of society.241

At present, there have been some international actions to change the food system,
such as providing fortified edible oils rich in vitamin A and vitamin D, increasing the
range of beneficiaries of social security, exploring the most scientific agricultural
production planning, encouraging private sector financing and assistance of small and
medium-sized enterprises, paying attention to and guiding the needs of consumers,
and the use of scientific research results242

A third significant finding was the need for irrigation techniques and resources. Many
farmers spoke about the need to manage water resources and the need to be prepared
for climate disturbances such as prolonged droughts.243

This should include supports to incentivise and remunerate farmers for both food and
ecosystem services, encourage environmentally-friendly farming and support high-
welfare systems.244

In summary, it was agreed that we need to utilise land in a way that avoids growing
food for animal consumption.245

To produce nutritious and safe harvest for food consumptions, NPK fertilisers should
never be used in the first place.246
Agroecology (a way of building environmental resilience) principles discussed were; Adapting to the local environment – its constraints and opportunities, creating favorable soil conditions for plant growth and recycling nutrients, diversifying species, crop varieties, and livestock breeds in the agroecosystem over time and space – including integrating crops, trees, and livestock from the field to landscape levels.

Innovations that could reduce energy use in food production/value chains over the next decade include: - Agroecology and better farming practices - Using balanced feeds in livestock rearing - Low pack/no pack solutions: shops using no packaging and customers using own recycled materials when shopping in stores. - Irrigation using gravity feed systems. - Using wastewater for energy: methane could be used to produce gas for other things such as cooking and heating. - Solar PV for pumping water - Intensive farming rather than extensive - Internet purchasing: small scale farmers chain to market is long, therefore using online shopping small scale farmers can shorten this and improve their on farm economics.

Promoting efficient use of water in agricultural system through improved technology such as hybrid crops (water resistant crops, drought resistant crops etc)

Many farmers may never have heard about the benefits of seaweed for livestock production and as a fertilizer for cultivation. A participant suggested creating a central resource to educate farmers looking to use seaweed where they can learn about good practices and where to responsibly source their seaweed additives from. All participants agreed that there needs to be further research conducted in a centralized manner around seaweed production for the specific use of it as feed, fertilizer, and in biorefinery.

Boosting nature-positive production is multidimensional. It cuts across ecological, education, policy, social and economic dimensions. Promote true cost accounting of ecological and societal benefits. • Despite the diverse ideas, participants agreed on a common goal of striking a balance between and among the five dimensions. • Promote the importance of soil health to food production, environmental conservation and addressing climate change.

Implementation of Integrated Water Resources Management approach to meet increasing demand and competition among various sectors and users • Development of water accounting system for the sectors and improvement of these databases according to water use and disposal.

The discussants agreed that there should be a focus in coming years on selected examples, like solar tubewells, which provide a connection between hydropower, irrigation and even food security in the Indus basin. Examples such as solar tubewells will demonstrate the value of more comprehensive WEF models. Some discussants were of the view that solar irrigation can result in overexploitation of groundwater aquifers and hence question the sustainability of groundwater use, whereas other discussants thought that such issues will provide an opportunity to integrate different institutes to address sustainable use of resources.
Finally, governments/stakeholders should push for conservation farming techniques to reduce agricultural emissions across the board.\textsuperscript{254}  

Promoting organic practices as sustainable food production practices and a route to reduced land degradation, and climate resilience.\textsuperscript{255}  

Adopting modern irrigation techniques such as drip or sprinkler irrigation. • Measuring soil moisture levels to maintain healthy crops without excess irrigation will increase productivity. • Phasing out of water intensive crops (like sugarcane) and switch to horticultural agriculture.\textsuperscript{256}  

Circular economy is another area to avoid food waste.\textsuperscript{257}  

Young people are encouraged to start-up the practice of regenerative farming as a means of boosting nature-positive production. It can be started at a low-scale and scale-up in a manner that manages, protects and sustain the natural ecosystem. For instance, through green house and home gardening.\textsuperscript{258}  

Seed security is crucial to food security and livelihoods and is a part of a community’s disaster risk management, especially in the context of climate change. Together with agro-ecological practices, and farmers accessing weather information and collecting weather data themselves, farmers use plant genetic resources as part of their climate adaptation strategies.\textsuperscript{259}  

There must be shifts in farming practices, especially at the big ag level.\textsuperscript{260}  

There is a diversity of food, culture, and biodiversity in forest communities. When we practice agroforestry and are connected to the landscape, a diversity of species proliferates.\textsuperscript{261}  

End neocolonial practices of land grabs and worker exploitation that are tacitly given license though international trade agreements - End practices that cause people to disassociate from the land; - End practices that extracts without replenishing; - End practices that exploit without regard for people or planet.\textsuperscript{262}  

In addition, 17 African Leaders committed to concrete actions to boost agricultural production by doubling current productivity levels through the scaling up of agricultural technologies, investing in the development of agro-industrial processing zones to boost national and regional food markets for value-added and nutritious foods.\textsuperscript{263}  

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.\textsuperscript{264}  

No one size fits all, and different national/regional approaches, farm sizes and production practices need to be recognized.\textsuperscript{265}  

The suggested steps were food diversification with a particular focus on drought resistance varieties, adoption of Agri technologies that increase productivity with less

\textsuperscript{254} 130:13 p 7 in 164_Apr_15_21_Anarbekov_Akramov  
\textsuperscript{255} 135:52 p 12 in 193_Apr_19_21_Badger_Earlem  
\textsuperscript{256} 135:69 p in 193_Apr_19_21_Badger_Earlem  
\textsuperscript{257} 136:18 p 7 in 196_Apr_20_21_Attah-Krah K  
\textsuperscript{258} 142:15 p 9 in 216_May_06_21_Ben_Aniabi  
\textsuperscript{259} 143:2 p 6 in 223_May_12_21_Mushita A  
\textsuperscript{260} 145:19 p 9 in 230_May_19_21_Allen K  
\textsuperscript{261} 147:6 p 6 in 232_May_27_21_Schwartz A  
\textsuperscript{262} 151:8 p 6 in 240_May_27_21_Schwartz A  
\textsuperscript{263} 153:7 p 6 in 253_Apr_29_21_AFDB_Multi  
\textsuperscript{264} 155:38 p 8 in 262_May_04_21_ILC_Multi  
\textsuperscript{265} 156:32 p 6 in 263_May_06_21_CCGA
impact on climate, support and promotion of Agri extension workers to reach farmers with new skills and models, the role of agro-dealers in local markets, reduction of tax for Agri inputs, promotion of livestock farming in drought-affected regions and the use of farmers cooperatives if commercial farming in not exploited.\textsuperscript{266}

The outcomes for discussion topic 2 were increased farming cooperatives to share knowledge on preservation, tree planting to protect soil and water, planting bananas along with water reservoirs\textsuperscript{267}

Improving particular practices including feeding cows better, composting, using home-grown fodder, silage wrap recycling, pain relief for dehorning, planting trees\textsuperscript{268}

Reducing waste by aiming to only have water and salts as outputs\textsuperscript{269}

Recognizing the need for resilient food systems, future-proof agriculture\textsuperscript{270}

The focus of agricultural education should not be solely on agriculture but what it can do for society. The current pandemic highlighted that there are problems that farmers, or economists, or doctors, on their own, cannot solve. Multi-disciplinarity must be considered in re-thinking agricultural practices and education.\textsuperscript{271}

There is the need to invest in life-saving crops that are resilient and in wide diversity from a wider range of crops and cropping systems.\textsuperscript{272}

Development of sustainable seed systems, facilitating conservation, access, availability, use and exchange of high-quality seeds of forgotten foods by farmers\textsuperscript{273}

In developing countries, purchasing powers are increasing and we can observe a transition towards unsustainable practices, adopting the culture of the global North.\textsuperscript{274}

Nature positive production safeguards producers’ ability to continue working and living as farmers and fishers, to maintain customs, traditions, and ways of life. Also potentially makes farming/fishing appealing to the youth again.\textsuperscript{275}

Maximizing connections across land and sea can help solve shared challenges, e.g., how to develop new markets, scale operations, and access funding.\textsuperscript{276}

Support circular use economies, E.G. utilizing waste products as fishmeal and fertilizer instead of harvesting an entirely separate stock for these uses.\textsuperscript{277}

Convert septic tanks to sewer systems to avoid nutrient leakage into waterways\textsuperscript{278}

Facilitate households growing their own landscaping plants so that landscaping companies can convert their land to agricultural crops\textsuperscript{279}

Participants suggested that farmers be incentivized to cultivate nutritious (and staple) foods within the community, and use farming techniques that improve fruit and vegetable yields.\textsuperscript{280}
Potential solutions also include plant-based proteins, certifications, alternatives to packaging, recycling and consumer trust building.\textsuperscript{281}

Using fisheries (seaweed, seagrass, mangrove zones) can increase yield by 25% and reduce methane emissions by 90% if used as feed.\textsuperscript{282}

Using seed bombing as a method to create feed for cattle during raining seasons.\textsuperscript{283}

Farmers be organized to work as groups to encourage collective yields that can meet market demands. Out grower contracts that entails sub-contracting of smallholder farmers by developed producers also makes it possible to meet market demands, thus enabling participation in local trading and marketing.\textsuperscript{284}

Supplementary feeding was also highlighted as imperative so that when rangelands did not produce adequately due to several factors such as climate change, animals will still have feeds.\textsuperscript{285}

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.\textsuperscript{286}

A healthy grazed grassland can create deep carbon sinks. Managing grasslands well also contributes to carbon storage in other ways: by enhancing soil health and water holding capacity to equip land to be more resilient to extreme events.\textsuperscript{287}

Feeding livestock, a seaweed supplement called FutureFeed could simultaneously help to secure global food security and fight climate change by reducing powerful greenhouse gas emissions.\textsuperscript{288}

Young people needs natural methods to assist their depleted soil so that they can be able to improve soil health and increase income.\textsuperscript{289}

It was emphasized that smallholder farmers does not need chemical fertilizers now because, toxic chemical fertilizers are destroying their soil and food healthy.\textsuperscript{290}

Machinery to enhance food production and preservation (e.g. microwave vacuum - dry up food and keep for longer in refugee setting).\textsuperscript{291}

Duckweed - plant that grows in pond water - can be food for humans and animals - high in protein - can also purify water - help with water scarcity.\textsuperscript{292}

Precision Agriculture was able to impress its importance in the whole gamut of the food systems.\textsuperscript{293}

Precision breeding and genome editing are increasingly becoming a practice in the Philippines, where there is an expressed need to repurpose the crops to adapt to the effects of climate change or to tropicalize livestock animals being imported from temperate countries.\textsuperscript{294}
Soil: Including pH and soil conditioning. The group noted that soil is the foundation of food systems and that there is an urgent need to rebuild soil health. This can help maintain harvests, especially for the staple maize and for horticulture and livestock commodities over the long run, and lay a solid foundation for a more resilient food system. Investing in soil health will also benefit the environment.

Avoiding veld burning. The group noted that veld fires have affected plants and animals, polluted air and water, and destroyed livelihoods. There were numerous challenges to environmental management and sustainability posed by veld fires include property damage, reduced soil fertility, destruction of vegetation, air and water pollution, and destruction of wildlife. It was therefore the responsibility of Primary producers to make sure veld fires are prevented.

The Agricultural Marketing Board (AMB) came up with the idea to work with the planters to store their vegetables in a cold storage facilities during this pandemic.

Re-invent the farmers to be smart for example, to use inputs when needed, and to change the way they produce.

Community based agriculture; in increasing the capacity of food producers, organizing is an absolute thing that must be trained, the existing community is no longer trapped in the interest of getting assistance from the government, more broadly with the existing community, food producers can share various kinds ranging from capital, knowledge, to looking for markets their harvest.

Development of non-centralized food production, such as the food estate model. However, by supporting smallholders to consolidate to produce more efficient, healthy, and diverse food. Non-centralized production also accommodates existing local food resources.

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

Smallholder Farmers needs natural methods to assist their depleted soil so that they can improve to improve soil health and increase income.

Expansion of mandatory fortification process to local millers, including related regulation.

Ensuring a healthy pasture Management factors include: ameliorating soil pH underlying soil fertility and the addition of inputs disease and pest management species & cultivar selection grazing management.

Carbon neutral is vastly insufficient - Carbon drawdown is a necessity (Changing farming practices).

Improving the quality of livestock breeds and developing intensive livestock.
Commodity management and soil nutrient balance calculation

Shifts to plant-based rather than animal-based farming

Bureaucracy in farming is dependent on policy and there needs to be incentives for farmers to change farming methods to sustainable alternatives.

Regenerative farming is growing in popularity and should be further explored, to protect wildlife and land quality. Simple conscious mowing practices can have a great impact, e.g. nature strips - leaving a three meter margin on the outside of fields untouched to protect local wildlife. • Animal management, genetic selection, multi species swords and reducing use of tractors and quads are all important elements in creating a sustainable food system.

Diversity should be improved in terms of both production and intake of aquatic foods. This would address observed species diversity loss due to unsustainable practices that in turn affect fish species and production

Supporting Land Degradation Neutrality (LDN) in order to combat desertification, restore degraded land and soil, including land affected by desertification, drought and foods, UNCCD is currently supporting 127 countries that have committed to setting their voluntary targets of which 104 have successfully set their targets. The scientific conceptual framework for Land Degradation Neutrality (LDN-SCF) that underpins these guidelines comprises five modules, which describe the overall approach to LDN.

...organic way of farming

Further, there is a need to promote sustainable food production, soil health management and organic production, so that the ingredients of these ethnic cuisines are free of harmful chemicals.

Seed banks, ex-situ conservation, and data management and documentation of genetic resources for food and agriculture is closely linked to the revitalization of ethnic cuisines.

To establish community seed banks to be managed in partnership with IPs and provide relevant trainings to enhance their knowledge and practices on indigenous seed preservation, regeneration and seed exchange/sharing among and between IPs to increase varieties and volume of stocks.

Recovering old ways of farming. Implementing regenerative agriculture methods, such as composting or crop cycling.

Food production: Stimulate the production of safe/nutritious food through an educational process targeting conventional family farming producers. Incentivize family farming and production policies and access to food free of pesticides. Maintain the mobilization of the legislative and State Forums to combat the indiscriminate use of pesticides. Valuing and enabling extractivism, considering the importance of traditional
populations in this process, in particular coconut breakers, shellfish gatherers, and indigenous women and their knowledge.\textsuperscript{318}

In fact, working together would make it possible to avoid situations known as “maladaptation” (adoption of adaptation measures that, for example, would lead to an increase in GHG emissions). This action also focuses on coexistence and biodiversity. Biodiversity, or biological diversity, is defined as the extent of the variety of different living organisms in a given environment. A rich diversity is a sign of a healthy ecosystem. This can be improved by extending the crop rotation cycle (more crops in rotation on the same plot). Biodiversity will also be supported by providing certain spaces for the natural environment to perform its role. The beneficial effects of a balance between agricultural activities and the ecosystem in which they take place are known. Biodiversity can be useful to agriculture such as in the pollination of many plants or the control of insect pests by birds and amphibians. However, the presence of certain animal species can lead to more or less important issues of cohabitation. For example, overpopulated deer can cause severe damage to crops and orchards\textsuperscript{319}

International trade with Latin America and the Caribbean is relevant not only as a generator of foreign currency and employment but also as a driver of the implementation of new and better practices. In this sense, it is an essential factor to develop the potential of agriculture in the region and strengthen its contribution to overall food security and the achievement of inclusive and sustainable food systems.\textsuperscript{320}

The capital intensive nature of commercialised aquaculture restricts buy-in from many seeking to form in ‘unconventional’ manners - such as in integrated multi-trophic aquaculture (IMTA) systems, or focussed on lower trophic cultivation. More sustainable farming methods need increased support from innovators and researchers in ways that can reduce operational or upfront capital costs in order to create more viable markets and profit margins for producers in this space.\textsuperscript{321}

They faced a series of weather events that made them vulnerable and saw that perennial crops had greater resiliency. So they began adopting practices to build resiliency, such as cover crops, reduced synthetic inputs, stripper headers and stubble retention, diverse cash crops with companions, compost and carbon based inputs, compost extract and biostimulants, and synergistic crops. The idea of how big of a difference soil management practices could make really stuck with the farm as they learned about the practices of others, such as Gabe Brown. They built a seed cleaning facility that cleans all grain grown on the farm to food grade and the seed market, as well as regeneratively grown flour, that they directly market and control the end to end process. 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. They have also conducted grain nutrient testing to highlight the major difference their practices have made on nutritional quality, and that has also translated to more flavorful products.\textsuperscript{322}

Success stories from the panel. For example, Noursih\textsuperscript{\textsuperscript{\textsuperscript{N}}} was able to work on a water funding mechanism in Quito, Ecuador where funds were gathered from large water consumers in the city to support upstream water friendly farming practices. They also had a project in Zambia they want to replicate elsewhere working with Camaco and

\textsuperscript{318} 211:6 p.18 in 222_May_11_21_FTH_DHI, English
\textsuperscript{319} 222:6 p.6 in 226_May_17_21_Oceaneen D, English
\textsuperscript{320} 239:7 p.6 in 277_May_18_21_JCA, English
\textsuperscript{321} 243:9 p.6 in 319_June_30_21_Fredriksson O
\textsuperscript{322} 252:13 p.8 in 485_June_22_21_Draceque, SD
farmers across the country to gather soil data and determine carbon offsets. The resulting work has been able to support elephant conservation goals (a rare instance of major biodiversity outcomes from agricultural work) and supporting rural regenerative food and farming practices.\(^{323}\)

Aquaculture has a big role to play in the future of food, and it is necessary to push the frontiers of aquaculture towards more mariculture and a diversification of species, so that aquaculture also can be an ecosystem service provider.\(^{324}\)

Confined Animal Feeding Operations: continue unchallenged. Ban further factory farming. Land degradation increases our risks for future pandemics Reduce pandemics by reducing animal products and increasing access to plant based options.\(^{325}\)

Farmers are commanding the market and will increasingly require more actions in the environmental field. No soy has been purchased from deforested areas and the grain producer must change its mind. The ones that do not adapt to the new reality will be out of the market soon.\(^{326}\)

There is a lot to be improved in the current practices only by adopting existing techniques, as the reduction on the usage of fossil fuels, improvement on equipment efficiency, investments on infrastructure that allows larger vehicles to reduce the number of trips per ton of production, among others.\(^{327}\)

Land-based seaweed production can also grow seaweed in an integrated way, for example with shrimp farms, and open ocean farming methods such as Integrated Multi-Trophic Aquaculture (IMTA), can be used wherein which seaweed can be grown along with other species like mussels, oysters, and certain local fish to mimic natural ecosystems.\(^{328}\)

A range of potential products were discussed including, biofertilizers from seaweed, polysaccharides from seaweeds, antical pesticides for the land based farming sector, plant based protein, new forms of superfoods for eg Energy gels, and seaweed masks.\(^{329}\)

Chemical fertilizers will continue to be banned to protect Kiribati fragile atoll environment and to ensure that all local production are organic.\(^{330}\)

The role of vegetable cultivation between two harvests of main cereal crops in a rice-based system was also identified as an effective way to increase the availability of plant-based protein.\(^{331}\)

The importance of developing new vegetable varieties that are resistant to abiotic and biotic constraints, and rich in protein was emphasized.\(^{332}\)

Farming greed red and brown seaweed in geographically suitable conditions for these taxonomic groups and supporting local people to set up these farms so they then buy the harvest off them.\(^{333}\)
National food and nutrition - to co-create food production systems to suit our current climatic conditions, improve diets, ensure healthy soil and address pests and diseases in an environmentally friendly way.\(^{334}\)

Integrated methods – bucket drip irrigation in conjunction with targeted compost productions – areas where high tide is below 30-50cm depth - Wicking system – used in low lying areas where high tides rise to the soil surface\(^{335}\)

In addition, farmers should be encouraged to use organic fertilisers and governments to regularly review land policies were proffered as some of the solutions to constraints on agricultural land.\(^{336}\)

Develop and apply integrated pest and land management systems\(^{337}\)

‘Human centred digitalization’ in agri-food systems can help ensuring existing divides are not deepened and new divides are not created.\(^{338}\)

Possible solutions could include organizing independent payable grassroots advice and developing new tools to help farmers to understand the impact of their practices on climate, environment, and health.\(^{339}\)

Further, regenerative agricultural practices could be used as the backbone of carbon farming standards delivering carbon certificates to buyers and processors, as an indicator to show applied practices’ impact.\(^{340}\)

As part of the solution, the members reckoned that proper land tenure policies need to be instituted, there is need to protect land from soil erosion and governments must ensure proper management of land laws among others\(^{341}\)

Practice of monoculture and specialized production over diversification • Practice of nature and biodiversity preservation versus natural resources utilization for agricultural production\(^{342}\)

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.\(^{343}\)

Some participants expressed concern about promoting plant-based diets, without consideration of land clearing, water consumption, soil depletion relating to agricultural production.\(^{344}\)

Zero-Budget Natural Farming (ZBNF) was discussed as an option for Sri Lanka in its aspirations to be the first country to produce food without the use of chemicals.\(^{345}\)

With the volume of food needing to be produced for food security and with the data on the increased yields due to chemical inputs, one of the speakers noted that while the amount of chemical inputss have to be reduced, it cannot be completely done away
with without having ramifications to yield. He juxtaposed the statistics from 1940 (before Sri Lanka used agro chemicals) and the yields in 2020 to show the difference (4.8 tonnes of rice per hectare in 2020 as opposed to only 0.65 tonnes per hectare in 1940). He advocated for integrated plant nutrient systems and integrated pest management systems.

Panelists shared views and data supporting the idea that efforts to improve livelihoods across the board are now constrained by lack of progress in building national-level research and development capacity, particularly within NARS, and extension services. Given the highly varying farming conditions in the region, farm technologies and soil fertility management practices must be locally adapted to specific conditions. Strong NARS and extension systems are needed to achieve this. Technical innovation that is adapted to specific smallholder conditions is a precondition for sustainable and inclusive transformation of food systems.

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 results, and with greater supervision to encourage farmers to adopt more positive practices for biodiversity, rewarding them accordingly.

Decrease the number of vessels and hours at sea and polluting emissions.

Farmers and producers should be more aware on the importance of professional consulting services and provided training programmes in order to increase their capacities on sustainable production practices.

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.

Traditional communities (Quilombos) are empowered individuals and not victims. There is much knowledge and artistic talent in these communities that can contribute to disrupt unsustainable food practices. People from these communities commit to take concrete steps to continue and revive their traditional agricultural systems and transfer their cultural traditions, knowledge and practices to the next generation and to the society at large. This is possible via: • Continued process of revalorization of local culture and empowerment and taking pride in traditional values that prioritize a respectful relation with nature, especially with the land. • Strengthening of collaborations with external actors, in particular with government officials and researchers. • Dissemination of sustainable agricultural practices. • Responsible tourism in their communities that values nature and respects their culture. • Creation of role models derived from their own tradition rather than from the outside so that children no longer feel ashamed of their skin color or love for farming. • Develop other
books and education materials to ensure better food practices are upheld within their communities as well as in other cities.\textsuperscript{352}

Crop diversification will significantly help in eradicating malnutrition as it increases consumption of diversified foods with enriched nutrients\textsuperscript{353}

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.\textsuperscript{354}

Participants started the discussion focusing on which innovative pre- and post-harvest technologies and practices should be applied over the next years to increase crop yields while offering safe and nutritious food, and divided them in sectors of application: • SOIL MANAGEMENT: Precision farming. • WATER MANAGEMENT: Solar energy, drip irrigation. • AGRICULTURE LIVESTOCK INTEGRATION: Agro-ecology. • CROP MANAGEMENT: Neglected and Underutilized Crop Species. • POST-HARVEST: Drying solar systems and special bags that farmers can use for storing solar energy and avoiding contamination in food. • PEST AND DISEASE MANAGEMENT: Push-and-pull technology; “Aflasafe”, natural product for minimizing aflatoxin limiting contamination from reaching dangerous level. It is used in Sub-Saharan Africa for augmenting the quality of products and quantity. • ICT TOOLS: Sensors for monitoring the conditions of grains during the storage.\textsuperscript{355}

Specific environmentally sustainable practices and technologies can be applied and in the local food chain: • Intercropping – many options are to be explored, also by mixing cropping and intercropping to deal with climate stress and pest and diseases. One clear option is to work on what it is known to be already successful and very effective. One example is the push-and-pull technology, that is known to be successful and effective. • Use of local, accessible and already existing materials to reduce the use of chemical fertilizers, to increase nutrient cycling at farm and household level and recycling of crop residues. One example is to employ domestic and animal west.\textsuperscript{356}

Most of the participants felt that there was urgent need for the adoption of new technologies in agriculture, the new technologies will help in improving crop management, pest control and disease management and may include farm automation, livestock technology, artificial intelligence, precision agriculture, block chain, vertical farms and modern green houses. This will contribute greatly to the consumption of diversified diets by the general populace.\textsuperscript{357}

Flexibility is critical to producers when it comes to the design and implementation of soil health practices to improve resiliency. For example, certain practices such as strip-tilling may be possible in a field one year, but not necessarily every single year depending on moisture levels and residue decay.\textsuperscript{358}
The promotion of agricultural production systems and livestock grazing which use fewer chemical products which then represent a food risk: different models were mentioned at this level such as organic agriculture, sustainable agriculture, permaculture.359

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 resources360

To also promote regulations and practices that are based on science and evidence. This will encourage prudent and responsible antimicrobial use in food production, within the framework of the One Health approach, which recognizes the interconnection between human, animal, and ecosystem health. Therefore, it is necessary to create healthy environments to mitigate and adapt to climate change.361

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.362

Encourage the issue of plant breeding and good practices for the use of seeds and technologies that improve the quality of crops and investment levels. Observe the term "encourage". Does this imply that it is not being done? Not all producers can apply plant breeding. Financing for plant breeding corresponds to the State. 363

Benefits and risks of climate warming; e.g. crop diversity can increase, but locally adopted crops and farming systems (including animal) are required in ...combination with pest management methods to address emerging pest pressure from northwards shifting ecosystems (incl. pests)364

Consumers tend to express their interest in local and sustainable food sources, and stakeholder companies (fertilizers, animal production) are increasingly active in collaborating and interact with scientist and research entities on impact of climate change in agriculture. In Europe, future decisions of big food companies would likely be very influential in LUC.365

Acknowledging the reality of culture, traditions, customary laws, and religion for food production, land ownership, gender, etc., addressing existing inequalities and vulnerabilities. Exploring the role of blue foods and strengthening sustainable fisheries, mariculture, and aquaculture.366

A large-scale mainstream supported program on women led climate resilient ecological farming to be framed and advocated to the government.367
Agricultural transformation to work closer with farmer’s market and the local populations in order to shorten value chains and advance the 13 principles on agroecology and other innovations of the HLPE report.

The participants then discussed the benefits of knowledge intensive and regenerative agriculture. This kind of agriculture encourages carbon sequestration, which in turn increases the groundwater table (for every gram of carbon sequestered, the soil can hold 8 grams more water).

Regenerative agriculture also improves the soil microbiome. These can lead to greater resilience of farming to climate change and also decrease the chance of zoonosis like Covid-19. The practicalities of promoting and implementing regenerative agriculture were then discussed.

Use crops that are climate resilient and require less amount of water

Promote research, use of technology and renewable energy, use climate resilient crops that require less amount of water and save local seeds and improve agro-diversity

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. Simply adding compost or humus can have a positive impact on soil health, fertility, water retention and can even combat some effects of climate change.

Establish pilot projects that improve water and energy use and reduce pollution to support countries in crisis and with funds from World Bank, Green Climate Fund and FAO

Transparency of best practices for farming in the era of climate change can lead to less energy required to produce food, which could reduce the cost to the consumers (increasing fresh food access for consumers at an affordable price)

A significant emphasis should be placed on regenerative agriculture techniques, agroforestry and generating the data on the carbon sequestered from trees in agroforestry projects that promote the reforestation of indigenous trees and the conservation of indigenous species and biodiversity. Nature based climate solutions will be critical to protection of water ways, reduction of carbon and conservation of water and energy.

Improving water conservation through watershed management, better use of irrigation equipment and educational programs. Improving animal health and welfare through strategic breeding and selection, practicing integrated farming systems, implementing the use of bio gas digesters on slurry type waste farms and using precision nutrition and feeding strategies to lower emissions. Improving on soil health and focusing on the beneficial microbial populations and their synergy to impact the entire environment. Improving and updating existing policies on plant and animal wildlife conservation strategies as a means of supporting a healthier and more natural environment through biodiversity. 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 chances of healthier food production, less wastage and a higher chance of managing climate risks in agriculture. Improving on the genetic selection of higher producing varieties of crops and breeds of livestock, to ensure more nutritious food, as well as relating these techniques to more conservation type agriculture techniques.376

Adaptive approaches and youth inclusion. The factors affecting food sustainability are ever-available so, adaptive measures to respond to their incidence must be adopted. Climate Smart Agriculture, incorporation of Geographic Information System and other technologies into the Food System etc have been said to be adaptive.377

It was concluded that adoption of Climate-Smart Agriculture, Geographic Information System, Technology, Crop selection etc will enhance an adaptive and sustainable Food System in Nigeria.378

Forestry and growing fruit and vegetables offer the cheapest & long-term option for earning carbon credits for fossil fuel and heavy energy-intensive industrial production. This is critical when globally CO2 emission will need to be reduced by 23 Gigatons by 2030 if the Paris Climate change aspirations are to be realized by 2050379

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 resilience380

Sustainable production and consumption of aquatic foods are an important key to ending poverty and hunger, and to ensure food security and health for all. We must keep our oceans and waters renewable and clean, ensure a variety of aquatic foods and fully use what we harvest, without loss and waste.381

By combining sustainable intensification of aquaculture, improved management of capture fisheries while increasing the development of fish value chains and reducing significant fish loss and waste, improvements can be made to the provision of food and to nutrition while keeping within planetary boundaries.382

The creation of early warning systems was another solution offered as an option for mitigating the effects of climate change. Similarly, there is a great area of opportunity in designing programs for small farmers that would allow them to increase crop yields.383

Not only does the integration of healthier food options improve outcomes in NCDs, like diabetes and heart disease, but the practice of shifting to more plant-based foods has a direct effect on decreasing greenhouse gas emissions that impact climate change.384

Need to value the benefits of livestock production and minimise climate change effects so that food production is not adversely impacted by climate change.385
Compile a database on climate-resilient mountain crops and try to influence the use and adoption of these crops.\textsuperscript{386}

Promote climate services and early warning systems as key tools to mitigate degradation of natural resources in mountains and better respond to climate change impacts. \textbullet\ Include the impacts of climate change on mountains in policy, and create opportunities for climate resilient crops and for mountain-specific technology.\textsuperscript{387}

However, aspects of food insecurity among vulnerable populations and adaptation to climate change need to be priorities\textsuperscript{388}

Climate Smart Agriculture \textbullet\ Extensive clean-up of rivers in Nairobi so water can be used for urban agriculture \textbullet\ Country should limit clean/drinking water use to agriculture and domestic uses and avoid ‘wastage’ for example don’t allow car washing companies to use drinking water \textbullet\ Encourage urban small business to diversity their income by running small farms or holdings rearing chickens/goats/sheep (helps with shocks like COVID)\textsuperscript{389}

...the food system must be sustainable, and it must be able to help reduce greenhouse gas emissions\textsuperscript{390}

How much investment should be channelled to agriculture, & climate smart practices\textsuperscript{391}

The participants also discussed seaweed as a potential feed source for livestock, one that could possibly reduce methane emissions. All agreed that this was a fascinating and potentially win-win usage for seaweed globally. Not only does just a small amount of seaweed, particularly asparagopsis, significantly cut methane emissions from ruminant livestock but some participants pointed out that the production of seaweed does not require fresh water or fertilizer, compared to traditional feed sources. Therefore, not only would seaweed cut down on GHG emissions, but it would also reduce the use of resources and harmful run-off if widely used in the livestock industry.\textsuperscript{392}

Promote the importance of soil health to food production, environmental conservation and addressing climate change\textsuperscript{393}

Climate smart practices need to be identified and upscaled along with promoting innovative techniques for water saving among farmers\textsuperscript{394}

Using low-cost technologies in climate smart irrigation and on-farm water management practices. \textbullet\ Reducing dependence on high water consuming crops systems like rice, potato, sugarcane, etc. and transforming the cropping system according to local conditions.\textsuperscript{395}

Use of climate smart crops (heat, water and salinity tolerant crop varieties) and scaling up using an efficient seed system.\textsuperscript{396}
Study around climate smart agriculture and seed policy to ensure ease of movement of seed across the two continents.\(^{397}\)

Provision of curriculum on climate smart agricultural practices and training youth as key actors as prerequisite for building resilience to shock and stress.\(^{398}\)

i) Stakeholders in the sector are called to develop curriculum on climate smart agricultural practices and train youth as key actors as part of the sustainability plan for building resilience to shock and stress.\(^{399}\)

In Zimbabwe, the farmers are experiencing recurrent droughts and unpredictable rainfall. In response, farmers used drought resistant crops and varieties such as millet, sorghum, and ground nut. Farmers also used crops that mature quicker and at different times so that they can adjust to erratic rainfall. A well-functioning and sustainably managed Community Seed Bank can provide farmers with quality seeds when they need to re-sow, when rainfall is too erratic, or when they lose their seeds from a failed harvest.\(^{400}\)

Institute regulations on agro-corporations to mandate climate mitigating practices and resilience building in their value chain to account for the environmental, social, and economic implications of our food systems.\(^{401}\)

Enhance support for climate-proofing agriculture in Africa to boost the ability of farmers to adapt to climate change, especially through drought-tolerant crops and livestock, digital weather information and climate advisories, irrigation, better water management, and crop and livestock insurance products.\(^{402}\)

Prepare for, don’t just react to, climate change. Implement forward-looking management that develops and incorporates an understanding of the climate-driven changes expected (and being experienced) in a given community.\(^{403}\)

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.\(^{404}\)

Developing feed supplements that can massively reduce methane emissions from cattle, with farmers potentially paid carbon credits for methane abatement.\(^{405}\)

Providing financial incentives to farmers for sustainable outcomes, including ecosystem service payments, carbon payments, payments for improving practice.\(^{406}\)

Thailand has been promoting as ASEAN seed hub so maybe this can be linked to projects of the government.\(^{407}\)

The innovation on seaweed as feed to reduce methane gas emission can address concerns for food security as well as climate change.\(^{408}\)

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\(^{398}\) 142:7 p 6 in 216_May_06_21_Ben_Aniabi
\(^{399}\) 142:22 p 15 in 216_May_06_21_Ben_Aniabi
\(^{400}\) 143:3 p 6 in 223_May_12_21_Mushita A
\(^{401}\) 152:3 p 6 in 243_June_01_21_Schwaritz A
\(^{402}\) 152:12 p 6 in 253_Apr_29_21_AFDB Multi
\(^{403}\) 158:17 p 6 in 272_May_12_21_Battista W
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Transitioning to nature positive production can generate more food for people who need it most, while aligning production with capacity of the environment and building resilience to climate change.\textsuperscript{409}

We must re-imagine "protected areas" through a climate lens, and must ensure small-scale producers are engaged in design. E.G., Can we create "blue carbon zones" that can fit many things like reforestation, producing food, eco-tourism, wind farms, etc.\textsuperscript{410}

We need to increase farms’ energy efficiency: invest in technology and pilot projects for sustainable agriculture, convert the power grid to renewable sources, convert septic tanks to sewer systems to avoid nutrient leakage into waterways.\textsuperscript{411}

Work on aquaponics system with youth 7) Use waste from tilapia growing system to grow lettuce\textsuperscript{412}

Artificial intelligence is guiding new systems for farming, observing many factors simultaneously like climate controls, water etc. all remotely.\textsuperscript{413}

Ensure use of climate smart agriculture given unending climatic challenges.\textsuperscript{414}

Adoption of conservation and climate-smart agriculture are recommended to address the challenges brought by climate change must be upheld.\textsuperscript{415}

More comprehensive monitoring of nitrogen and other fertilizers in waterways is needed\textsuperscript{416}

Simple soil management practices are available that have been shown to reduce farm level emissions. In order to expand these and other climate change mitigation initiatives, finance solutions, policy, research and collaboration are needed\textsuperscript{417}

Regenerative management practices result in improved soil health, greater water holding capacity and increased plant growth, increasing human food availability in harmony with increased biodiversity and system resilience\textsuperscript{418}

Livestock also play a key role in converting otherwise ‘waste’ food (e.g. crop residues and by-products of food manufacture) into high-quality, nutrient dense protein for human consumption. This cycle is a crucial part of global food production. Large volumes of crop residues, weather damaged product, vegetable wastes and food system by-products that would otherwise add to waste and GHG levels, are recycled for human consumption\textsuperscript{419}

Climate change and sustainability framing - in US and Europe, humans are told they are the cause of climate change, in terms of their excessive consumption behaviors. In Africa, natural disasters/water shortages/stresses/low rainfall/environmental problems affect food systems\textsuperscript{420}

Responding to the climate crisis provides an opportunity for young people to share what they are learning about environmental conservation.\textsuperscript{421}
It also reported the need to modify crops and animals to adapt to the changes happening in the environment, especially given the impacts of climate change and biosecurity threats.422

Government tractor hire services must have readily available tractor drawn implements that are Climate Smart and promote conservation agriculture.423

Plant drought-tolerant crops. It was agreed that there were benefits of planting drought-tolerant crops including producing larger crop yields. Planting climate-resilient maize varieties in most environments leads to increased crop yield because these crops are still able to grow in periods when the rainfall is not enough continuing to maintain soil cover and benefitting the environment.424

Efficient water use is also an important component in new scenarios of climate change, where dry seasons are more frequent. Need to have schemes on rain water harvesting systems, so that they become more popular among farmers in Mauritius as well as subsidies on irrigation systems like drip irrigation implements425

Improved water management. Trees can contribute to the contribution of a microclimate which can be favourable for the growth of plants and provide shade to livestock. Trees can be used to create shelterbelts to protect crops against wind damage426

Promote climate adaptive technologies and techniques for sustainable food production427

Inclusion of pro-poor nature-based solutions and climate change and environment policies to improve the capacity of the poor to manage risks.428

Supporting increased biodiversity and implementing biocentric restoration centers. Resilience is strongly linked to biodiversity, so supporting indigenous communities to keep and restore their biodiversity is crucial not only for food security and nutrition but for life in general. One example of such initiatives is the Potato Park in Peru.429

Climate models do a good job of projecting plausible future climates430

Further, implementation of sustainable practices in Agriculture and manufacturing which can decrease carbon emissions is a global priority in mitigating future resource-based conflicts and mass migrations of populations.431

Farmers must play their role in mitigating the effects of climate change through e.g., carbon storage, green energy production, increase organic farming practices, research and innovation.432

Regenerative is being co-opted by multinational corporations --- (agroecological? there is a social movement aspect to agroecology- where **food sovereignty is central**) comes down to the question of where power lies within the food system. - Indigenous food practices aren't adopted by society as a whole, because of incorporation of the food system - Over subsidized farming in the Global North has caused the loss of crop-
based resources in the Global South. Modern agriculture has had a drastic impact on local economies and threatened age-old agricultural practices and family farming which, for the most part, is characterized by a symbiotic relationship between people and planet.\textsuperscript{433}

Urgent need to curb the natural habitat degradation for fisheries resources and optimize resource use. Along with climate change, heavy pollution from agricultural land, over-exploitation, and unregulated fishing are the key issues in the fishery habitat degradation. There is need to collectively strengthen awareness and promotion of nature based approach with the active engagement of relevant stakeholders to ensure social, economic and environmental benefits. Identification of highly degraded ecosystems should be undertaken and accordingly, upazila/sub-district or community level fishery ecosystem management plans should be developed and support should be provided to ensure their effective implementation.\textsuperscript{434}

Nature Positive Production: Offer the government review about Agri-Product Negative environmental impacts such as chemicals, slash shifting cultivation.\textsuperscript{435}

With regard to sustainability, the need to better manage natural resources and by-products was discussed, mentioning examples in the sugarcane and poultry sectors. Opportunities to ensure sustainability in production were shown.\textsuperscript{436}

The efficiency in the use of raw materials, the reduction of the water footprint, and the use of by-products that are generated in the farms, as an organic amendment for the fertilization of soils, together with the use of renewable energies, are essential tools. The development of new technologies, within the framework of precision agriculture and livestock, will allow further progress in this objective. This technological progress, together with the awareness of the agri-food sector as a whole, guarantees the objective of achieving a neutral climate impact by 2050, in line with the provisions of the European Green Deal\textsuperscript{437}

The incorporation of new technologies is facilitating the inclusion of women in livestock farms. In addition, farmers and professionals in the agri-food sector in Spain are increasingly more specialized in their work and are committed and involved in the fight against Climate Change.\textsuperscript{438}

Cogeneration energy from sugarcane bagasse used for own consumption and also for supplying the market and, more recently, the beginning of biogas projects that will use vinasse and other sugarcane by-products as the raw material for biogas/biomethane production. The biogas will be then used for clean energy generation while the biomethane as a substitute of diesel in the company’s logistics.\textsuperscript{439}

Renewable energy/biofuels and their positive impact. Carbon credits and locally CBios as a way to monetize/back environmentally friendly investments. Farmers should realize that producing a lot volume thru expanding lands is not interesting for them price wise, meaning that if farmers are able to realize that in record volume moments price trends should be bearish perhaps they would better control their expansion moves\textsuperscript{440}
Focus on climate smart agriculture.\textsuperscript{441}

Ensure that finance programmes focus on resilience and climate adaptation and mitigations.\textsuperscript{442}

Cooking with Seaweed, it was noted that seaweed has a lot of potential as a food source. Seaweed forests are very biodiverse and important for our coastline. Therefore, we need to first look at how we can have a precautionary and sensitive approach to cooking with seaweed before we exploit it for the market.\textsuperscript{443}

Seaweed mapping can be carried out through Spatial Analysis carried out in macro scale where the whole coastline is documented bit by bit and they can be stitched together to create high resolution images.\textsuperscript{444}

On the Nature and Resilience Tracks, the National Dialogue also agreed to employ new climate smart farming technologies with the active leadership of the Agriculture and the technical and financial support of the Global Green Growth Institute and with the active involvement of NGOs.\textsuperscript{445}

The harsh atoll conditions of the islands in Kiribati - compounded with the impacts of climate change would benefit much from this climate smart techniques after a number of successful trials.\textsuperscript{446}

ADB, EIB, and the Green Climate Fund (GCF) have initiated a collaborative, multisectoral, and transdisciplinary approach in Mongolia to promote green growth, including the livestock sector.\textsuperscript{447}

Climate Adaptation and Mitigation in Atoll countries\textsuperscript{448}

Islanders must identify local knowledge and methods that can be upskilled or enhanced to combat the impacts of climate change, food security, and the COVID-19 pandemic.\textsuperscript{449}

Organise independent payable grass roots advise and develop new tools to help farmers to understand the impact of their practices on climate, environment, health.\textsuperscript{450}

Promote digital agriculture and economy, organic production, climate-smart production, and agroforestry models.\textsuperscript{451}

Further, there is need for more capacity building for young farmers, need to begin conserving the indigenous seeds for better productivity, we should adopt proper disposal/ reuse/ recycling of plastic waste and push for reforestation and tree planting for improved ecosystems.\textsuperscript{452}

Decrease the number of vessels and hours at sea and polluting emissions.\textsuperscript{453}

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.\textsuperscript{454}

Environmental sustainability involves the system as a whole—to ensure that no harm is being done to the environment. This can be achieved by ensuring the food system is low waste and that individual daily habits demonstrate sustainable practices. 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.\textsuperscript{455}

Improve farmers’ resilience by investing in adaptive and mitigation needs to climate change\textsuperscript{456}

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.\textsuperscript{457}

Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how ‘old’ concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems.\textsuperscript{458}

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.\textsuperscript{459}

State Governments, large and small agricultural organisations, businesses and civil society organisations need to do more to mitigate and adapt to the negative impacts of climate change which have been brought about, in part, by the increase in large scale farming. Particularly, when it comes to the automation of what once used to be human inputs and an ever increasing reliance upon the mass use of fertilisers and pesticides. 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.\textsuperscript{460}

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.461

Improved selection and crop variety for farmers is essential for adapting to climate change and rainfall variability in the coming years. • On one side it will be pivotal to select a wide variety of crops, whereas on the other side it is crucial to use native species whenever trying to apply Sustainable Agricultural Intensification to avoid invasive species.462

Specific environmentally sustainable practices and technologies can be applied and in the local food chain: • Intercropping – many options are to be explored, also by mixing cropping and intercropping to deal with climate stress and pest and diseases. One clear option is to work on what it is known to be already successful and very effective. One example is the push-and-pull technology, that is known to be successful and effective. • Use of local, accessible and already existing materials to reduce the use of chemical fertilizers, to increase nutrient cycling at farm and household level and recycling of crop residues. One example is to employ domestic and animal waste.463

The nation needs to widely adopt modern methods of agriculture such as climate smart agriculture as a means of increasing productivity, enhancing yields and reducing carbon emissions.464

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 opportunities for farmers to create revenue streams through both nature protection and restoration is critical in supporting a future sustainable system.465

Without a market for things like manure byproducts or carbon credits farmers and ranchers operating on thin margins will not be able to implement mitigation strategies which inevitably will raise their costs. It is incumbent on the developed world to bring climate-smart solutions to the developing world, which is seeing the largest increases in meat and dairy production, if we are to meaningfully reduce greenhouse gas emissions from this sector.466

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.  

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.

Every farmer or rancher is capable of employing a climate smart practice, such as no-till, conservation tillage, cover crops, diversified annual crop rotations, variable rate fertilizer application, maximizing feed efficiency, range management, etc.

Finally, the group considered the fact that family agriculture was the best point of entry for the optimal management of natural resources and protection of the environment while promoting the adoption of good agricultural practices, of crops that are not demanding (in water and inputs), and crops that are adapted to climate change; among the models to be promoted, organic agriculture which is less demanding of chemical products and thus less dangerous for the ecosystem, and permaculture.

Take drastic measures to save natural resources, in particular water resources: there is no more time for diagnostics, and the participants insisted on the urgency of promoting this type of measures and technologies which respect the environment and which can adapt to climate change, which are in fact already known and used in certain regions of Tunisia, but are not sufficiently promoted.

Peru prioritized actions to reduce waste: • Introduce rewards and penalties for points of sale (in particular large supermarkets) for food wastage due to expiration or improper storage conditions. • Organize waste collection for the production of organic fertilizers that return to production. • Use of urban food and crop waste to produce organic fertilizers, reducing health and fire hazards. - Boost environmentally-friendly production.

What actions should be disseminated beyond the Summit? Margarita: Take these events to a national level; people do not know about the Summit; many farmers' organizations contribute to increasing the political vision, disseminate it in the media. Family Farming NGOs in each country should promote reflection. Jerónimo, SPP Small Farmers Network: Promote methods of cultivation and consumption, unite the efforts of the organic and agroecological movement; there are common points. On a small scale, there is collective strength, horizontality, and dialogue.

Continue to work on promoting conservation, efficient water use and water shortage management as well as the access to and sustainable management of this resource. This under the context of increasing frequency and intensity of droughts, floods, saline intrusion and other threats exacerbated by climate change.

Create a balance of intensive crops that degrade soil and require intensive maintenance and resources, these also produce loss of biodiversity.
Strengthen and make affordable technology programs for clean and competitive production, especially for small and medium-scale producers.\textsuperscript{476}

Food gardens are an important component.\textsuperscript{477}

Displaced people during Covid started food gardens successfully. Look at foods that are lacking in the diets such as fresh fruits and vegetables.\textsuperscript{478}

Participants in the Environment group highlighted urban farming initiatives as one of the ways to support availability and access to healthy food for the communities. The local government needs to regulate the use of vacant land for this purpose.\textsuperscript{479}

Practices such as beekeeping, community gardens, no till agriculture, indigenous agriculture practices, agro forestry rainwater harvesting, stormwater management and mitigation Utilize contract farming/sustainable procurement as means of reducing food loss, reducing carbon footprints and having farmers know exactly what varieties of crops to grow.\textsuperscript{480}

Developing targeted and tailored education programmes for all age groups and communities is seen as critical to ensuring that all stakeholders are aware of sustainable practices. In our community we can take action by educating and creating awareness, encouraging persons to plant and also by setting up community gardens, backyard gardens, expanding school gardens, community food hubs and community based slow food restaurants. Slow food restaurants can be a niche for eco tourism communities that actively promote on organic and regenerative principles on a community scale.\textsuperscript{481}

Food gardens should be encouraged in communities, government offices, schools and university campuses along with education about local food through planting, harvesting, and cooking together.\textsuperscript{482}

Community gardens - this is a type of outdoor community center, a place for physical activity, a meeting for the elderly, etc. if we could turn these areas to be more productive and produce local agriculture, it can help reduce nutritional insecurity especially in low-income neighborhoods. This should happen without taking on the community nature of the garden\textsuperscript{483}

Social campaign from bottom up. For example - the olive harvest season as a family experience, more community gardens. 5. Integration of local councils.\textsuperscript{484}

let the kids know how we grow food, what happens in the field, what is healthy, fresh, local, seasonal; what foods we import; how we ensure versatile, balanced diets; organise school gardens and cooking classes; encourage talking about food, promote bidirectional intergenerational learning; encourage people to cook for each other, to shop for food together, to share excess food within community, to jointly prevent food waste; organise communal gardens and cooking classes\textsuperscript{485}
It is essential to improve communities’ knowledge of good growing and nutritional practices through well-established programs as well as train women and youth in various agricultural business sectors such as vegetable gardens and livestock.486

Encourage establishment of urban gardens so that the inhabitants of Mérida have access to local and seasonal products, and know about them.487

Americans should be more involved with food production through community gardens to reduce distance from production to consumption. This includes participation by schools and universities to engage students, since significant lifetime consequences of poor nutrition emerge at a young age, and local governments/organizations should find ways to compensate individuals for working in these gardens. Involving schools and afterschool programs would have the added benefit of teaching children about nutrition. Community gardens place food agency for improved nutrition in the hands of those who are food insecure or cannot access preferred foods like fresh fruits and vegetables. These efforts draw on existing community and nonprofit institutions and promote ownership and pride in work through cultivation. Funding sources may be local and state government and it is important to emphasize the need to adequately compensate community members for their efforts and labor in the community garden. At the local level, each community garden can be tailored to the local community in terms of food types, type of engagement, funding mechanisms and access. The community garden will be completely run by community members themselves. An example of success is Cultivate Charlottesville, a local food justice organization in Virginia working towards food equity through community-engaged gardens. Implementing this approach at a large-scale will take time and a benchmark of quality common to all is needed to ensure gardens meet community needs. A mechanism (such as an annual assessment needed for funding) would ensure that each community garden is performing to a set standard. This intervention may employ metrics quantifying both food available locally to community members from these community gardens as well as the level of engagement community members exhibit towards those places. The latter will be more challenging to measure but qualitative case studies and focus groups can illuminate any cultural shift that may occur because of the community gardens.488

There is a need to invest in low-cost solutions such as kitchen gardens and backyard gardens, as home gardens can supply non-staple foods489

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 gardens490

Household level gardens, kitchen gardens, chickens and goats to diversity food system o County could provide more support with ground work policy implementation: e.g. extension491

Some years ago, people in Cagayan de Oro started with communal gardens. It is very important to have these examples so the youth can engage and take up the demanding issues because this is the challenge of the youth.492
...including home garden production of nutritious food, nutrition-sensitive aquaculture, developing recipes based on locally available foods, improving infrastructure and market access.\(^{493}\)

Go back to ancestral plant tradition and everyone should have a home garden / orchard: learning by doing.\(^{494}\)

Transform vacant land into community garden\(^{495}\)

identify food deserts, increase the number of community gardens and on-site farms at community facilities, bring food market to the people, increase policy support of urban agriculture.\(^{496}\)

Observing the mind-set of people on how they feel about community gardens by talking to people or engaging in focus groups in various communities. This will provide important insight into whether or not these actions are being successful or not.\(^{497}\)

It was also suggested that these lessons be accompanied by the creation of gardens, as a practical application of the course material.\(^{498}\)

Finally, home gardens and livestock farming, linking to markets for surplus trading to enhance access to foods, and the language and positioning of the issue of hunger were all identified as areas for impact.\(^{499}\)

Raising crop production by vegetable garden at the homestead areas and the rooftop through conducting awareness campaigns using social media and small financial support\(^{500}\)

Importance of community gardens in rural and urban areas: We agreed that community gardens are an important step towards creating the collective resources and food growing spaces we need going forward. These community gardens are important in urban areas as well as rural areas alike. They create opportunities for intergenerational knowledge sharing, learning, while improving the access and quality of local food sources.\(^{501}\)

Community gardens\(^{502}\)

Vertical agriculture\(^{503}\)

The Mayor of AMA offered a great provocation: “Imagine the rooftop of the City Hall at the Metropolitan Assembly converted into a lively rooftop garden growing organic vegetables. We can if we put our minds to it. We can make intensive backyard gardening especially of vegetables and fruits more attractive and accessible to city residents. Importantly, the context of digitization needs to be discussed and promoted by government.”\(^{504}\)

Rooftop gardening, home gardening as well as other forms of intensive urban agriculture should be institutionalised and promoted across the city of Accra. Intensive
system for livestock (grasslands - identify suitable spaces within city) - ditto for aquaculture

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 value chain activities to ensure women participation and to increase their adaptive capacity to adequately respond to climate change challenges.

Home gardens are key to sustaining ethnic cuisines: Home gardens can improve access to food in marginalized areas, and can ensure household food security. Home and kitchen gardens may not be new ideas but they need greater recognition and dedicated support from governments. Home gardens are not only repositories of daily food ingredients, but also of local seeds and genetic resources. They can also serve as spaces to experiment on future food crops, and to diversify local culinary knowledge.

Home gardens must be promoted at the household level as they serve as a reservoir of diverse ingredients for ethnic cuisines, as local seed banks and a ready source of safe and nutritious food. The diversified crops, plants, and livestock in home gardens are crucial and accessible resources for providing year-round food supply for the household, and surplus which can bring income to the family, thereby supplementing the livelihoods of poor rural households.

Vertical farming as a new frontier. Shifting away from conventional horizontal farming to maximise efficiency of food production for the global population.

Food production: Support and encourage food production within urban communities and with traditional peoples to ensure access to healthful food in various territories. This can be achieved through the installation of organic community gardens in the periphery, and stimulated by keen budgeting, thus ensuring the continuity of existing production, credit for small producers, and the flow of communication between city and country. Donation of inputs, tools, and work equipment for farmers

Food is a basic right - access, grow, and share their food; public gardens and use public spaces (community gardens and space, indoor production; opportunity to get municipal government involved) Many first nations are without accessible and appropriate food

Promote gardening

...to address the lack of intersectional food systems education in the Canadian school systems, it is crucial to set a curriculum surrounding food literacy and opportunities in the food system. It is also important to provide students with experiences out on the land to build an appreciation for nature and the food system through school gardens or access to urban farms.
In many countries in Africa, malnutrition and obesity lives side by side. This is a direct result of urbanisation and the glamorisation of fast food. In these countries, effort needs to be made to eliminate the stigma around growing your own food so that is no longer seen as poverty but community initiatives could come together to create urban gardens and remove the stigma. Chefs can play a major role in removing this stigma and teaching people how to cook with indigenous varieties of crops.514

Smaller structures and shorter supply chains help to avoid food waste. Smaller stores have better possibilities to manage their food supply and create less food waste overall. Moreover, shorter supply chains lead to less waste creation. In that sense, it is not only important to watch out for regional but also for seasonal food. Food grown in the season is also tastier and provides people with additional health benefits. Zero Waste stores, farmers’ markets and small organic stores, but also other alternative forms of purchasing food e.g. SOLAWI and growing own food in gardens are found to have beneficial effects for food waste reduction. Every consumer can do his/her part here: Informing themselves about local fruits and vegetables and establishing alternative purchasing habits.515

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. If we can find a market for mitigation solutions farmers and ranchers will adopt them516

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.517

Boost environmentally-friendly production. Priority was given to tools [instruments] to quality food production by FFs, and to advance systems that reduce gas emissions, increase carbon sequestration, and/or that are useful in protecting valuable ecosystems: • Non-returnable [financial] support for co-innovations by FFs and research institutes to expand biologically, environmentally and economically sustainable production systems. • Train extensionists in practices needed to move from current to proposed production systems, favorably influencing factors related to climate change. • Subsidized investment loans and working capital for the transition from conventional to agroecological systems. • Ensure that FFs have access to quality seeds, based on the collection, selection and genetic improvement of native seeds. • Promote local consumption of agroecological FF products (short distribution channels, internet sales, public procurement, gastronomy sector), avoiding unnecessary transportation.518

Provide support for coastal communities to take measures for resilience, adaptation and developing new techniques in order to cope with the rise in sea levels and saline intrusion. In addition, initiate the development of voluntary technical guidelines to facilitate rapid adoption of best practices that will help fishermen, fish farmers and coastal communities adapt to the warming of the ocean.519
Leading farmers have been on the regenerative bandwagon for decades, using no-till methods and cover crops; finding ways to reuse “waste” with biodigesters and gas lines for energy from manure; using hulls from one crop to mulch another; and more-effective irrigation, among other practices.\textsuperscript{520}

As in grains and livestock, specialty-crop farmers have for years been adopting nature-positive practices – though the change often has been as much for economic and environmental reasons (which underscores the argument that regenerative farming is not an economic burden).\textsuperscript{521}

Banks should aim to commit a significant portion of their loan books to regenerative agriculture.\textsuperscript{522}

In addition, there was also a call for policy that directly and comprehensively incentivizes organic, regenerative and agroecological farming along the land sharing model (making the whole area of the farm good for biodiversity, not just the margins).\textsuperscript{523}

Similarly, regenerative agricultural initiatives should also include consideration of local communities.\textsuperscript{524}

Scientific evidence and documentation of regenerative production practices are essential to facilitating this shift in policymaking and governance.\textsuperscript{525}

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.\textsuperscript{526}

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.\textsuperscript{527}

The participants then discussed the benefits of knowledge intensive and regenerative agriculture. This kind of agriculture encourages carbon sequestration, which in turn increases the groundwater table (for every gram of carbon sequestered, the soil can hold 8 grams more water). Regenerative agriculture also improves the soil microbiome. These can lead to greater resilience of farming to climate change and also decrease the chance of zoonosis like Covid-19. The practicabilities of promoting and implementing regenerative agriculture were then discussed. 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. It was also necessary to empower communities and facilitate development that spreads from farmer to farmer. Women’s SHGs and farmers could be considered as the unit of knowledge transfer. Universities could be enlisted to provide financial and capacity building training to these communities. The idea that
farming is a business that has to provide financial as well as ecological returns should be mainstreamed.\textsuperscript{528}

In meeting the aim of Boosting Nature-Positive Food Production, respective Government agencies have responsibilities of providing farmers with biofortified crop seeds and adequate training to boost production of farm outputs as well as incentivizing regenerative food production.\textsuperscript{529}

Additionally, training these actors to adopt regenerative and circular practices as economic, social and environmental preparedness to future shocks and vulnerabilities.\textsuperscript{530}

Educating consumers on the meaning, value and benefit of proposed organic/regenerative certifications and healthier food choices are critical to sustaining a demand and market for high quality, safety and sustainably grown nature positive food.\textsuperscript{531}

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.\textsuperscript{532}

Design market and policy systems to enable farmers to adopt soil health through ecological and regenerative practices on farms\textsuperscript{533}

Create accountability for land stewardship through consumer tax programs that invest in regenerative land practices (ie a public utility model to develop agroecological practices that benefit the ecosystem in and around developed areas).\textsuperscript{534}

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. It would be critical to address need to reduce emissions, the need to address soil health, food and to assure that waste is managed in a more regenerative, sustainable and appropriate way.\textsuperscript{535}

Food waste provides many opportunities for circularity and should also be a focus of investment A significant emphasis should be placed on regenerative agriculture techniques, agro forestry and generating the data on the carbon sequestered from trees in agroforestry projects that promote the reforestation of indigenous trees and the conservation of indigenous species and biodiversity.\textsuperscript{536}

A move to nature-based solutions will require efforts to achieve zero emissions, regenerative agriculture, and emphasis on a circular bio-economy while maintaining economic viability.\textsuperscript{537}

\textbf{NATURE POSITIVE A move to Nature based solutions will require the following: efforts to achieve Zero emissions; regenerative agriculture; and emphasis on a circular bioeconomy while maintaining economic viability.}\textsuperscript{538}
She also underscored the critical need to scale up integrative regenerative practices that restore habitat and protect biodiversity while reducing greenhouse gas emissions (GHG).\textsuperscript{539}

One participant shared that sustainability might be an outdated term, and that regeneration is a better term to be using since regenerative systems deliver economic value for the farmer and for society.\textsuperscript{540}

Overall, across all breakout groups, there was consistent agreement that food system transformation needs to deliver healthy and sustainable foods, embrace responsible (and regenerative) production methods, and encompass equity and social justice to address the most vulnerable among us.\textsuperscript{541}

Promoting soil health and carbons sequestration through regenerative practices can address these boundaries.\textsuperscript{542}

Promotion of soil health and stability through regenerative practices.\textsuperscript{543}

There is a need to produce food that supports regenerative growth and holistic biodiversity support.\textsuperscript{544}

These range from emissions of greenhouse gases from ruminant animals where improving production efficiencies (emissions per unit of product) is paramount in most LMICs, to opportunities for carbon sequestration and biodiversity conservation across the world’s vast rangelands, to opportunities for regenerative agriculture approaches based on livestock management.\textsuperscript{545}

Among the 2030 outcomes for the sector were: healthier, more productive, and well cared for animals; reducing carbon emissions from livestock; quality over quantity; improve productivity, efficiency, sustainability, and resilience of the livestock sector; moving to regenerative farming; change the negative image of the sector\textsuperscript{546}

The role of the consumer is fundamental to understand that a seasonal product is seasonal, innovation while duly regulated is good, regenerative agriculture is the future, monoculture is damaging etc.\textsuperscript{547}

Manufacturers need to deliver according to what the regulatory environment allows, ensuring less packaging, regenerative agriculture, UN SDG goals oRegulators need to continue helping enabling operators to act, but innovation runs very fast.\textsuperscript{548}

Young people are encouraged to start-up the practice of regenerative farming as a means of boosting nature-positive production. It can be started at a low-scale and scale-up in a manner that manages, protects and sustain the natural ecosystem. For instance, through green house and home gardening\textsuperscript{549}

Solutions: do unexpected (wild) changes with existing cultural and productive models, recuperate institutional capacity (specifically within social and human capital, trained, qualified), investment in watering resources, accessible financial aspects, diversify
agricultural (agropecuario) production and consumption (keeping an wary eye on animal protein). Promote regenerative agriculture to recuperate soil fertility.\textsuperscript{550}

Create community education projects for homes and community spaces on the importance of small gardens, water storage and management and regenerative techniques that strengthen food resilience + nutrition.\textsuperscript{551}

Improve community and industry education to train towards regenerative practices and bicultural foods systems.\textsuperscript{552}

Farmer participants noted concern with singular, prescriptive approaches, such as agroecology and regenerative agriculture, and their applicability to a Canadian context. For value-added, innovation can drive increased productivity in Canada’s food supply (robotics) and address labour shortages. For consumers, clarity in labelling and improvements in packaging to support sustainable consumption (recycling, extends shelf life, portion sizes).\textsuperscript{553}

To address these issues, the group discussed increasing the uptake of regenerative agriculture practice so practice not just mitigates impact but also aims to restore nature.\textsuperscript{554}

In some cases, nature positive production can even contribute to climate change mitigation efforts (e.g., regenerative aquaculture; enriched agricultural soil; etc.).\textsuperscript{555}

Sustainable nutrition should support food safety, observe social impacts, reduce climate impacts, implement regenerative agriculture and circular solutions. Actions must be global and not only local, as the supply chains generate effects in planetary scale.\textsuperscript{556}

Regenerative management practices result in improved soil health, greater water holding capacity and increased plant growth, increasing human food availability in harmony with increased biodiversity and system resilience.\textsuperscript{557}

Delivers soil improvement, fertility and health through regenerative management practices which imitate previous wild livestock systems where large herds moved across a landscape.\textsuperscript{558}

Explore ways and opportunities available in climate smart agriculture particularly in Regenerative Agriculture and Agroforestry.\textsuperscript{559}

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.\textsuperscript{560}

It was recognized that soil is the foundation of healthy ecosystems and food production systems. Improving soil health, which affects biodiversity, leads to healthy food and healthy people. Therefore, soil degradation must be approached as the foundation for
building healthy food systems. The view must be systemic: Without healthy ecosystems, we don’t have healthy people.\textsuperscript{561}

The importance of technical and financial assistance to transition land towards regenerative practices. The panel, including a farm owner, shared their experiences with consultancy and digital education efforts funded by state (e.g. Pennsylvania) or national governments for farmland transition programs that current land grant universities are not serving. Iroquois Valley Farmland REIT also discussed their work offering mortgages and lines of credit from 600 investors towards transitioning farmland across the US.\textsuperscript{562}

Connecting regenerative agriculture and organic agriculture with institutional health care. Some of the worst food in the world is presented at healthcare facilities, but people don’t understand the true scale of the sector. This includes hospitals, senior care facilities, long term care facilities, and community based food services (e.g. meals on wheels) that have not contributed to the human body with true nutrition towards some of the most vulnerable population. It is a $16b marketplace almost entirely serviced with conventional food, with 40% of this spend on animal protein. 2. The increasing connection between nutrition and the wider medical field because of the pandemic. Antibiotic free, chemical free, higher nutrient density, anti-inflammatory is what is needed. The public policy piece will follow what the medical community wants, as medicine can be a push for some bi-partisan areas.\textsuperscript{563}

Regeneration of oceans is a key component in scaling sustainable Blue Food\textsuperscript{564}

Making town more resilient by strengthening links with local producers - eg, ‘food festival’ event, local produce market, link surplus to distribution hub, website and social media promotion, online sales platform to raise awareness. Integrate regenerative local food producers/processors/distributors/retailers into a local monetary system with built-in rewards for regenerative practices.\textsuperscript{565}

Companies must commit with Regenerative practices and Governments must provide access to transition finance and support the scalability of projects. Blended-finance instruments can facilitate the transition and scale up.\textsuperscript{566}

For a successful business case for regenerative agriculture, it is essential to bring together knowledge about farming, ecology, communications, technology and finance.\textsuperscript{567}

...one major outcome was the need to focus on long-term vision, as well as a shift in mindset and behaviour from the entire food value chain to enable the transition towards regenerative agriculture.\textsuperscript{568}

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.\textsuperscript{569}
Connections are paramount, between and within sectors. Conversations need to build the bridge between nutrition science and regenerative agriculture. Peru prioritized actions to reduce waste: • Introduce rewards and penalties for points of sale (in particular large supermarkets) for food wastage due to expiration or improper storage conditions. • Organize waste collection for the production of organic fertilizers that return to production. • Use of urban food and crop waste to produce organic fertilizers, reducing health and fire hazards. - Boost environmentally-friendly production.

Develop waste collection to be used in the production of organic fertilizers that return to production quickly and efficiently. - In the countryside we are experienced in using stubble as an input for organic fertilizers, compost, bokashi and biopreparations. - In the forest, the concern is with fruit trees that are wasted. We would like to have pulpers, which would reduce losses, and use the peels to make essential oils. - Training and raising awareness in order to eradicate the burning of stubble and dry

Ecosystems
The presence and importance of ecosystems services (carbon market) need to be clarified and emphasized more in food systems. Considering ecosystem services is crucial in Latin America due to its vast diversity of ecosystems.

Conserve natural ecosystems. Reduce greenhouse gas emissions.

It’s not about smallholders only (self-subsistence or emerging or exporting), but it’s about the ECOSYSTEM with and around them, including SMEs, the mom and pop stores, producer organizations, and cooperatives. • The Profit we need with business models and business cases, and the need to address this ECOSYSTEM with technology, leapfrog smallholders to the innovation potential with digitization and new financial solutions such as carbon credits as the new currency • The Planet we need to have benefit from new nature impact solutions by connecting the smallholder ECOSYSTEM to agroforestry projects or nutritious production such as fruit trees or cold chain solutions in the ecosystem with less food loss & waste.

In some cases, it should be possible to take advantage of regional integration and diverse eco-systems, through a move to specialisation tailored to specific agro-zones (e.g. production of cattle in arid areas).

Training and development agencies can support capacity development through knowledge exchange, training and upskilling/reskilling. The development of ‘community ecosystems’ were seen as an important step, as well as the promotion of innovation and good practice through case studies.

Demand for ecosystem services should be supported: this will provide an income without intensification of agricultural production. Another critical element is the adaption of outputs to land capacity.
We need to demystify the sector and the innovation that is happening, allow people to see and understand it. Bring policy-makers to the innovators. Building National and Regional Innovation Ecosystems There must be a policy environment that enables innovation to come to forefront and government/institutional leadership. Therefore, it is suggested that in the next few years a starting point for enhancing the living systems that support our societies and economies can be the restoration, protection, and prioritization of ecosystems and their services, such as the conservation of major water resource areas.

To ensure impact at scale, specialized people need support and work closely with the local ecosystem to create trust and get them to take the last mile, such as financial intermediaries, regional and local banks. Those are the ones supporting small-scale farmers and have trust within.

The Earth should no longer be ignored as a stakeholder within decision making and include the benefits of an investment to the planet as a return. Valuation of ecosystem services provided by the Earth can enable us to put the Earth as a stakeholder on the negotiating table.

Production and scaling up: Better capture the ecosystem services seaweed provides; manage tensions between scaling up and challenges such as environmental and food safety; and involve producers more equitably.

Treatment, recycling, and reuse of wastewater using the decentralized approach thus protecting vital ecosystem.

It is necessary to raise the status of protected areas of groundwater deposits, groundwater monitoring should become part of ecosystem management.

For youth, boosting nature-positive production can be started at a low-scale and scale up in a manner that manages, protects and sustain the natural ecosystem. Young people are encouraged to start-up the practice of regenerative farming as a means of boosting nature-positive production. It can be started at a low-scale and scale-up in a manner that manages, protects and sustain the natural ecosystem. For instance, through green house and home gardening.

Food is very connected to health, so need a systemic view of forest and the healthcare of people and ecosystem as a whole. With forest standing, will have water and less carbon and diversity of food and culture.

Restoring degraded land and protecting ecosystems while connecting farmers to markets produces better social, economic, and ecological outcomes. Ecosystems for regional and sub-regional research and development, with the potential to push technologies beyond borders and support strong regional agricultural value chains.
The development of a strong and structured ecosystem of fresh food actors that can ensure availability of produce on a regular basis is key to achieve these goals. Increase investments to ecosystems restoration recognising its importance in building sustainable food systems among local communities particularly of indigenous communities and pastoralists.

Trade Resilient Ecosystems. A trade resilient ecosystem will provide predictable rules to manage disruptions from external market shocks and to safeguard our food systems from instability.

Expand management "lens" and jurisdictions to encompass the whole food system – Look at production on a watershed scale, for example. And remember that humans are part of the ecosystem and must also be part of ecosystem management.

Ecosystem-based management should be prioritized and catalyzed to build system resilience.

Providing financial incentives to farmers for sustainable outcomes, including ecosystem service payments, carbon payments, payments for improving practices.

Sustainable agroecosystems depend on sustainable productivity.

The government must empower local communities to work on their own food systems.

Value ecosystem services and count food in terms of micronutrients that are critical to vulnerable communities.

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.

While these may be implemented on frequent bases, the results would be a solid view and resolution by the stakeholders on the food system they want that is perceived to be profitable for all and also addressing issues of environmental safety.

River ecosystems must be monitored for agricultural pollution and managed more sustainably.

Introducing stringent laws to hinder disposal of fertilisers and pesticides in water bodies by agro-industries and farmers.

Introduction of policies and constant follow-up on agri-companies/food producers to control the usage of agro-chemicals in their production. (Similarly, farmers growing vegetables like watercress that are grown in water bodies, should be careful while using pesticides to control caterpillars).
Ensure that animals (in this case, marine animals) bred for consumption are still part of an ecosystem. Particularly, how does the production of animal feed as a monoculture fit in with the principles as above?

The need of a shift towards blue, green and circular economy was raised as a priority to tackle these challenges through an integrated ecosystems approach and coordinated collaborative regional solutions, taking into account country specificities.

Stop biopiracy; biodiversity and ecosystems destruction; stop dumping/unnecessary food imports; stop land grabbing and development aggression; oppose suppression of legitimate social movements.

By considering seaweed ecosystems as rich, diverse ecosystems, similar to land forests, and treating them as such.

An ideal way of going about mapping seaweed forests and tidepools would be an interdisciplinary mapping process of the tidal ecosystem using tech, ecologists, social scientists etc.

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.

The main outcomes came out as the need to capitalize on and accelerate what already exists, and that eco-schemes are a first move towards change.

Apply ecosystem approach on small scale production.

Land use planning with attention to urban-rural linkages to address urbanization, promote nature-based urbanization and reframe urban-rural linkages with nature-based interfaces.

Regeneration of degraded eco-systems and provision of environmental services.

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

Promotion of seafood consumption diversification - dissemination of less consumed species accompanied by cooking demonstrations.

Focus demand on the most productive systems and promote resilience to external factors.

Training & extension should focus on the coexistence of conventional and agroecology knowledge.

Community can also play a key role in this; encouraging everyone to be active members in their food system and use their voices for change. Schools could be at the centre of

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606 247:18 p 9 in 480_June_21_21_CIHEAM_Mult...
607 253:5 p 7 in 486_June_21_21_AFA_Multi...
608 267:34 p 8 in 500_June_26_21_Edible Issues
609 267:48 p 10 in 500_June_26_21_Edible Issues
610 269:21 p 6 in 502_June_28_21_Zhang_Basher
611 276:58 p 11 in 509_June_30_21_FFA_Nestlé
612 280:52 p 9 in 513_July_01_21_Weise_S...
613 302:41 p 9 in 535_July_08_UNESCO Chair on Food
614 302:43 p 9 in 535_July_08_UNESCO Chair on Food
615 304:42 p 8 in 537_July_08_21_ANP_WWF
616 304:48 p 9 in 537_July_08_21_ANP_WWF
617 308:8 p 8 in 541_July_12_21_AEHT

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urban growing initiatives (example given in discussion topic 2) in support of their community and vice versa. We need to be a part of nature’s ecosystem again and show children how to be part of that ecosystem rather than detached from it.619

Not only can Chefs play a key role in school ecosystems but they are also key in communicating what good, whole food is and how we can cook it and make it taste good.620

Identified priority areas for research and development are dependent on landscape and climatic conditions. These include the development of lower cost and scale-neutral stress tolerant rice varieties, improving rice-fish systems and polder farming, and the establishment of climate smart villages. It was also suggested that promising new technologies must be made readily available in the public domain.621

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.622

Participants agreed that policy needs to catch up to forward-thinking companies’ ambitions and the scientific consensus as to the impact of the current global food system on planetary and human health. 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. By supporting and scaling regenerative supply chains, farmers can make a living wage while companies gain better access to healthy ingredients and these products are accessible to all consumers. 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.623

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.624

Environment sustainability is an important part of the discussion on food systems. One important feature is to avoid monoculture in agriculture, which endanger the sustainability of production. There were debates over whether plant-based production might encourage greater monoculture, however there are ways to mitigate that.625

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.\textsuperscript{626}

Below are some of the approaches which can be taken to build environment sustainability in food systems. 1. Altering the usual approach to grow monoculture crops. 2. Address large-scale deforestation which are a consequence of large-scale planting of commercial crops.\textsuperscript{627}

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 different realities, both in terms of the agroecological and the socioeconomic conditions in which they operate. Therefore, State funded technology and innovation are essential particularly when it comes to helping small farmers grow more sustainable produce and/or reducing their food loss and waste.\textsuperscript{628}

Ultimately climate neutrality for the sectors cannot happen without policy and markets for carbon. Programs that allow farmers to sell the energy they make from tools such as dairy biodigesters back to the grid can make the investment in the technology worth the cost. Not being able to reverse meter is a big policy roadblock. And it is not just emissions that degrade the environment and offer a market to be sold as credits. California has credits for things like phosphorus which affect water quality. Ultimately we need engagement from industry and researchers to craft policy that meets both environmental and economic needs. Market limitations on biodigester products is one example of impediments to their widespread adoption. Policy can open up markets making mitigation strategies profitable.\textsuperscript{629}

Food companies, including retailers, must design and manage their packaging to reduce the risk that their packaging materials would leak out of the waste management system into the natural environment, usually ending up in the ocean. Additionally, seafood companies should influence their suppliers to improve their management of fishing gears (or implement recovery program of ghost gear) and waste management aboard fishing vessels.\textsuperscript{630}

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.\textsuperscript{631}

Regarding the importance of the challenges considered, public policies have a fundamental role to play in implementing the incentives and the necessary frameworks
in the long term (authorization to use pesticides and chemical fertilizers, governance and management of natural resources, penalties in case of infractions). It's the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform.

Efficient and conscious use of the resources in the agri-food chain stages is indispensable in guaranteeing the necessary conditions for the food production of future generations. For this, the training of agro-ecological militant groups and a return of the people to the country will have to happen extensively. Ensuring generational overlap in the country with a conception of agro-ecological production is the way to guarantee that food is healthy, nutritious and fairly priced so that everyone has access to it. However, decent living conditions must also be ensured in the country.

We are in the midst of a pandemic causing a serious crisis to the system, so it's time to turn the crisis into an opportunity for the peasant and agroecological production sectors to be at the center of the discussion. It must be made clear that there must be healthy, resilient food and healthy production to overcome the circumstances permeated by the pandemic. It is necessary to accomplish a good local presence in local, national and international spaces. Resilience is only possible if there is food sovereignty and agroecology.

Food sovereignty is a complete strategy of struggle that takes up transcendental and necessary issues for its development, such as access to land, water, and territory through mainstream and integral agrarian reform and agroecology. This will create the resilience necessary to face crises caused by capitalism, the pandemic and post-pandemic.

Create a balance of intensive crops that degrade soil and require intensive maintenance and resources, these also produce loss of biodiversity.

More care to the earth from damage caused by fertilizers and pesticides, biotechnology applications

Automated solutions for the protection of vulnerable crops that are such a large part of Dominican agricultural production.

Promote the use of Biotechnology
Technology and innovation are essential for promoting agricultural development. Better-quality inputs (molecules) that can boost production and take care of our environment should be promoted.\textsuperscript{641}

Africa’s unorthodox structural transformation is also such that there is rapid urbanisation with no manufacturing jobs in the cities. A deeper analysis places the agri-food system at the centre of orthodox structural transformation that pulls in the majority of SFFs and SMEs into industrial processes of mass production, mass processing, and mass consumption of food products and services by a growing rural middle class and bulging urban population. In many regions outside of Africa, agriculture is increasingly organized more like manufacturing – facilitated through technological advances to manipulate and control the production process and its ecosystems. Agricultural commodities produced under different contexts and regimes meet at the local market places – often resulting in displacements of less-competitive products and systems. In the face of large and rising food imports, African local products are often on the displacement side of the equation.\textsuperscript{642}

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.\textsuperscript{643}

The role of youth should be to maintain conservation techniques, transfer them and link them to innovation in food production. Understanding how young people can recover the soil and strengthen natural resources and recover ecosystems through the search for sustainability. Young people as innovation managers due to their level of education, more literacy in rural areas. This requires public and/or private investment and advocacy: there is a political resistance to consider the participation of young people in general and rural youth in particular.\textsuperscript{644}

Packaging

Clear, user friendly food labelling and credible marketing claims\textsuperscript{645}

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.646

Provide support for vehicles transporting crops and reduce transportation costs and provide qualified warehouses designated for storage and packaging • Develop local plant varieties and animal breeds to increase production and productivity • Develop post-harvest services through improving packaging, grading, transportation, storage, and manufacturing.647

Product IDs which list the location/environmental impact of a consumable item

Proposed method: Transparent information on packaging ratings to guide decisions in markets/groceries, which encourage climate-smart choices, and reward consumers through financial incentives/rebates.648

Decreasing food waste through a shifting of labeling regulations (ie removing expiration dates in favor of ‘best by’ dates) and leveraging technology to connect organizations as a method to utilize food before it is wasted.649

It is better to take foods from nature and reduce processed food. In addition, education is also needed for food producers to maintain food hygiene and sanitation during food processing to ensure health. 2. An environmentally friendly diet is one that does not have a large carbon footprint. This diet can be achieved by: a. Paying attention to locality, naturalness, and type of product (reduce consumption of animal products, prioritize more carbon-friendly vegetable products). b. Reducing food waste and plastic packaging that is not environmentally friendly c. Guarantee the totality of the full use of food ingredients so that food loss does not occur. d. Processing of kitchen waste in the form of compost and replanting. e. To maintain food sustainability, it is necessary to pay attention to locality. We need to explore food ingredients that are widely developed in our area and diversify food sources. 3. In order for all levels of society to be involved for a diet that takes into account health and is environmentally friendly, education is needed starting from the pre-production, processing, to marketing stages.650

Starting from raw materials with low emissions, the production process from upstream to downstream also needs attention to implement an environmentally friendly process. Transparent production processes are used as one approach towards consumers so that consumers can choose healthy, safe, halal, and sustainable food. Manufacturers also need to increase honesty and responsibility in the production, sales and promotion processes. It is also important to have informative and interactive smart food packaging that is easy to understand, to provide information on nutritional value, product processing flow, and the quality of food ingredients contained in packages such as level of maturity, and product freshness.651

Reliable information - Farm to fork at EU level - giving more information to consumers through labelling. Countries need to work towards an EU standard.652

To governments / policy makers: o to create enabling environments for sustainable production; o to regulate other aspects of the food system, incl. the labelling and marketing of food products; o to harmonise food labelling at international level; o to
ensure policy coherence: producers should be able to rely on a solid and coherent framework, resilient to ... loose trade rules that challenge the level playing field; o to allow adequate time to adjust to new rules, as well as support access to modern technologies.

Use policy tools to encourage plant-rich diets o Public procurement: through campaigns promoting plant-rich diets o Labelling: use nutrition labelling to highlight the health benefits of plant-based products, and sustainability labelling such as carbon labels to highlight the environmental benefits.

Encourage the sale of products in bulk. - Promote the use of alternative and biodegradable packaging.

The leaves can be used as food packaging.

The process from upstream to downstream is very sustainable because traditional food packaging uses banana leaves. So it does not pollute the environment.

The longer the list of ingredients, the less that consumers know what’s in it. Consumers send market signals by what we purchase. There is a need for more consumer literacy and following guidance of the World Health Organization such as on salt content.

Market mountain food as “smart food” due to their not depending on intensive and harmful agricultural inputs. Increase consumers’ awareness and understanding of the importance of mountain products though narrative labels, traditional production certification and organic certification, moving from the “commodity” approach to products with a face, story and heritage.

Empower consumers through education which can impact acceptance of innovation. Science-based education on food and how it is produced is key, particularly targeting consumers (and policymakers), and starting from schools. Empowering consumers from being ‘passive’ to ‘active’, includes better product information. The concept and understanding of food systems is not well understood, and the role of all actors in a value chain (producers, processors, distributors, consumers etc.) needs to be better explained, and a holistic solution sought.

Manufacturers need to deliver according to what the regulatory environment allows, ensuring less packaging, regenerative agriculture, UN SDG goals.

Food labeling

Minimal environmental impact – biodegradable packaging materials using local biological resources; and multi-cropping to regenerate the fertile soil.

The food industry should not do green washing on agricultural products that have an impact on the environment.

Two enabling technologies were identified as important: digital labelling identifying beneficial nutrients in unpackaged/unprocessed foods (particularly those we are

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654 68:75 p 13 in 052_Feb_25_21_EUFIC
655 68:100 p 100 – 104 in 052_Feb_25_21_EUFIC
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657 90:7 p 8 in 174_Mar_20_21_Niode K
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659 93:20 p 6 in 217_May_6_21_Schwartz A
660 100:28 p 9 in 282_May_18_21_Romeo R
661 101:3 p 6 in 285_May_20_21_TFFF_Multi
662 101:27 p 9 in 285_May_20_21_TFFF_Multi
663 102:9 p 8 in 324_May_14_21_Guzanic J
664 105:13 p 11 in 007a_Dec_18_20_NAAGD
665 108:15 p 7 in 004_Nov_30_21_Kustipia R
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deficient in) and nutritional analysis of the entire shopping basket (phone-based app based on scanned produce)\textsuperscript{665}

More sophisticated branding of agricultural products providing consumers with verified information on sustainability aspects, such as energy and water use and the land-use ratio, will also be needed.\textsuperscript{666}

The need for intensifying of public and private partnerships to put forward the agenda through investment across multiple areas and aspects and innovating the ways where the investment is redirected, e.g. packaging etc. is needed.\textsuperscript{667}

Low pack/no pack solutions: shops using no packaging and customers using own recycled materials when shopping in stores.\textsuperscript{668}

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.\textsuperscript{669}

Seaweed also faces a branding challenge, primarily due to the name of the product itself. Changing the name to something more appealing, such as sea vegetable, could facilitate marketing and grow demand for the product. Efforts to address this branding challenge should also highlight food safety and occupational safety for producers.\textsuperscript{670}

Counteract aggressive marketing and promotion through regulations like zoning of locations of fast food establishments, taxation of harmful products, product labelling among others.\textsuperscript{671}

- Need strong promotion among children and adults on nutrition, food safety and effects on health. Provide nutritional information about organic products. Reduce food wastage.\textsuperscript{672}

Problem 5 is the wide availability of appealing “ultra-processed” sugary drinks and snacks, fried street foods, oils and sugar, which people are willing to pay for even when they may be more expensive than more nutritious alternatives. Potential solutions include clearly defining “unhealthy food”, a package of food environment policies, and disincentives for unhealthy food marketing.\textsuperscript{673}

Origin labels - showing where in the forest ingredients come from - are useful.\textsuperscript{674}

Labeling is key to warn and inform the consumer in capital and big letter: eg: high in sugar, fat, salt, etc... so as to promote greater repercussion, reflexing, and awareness. Work with colors to make it more inclusive. Ban the use of animals to get kids attention, too much visual pollution with ads.\textsuperscript{675}

There is still a lot of missing data on food, therefore labelling to enhance consumer decision making. The state of food, a lot of decisions have changed towards processed foods and unhealthy because of the information that media, product and marketing does.\textsuperscript{676}
For consumers, clarity in labelling and improvements in packaging to support sustainable consumption (recycling, extends shelf life, portion sizes).  

Governments should fund and support initiatives to enhance the food and nutrition value of products (e.g., processing and packaging fillets to be ready for the table and to last longer in transit).  

Developing novel end-of-life plastic packaging technology using catalytic hydrothermal reactors that can convert plastic milk bottles into renewable biocrude oil that can then be reused to make plastics in a true circular economy.  

Improving packaging use in processing, e.g. through using recycled sugarcane packaging.  

We need better labelling and classification to give information about the environmental impact of food (e.g. Nutriscore in many European countries for the health impact, but we could do that on the environment as well).  

Exhibitions and awards ceremony for the best companies with an example on organic packaging.  

In addition to these reforms, participants felt that policies should be developed to ensure transparent branding and packaging of foods.  

Potential solutions also include plant-based proteins, certifications, alternatives to packaging, recycling and consumer trust building.  

The focus of the discussion, therefore, was on the proper use and structure of labels.  

Branding, in fact, is an integral part of how the product story is told and received by consumers.  

Incorporate packaging in the food chain.  

Food safety – cold chain, packaging based on the needs of the consumers.  

Build healthy food environments to shape the diets and habits of children and adolescents using evidence-based approaches such as easy to understand front-of-pack labeling or visual cues, restriction on the marketing of unhealthy foods, fiscal policies such as taxation on sugar.  

Mandatory food labeling, including front of pack labeling.  

Consumers play a large role in driving demand and increased transparency in labelling is necessary to aid concise decision making.
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. The ethnic food market can grow through product diversification and proper branding (for example, dog chews made from traditional hard cheese, and cardamom masala from the HKH region). SAARC Business Association of Home Based Workers (SABAH) Nepal has brought together ethnic communities, their food products and cuisines together, contemporized their presentation and promoted these cuisines through enterprises, which not only contributes to the conservation of traditional cuisines and food system knowledge, but also support the livelihoods of small, farm-based women communities. Tourism packages and homestays serving ethnic food can also be an option for livelihood diversification. Ethnic food based enterprises can also help place indigenous communities as important strategic partners in the food value chain, not just as producers of the ingredients. Government-led programmes should also prioritize mechanisms for engaging small farmers and small family-based farming in agribusiness and food-based value chains.

To limit this, there is a need for increased transparency, governance and regulation in marketing/labelling so these can be trusted by consumers. The group also agreed that achieving a sustainable food system cannot rely solely on labels/marketing: it requires a multi-pronged approach from policymakers, regulators, consumer advocacy & education. These are the main solutions identified by the participants: 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. 4. Small-scale farmers should be incentivised or given affordable access to sustainable certification to dismantle barriers between small-scale farmers and consumers.

These centers will also require organized transport to carry goods from farms. These centers should also provide spaces for sorting, cleaning, grading, packaging, and storage in consideration of the strong seasonal nature and diverse quality of production.

Stop storage of food in plastic for long term to avoid chemical transfer. Laws to separate organic food from non-organic using non plastic packaging.

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, ... Organise farmers in Community of Practice; promote the ambassador role of first movers.

Policymakers & Authorities - can help to validate and and add credibility - e.g. through labeling schemes. The important thing here is to allow for experimentation and change, and not to overregulate.
...using innovations and technologies applied across the entire food system including labelling, traceability, food safety, use of risk based approaches, product quality, and e-commerce. A sustainable diet should take into account the use of production and natural resources. Participants identified that plant-based or vegan diets can be beneficial in that alternative proteins require fewer resources to produce (e.g. water, feed, land). There are also options for more sustainable animal proteins, such as pasture-raised cows for beef or accessing alternative low waste protein sources such as crickets. However, there are many challenges to some of these practices. For example, pasture-raised cows are significantly expensive and take up more land than conventional industrial beef farms.

Farmer’s markets and refill stores enhance the reduction of food waste because you can buy the right amount of food. Usually, larger supermarkets do not offer this personalized packaging option. Hence, smaller business structures are needed to help fighting food waste; it also easier for a better management overall. A small organic supermarket was observed to offer less fresh fruits and vegetables, but also to have less food waste overall.

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.

Recycle food packages in order to reduce or prevent land degradation and emission of toxic gasses to the atmosphere.

Food companies, including retailers, must design and manage their packaging to reduce the risk that their packaging materials would leak out of the waste management system into the natural environment, usually ending up in the ocean. Additionally, seafood companies should influence their suppliers to improve their management of fishing gears (or implement recovery program of ghost gear) and waste management aboard fishing vessels.

To also promote regulations and practices that are based on science and evidence. This will encourage prudent and responsible antimicrobial use in food production, within the framework of the One Health approach, which recognizes the interconnection between human, animal, and ecosystem health. Therefore, it is necessary to create healthy environments to mitigate and adapt to climate change.

At the same time that the required collection centers are enabled, train producers on how to improve the storage of products, and manage agreements with the private sector for the use of those that are underutilized. Observe this point. The private sector manages practically all the collection centers in the country. Also define if these centers
exist or will be enabled in the future. Observe the concept "Collection Centers". Consider packing plants for product distribution.\textsuperscript{707}

Plastic
Reducing food waste and plastic packaging that is not environmentally friendly\textsuperscript{708}

Future food should return to the past, for example by using baskets for containers. Instead of using plastic, the use of baskets is more natural and environmentally friendly.\textsuperscript{709}

In terms of community-level action, participants agreed on the need for advocating with governments and big retailers to prioritize local foods, campaigning to eliminate the use of plastics, and prioritizing education surrounding sustainable and nutritious foods at the early childhood level\textsuperscript{710}

Eliminate use of plastic\textsuperscript{711}

Our food system is very vulnerable to risks and shocks. We should set up platforms and interdisciplinary alliances to share information and best practices and look at opportunities to work together\textsuperscript{712}

Single plastic use poses challenges to the food safety and food systems. The uses of plastic needs to be controlled in the farming, packaging, transportation and distribution of foods\textsuperscript{713}

Silage plastic and wrap is a big issue in farm waste management.\textsuperscript{714}

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. Improve infrastructure for roads, energy and markets especially in rural areas where most of the production occurs, is critical in facilitating the transformation of local food systems.\textsuperscript{715}

Production loss
Reduce post-harvest losses and improve food transformation and packaging.\textsuperscript{716}

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.\textsuperscript{717}
The breakout room discussions covered (1) the impact of the long domestic supply chain on prices and food safety, (2) balanced international trade to fulfill domestic consumption, (3) the health and nutritional values of the food circulated in the market, (4) food loss and waste, (5) Equitable food production, (6) Youth and agriculture innovation, (7) Food prices disparity between producers and consumers prices, and (8) inability of policies to respond to challenges of food systems on the ground.\textsuperscript{718}

It was briefly presented the document on visions and commitments for the UN Food Systems Summit, structured in four areas / objectives, co-developed and shared by the main stakeholders of the Italian agri-food system: 1) to reduce agri-food losses in the steps from agricultural production up to distribution; 2) increase the recovery of agro-food surpluses in order to improve the distribution and access to food by all; 3) promote the prevention of food waste at home and outside the home; 4) promoting the adoption of a healthy and sustainable diet, such as MD, accessible to all, especially the poorest sections of the population.\textsuperscript{719}

More must be done to scale up efforts to develop CIRCULAR ECONOMY approaches which promote food security by dealing with food loss and waste. One of the ways to shift the food systems towards sustainability is closing material loops, optimizing recycling opportunities and designing loss and waste out of the system.\textsuperscript{720}

The cause for food loss was directed towards the monoculture approach adopted by farmers, which leads to massive production of a certain crop/cereal that often exceeds the market demand. A further challenge is inadequate storage facilities along the food value chain that results in large food losses.\textsuperscript{721}

There is need for collaboration, partnerships and reducing post-harvest losses.\textsuperscript{722}

Post-harvest loss reduction.\textsuperscript{723}

...the negative impacts of dominant-culture education on the youth, the undervaluing of Indigenous food products in market...\textsuperscript{724}

To have a robust food system, it is necessary to also understand how to optimise the resources available when producing fruits and vegetables, with an additional focus on minimising waste.\textsuperscript{725}

Increase awareness on post-harvest losses\textsuperscript{726}

Protect local food systems from dumping\textsuperscript{727}

In-depth analysis is needed to treat food loss in the field, agricultural depreciation, post-harvest as a critical stage, including legislation to change expiry dates system,
retailer’s chains purchasing systems, and infrastructures designed to detect waste optimize utilizing all products.728

Reduction of Food Waste and Fighting Food Scarcity729

The reduction of food waste and losses are at the cornerstone of building a resilient and sustainable food system in Latin America and to ensure access to diet for all. Yet, the regional food system is bagged down into paradox, consisting of surplus of supply and production, while many livelihoods are still in a situation of food insecurity, further exacerbated with the outbreak of Covid-19. The reduction of food waste is a core strand in the region, and faces many bottlenecks, that require the improvement of governance ins-and-outs and incentives on best practices platforms.730

Lastly, in the third area of reducing food waste, solutions to address food waste should be developed at every level of the supply chain. This requires an integrated approach that tackles at each level the main problems which involves processes and support at both local and national levels.731

Food losses occur in different parts of the food system in different parts of the world. Smooth logistics and market connections are in a key role in reducing food waste in the northern hemisphere and in the south. Harvesting, handling and storage improvements are needed, especially in the south, to reduce losses. Poverty and food insecurity are closely linked.732

Sustainable production and consumption of aquatic foods are an important key to ending poverty and hunger, and to ensure food security and health for all. We must keep our oceans and waters renewable and clean, ensure a variety of aquatic foods and fully use what we harvest, without loss and waste.733

Impact hugely in food systems with a big opportunity: packaging from small and medium businesses with smallholder farmers towards sustainability. - Promote a honest market ecological and without packaging, promote local economy, diversity of production (local superfoods), healthier consumption (fresh, diverse).734

Furthermore, it is essential to reduce food losses and ensure a functioning and fair food value chain735

To minimize food loses we need to make use as a raw materials; for e.g., using the skin of onion to extract pectin736

Better managing waste. Not just waste water, but waste in general, so that all the input that goes into producing food is creating output that’s consumed and does not end up in landfills. 737

Adopt nutrition-sensitive approaches to increase access to nutritious foods and products, efficiency and safety along supply chains, and reduce loss and waste.738
Complementary to this, postharvest losses of vegetables have to be reduced and the nutritious value of food has to be retained from field to market by setting up an effective production and marketing system.\textsuperscript{739}

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.\textsuperscript{740}

Access to services to enable engagement to establish shared vision(s), action plans, participation from women/youth, conflict resolutions, technology integration, etc. 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.\textsuperscript{741}

What resources are most important for entrepreneurs to produce nutritious foods?

1. Infrastructure for post-harvest activities for example in storage and processing
2. Transportation is also another key area
3. There is the need for laboratories to test the nutrition of the foods being processed\textsuperscript{742}

Infrastructure - Nutritious value chains require sophisticated technology to sustain that smallholder farmers cannot afford. There is a need for post-harvest storage and process technologies and an effective logistic distribution system.\textsuperscript{743}

Reduce food waste by attending to size and calibration and using common metrics across the EU to calculate food waste (curb interests in using different metrics).\textsuperscript{744}

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\textsuperscript{745}

The nose to tail trend contributes to food waste reduction. By changing the definition of what people regard as inedible food loss vs. food waste that they could have saved, we can feed more people with less food. In this area, cultural exchange is extremely valuable. A participant mentioned that in South East Asia for example, it is much more common to consume all parts of the animal, including the feet of chicken for example. Other participants mentioned that they started to use the green of carrots or the stem of broccoli for example. This is holistically sustainable, as it contributes to healthier nutrition with more fibers and vitamins, helps people to save money and also creates more business opportunities: If people in the DACH region get more accustomed to eating “more” parts of vegetables again, restaurants can design new, creative dishes and also startups find creative opportunities to market food that has been regarded as “waste” because it has always been done that way in the past.\textsuperscript{746}

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 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. All stakeholders across South Asia must have a say on where time, money, resources are invested to maximize impact.747

During the dialogue, all stakeholders stressed the importance of, and are commitment to, disseminating game-changing solutions centered around reducing food loss and waste; pioneering actions to facilitate the transformation of food system and enhance food security; increasing sustainability through the food value chains; and promoting the efficiency, inclusiveness and resilience of food systems within the context of SDGs.748

Cropland protection could well facilitate farmland development and food loss reduction virtually protects cropland resource. As one of key objectives of FSS, building Sustainable Food Supply Chain could contribute to the food loss reduction in supply chain as well as carbon emission reduction, which aims to achieve a sustainable food chain with resource efficient use upon less investment for ecological environment while producing quality and nutritious food.749

Market linked production system: Market linked production system with end to end value system is essential to minimize wastage and increase value addition at the farm level instead of losing it to intermediaries. There has to be an anchor customer and anchor market, for whom the farmers produce. Database, crop monitoring and customised crop advisory reflects on the current crop conditions. ITC Limited- a leading Indian agro company is implementing a flagship platform called e-choupal (https://www.itcportal.com/businesses/agri-business/e-choupal.aspx), which acts as a solution integrator in various crop value chains, supporting new technologies to reach farmers.750

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.751

The participants noted that small farmers need financial and technical support to grow and sell more nutritious varieties of crops. Primarily, 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 innovation are essential particularly when it comes to helping small farmers grow more sustainable produce and/or reducing their food loss and waste.752
Best practices such as the control of toxic fungi population, for avoiding food losses during post-harvesting; and solar drying for avoiding contamination in food are considered of great help. Recycle food packages in order to reduce or prevent land degradation and emission of toxic gasses to the atmosphere.

In this era of climate change innovation in technology systems in the fields of agronomic and animal husbandry is key in ensuring that the nation produces adequate, safe and nutritious food. Innovation in information management through modern equipment such as ICT also plays a critical role in predicting future weather patterns and climatic conditions later on in future. Investing in early warning systems reduces the risk of crop and animal losses as a result of disasters. 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. Lastly the government was urged to ensure that modern methods of food storage are adopted compared to traditional ones which are commonly used in the country.

Promoting climate smart agriculture to increase resilience and yields of harvest and reduce the food production burden on women.

Investment in local logistics and distribution infrastructure, and reduction of food loss and waste, so that even while schools are closed the supply of local produce and delivery of food parcels to families can be guaranteed.

Priorities on waste reduction were identified: • Invest in infrastructure to reduce losses in food transportation and preservation. • Develop waste collection systems that can be used in the production of organic fertilizers that can be returned to production quickly and efficiently. • Use of waste from urban centers and crops to produce organic fertilizers, reducing health risks in cities and fire risks due to stubble burning.

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 neighborhoods or towns). 4) Organizations/cooperatives, funding actions to reduce waste.

Promote demand for healthy foods: iii. Support systems for the certification of origin/quality of FA products, which induce consumer preference. • Recognize/institutionalize participatory certification. iv. Tax benefits that improve competitiveness of quality and sustainable FA products • Comparative studies “agroecological vs industrialized consumers”, to support tax benefits for lower health costs. v. Develop electronic commerce connecting FA-consumers, supported by health and environmental authorities. • Provide rural areas with broadband, with high speed. viii. Support points of sale so that consumers have easy access to FA products. • Take advantage of the opportunity of the pandemic that questions large stores.

Plan and organize food production according to the capacity of the local and regional market, so that the types of items by region do not generate surpluses, if there is no export capacity and/or domestic consumption of these. Modify narrative: Add export market in the planning and organization.

Sustainability

BIPOC small farmers/underserved small farmers and their communities and farmer organizations recognize that seed saving and the work of seed keepers provides a critical food systems pathway that promotes a value added product (the seed) while promoting relationships with farmers and future generations of farming and supporting food security and sustainable resilient food systems.

Mentors and sustainable models that demonstrate small farm-good stewardship; land ownership models and seed saving models.

Food Systems need to be sustainable in all that we do, there is need for research and capacity development across the Value chain.

The dialogues provided an opportunity for government and people to take account of the learnings of the covid disruption and think about the strategic options for moving towards a national transformation of the food systems. Sustainability and resilience will be at the heart of this and rebuilding will focus on sustainable food systems, ensuring that women and youth are more central. This seems to be a common pattern especially in the Pacific. Inclusivity is making challenges and gaps turning into actions and the dialogue process is showing its value and will continue beyond the Summit.

Sustainable farming and ways to shorten supply chain of fresh produce in China need further exploration.

Harmonize the relationship between production and nature, to increase sustainability and resilience of the food system.

It was highlighted the need to promote the best practices of the excellence of Italian agri-food production and fisheries by valorizing their high values in combining food cultures, technological and social innovation, efficiency, productivity and sustainability of the food chains, closed linked to territories, local producers, farmers and fishermen. Innovation, both technological and social, was pointed as a crucial key for the development of an effective green, blue and circular economy at the centre of a
sustainable transformation of food systems. The important contribution of the marine resources and aquaculture was highlighted for building more sustainable food systems and revitalizing the MD.\textsuperscript{768}

In the summary on the dialogue “GOOD! The Good of the Mediterranean diet and Italian agrifood 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.\textsuperscript{769}

Issues related to illegal deforestation were suggested as damaging to the country’s image and the resolution of these issues was considered an essential condition for Brazil to be recognized in relation to the sustainable practices.\textsuperscript{770}

Shifting to sustainable consumption patterns: Indigenous Management of Resources to Sustain Indigenous Food Security.\textsuperscript{771}

Fully integrate an understanding of the characteristics of Indigenous Peoples’ food systems into the Summit process, as well as an understanding of the importance of these food systems for food system transformation towards resilience and sustainability, into the development of new game changing solutions, policy proposals and commitments.\textsuperscript{772}

Droughts and other weather shocks, loss of biodiversity, and balancing agri-food systems with reducing GHGs were all discussed. Work is ongoing in the region at different levels to discuss appropriate policies, ways to incentivize sustainable agri-food production, building data and early warning information systems, including on agrometeorology (joint initiative of WMO, FAO, EUMETSAT and MeteoRomania).\textsuperscript{773}

Diets are perceived to be changing dramatically towards the consumption of plant-based foods. This also means, however, that increasingly food is being produced in factories versus the land-based supply chains of animal proteins. We need a variety of proteins to feed the world, and consuming only plant-based solutions will not be sustainable in the near future, as more work needs to be put into research for other opportunities. Animal agriculture has a myriad of benefits and industry players are open to evolving their business models and engaging in dialogue with plant-based sectors.\textsuperscript{774}
Promote the return to the garden and the kitchens. Promote the return to the garden and the kitchens.

Permaculture and vegetable garden...Each product has its harvest, when the product has traveled or artificially matured, it loses it....This limitation in "the garden" has repercussions on consumers, as they are prevented from escaping from an industrial cultivation system, in which harmful products are used for cultivation...The garden takes time to bear fruit, you have to feel the earth, the plants and appreciate seeing the food grow slowly.

To be more resilient and ‘build back better’, we need to shift ideals to focus on sustainability, and how to build a sustainable planet.

Market access for new entrants into farming remains a vital ingredient that will unlock the sustainability of agricultural enterprises in Africa.

Exploring the role of blue foods and strengthening sustainable fisheries, mariculture, and aquaculture.

Recognize economic sustainability as an essential aspect of environmental and social sustainability.

Sustainable crop management.

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.

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.

Sustainable production - More sustainable production and shorter supply chains will link producers and consumers more closely.

Recommendation 3: increase demand for more sustainably produced products. Consumer behaviour is one of the strongest instruments for change.

Recommendation 5: orient nations towards sustainable use of natural resources and biodiversity; guide territorial planning considering the potential for land use, generating a balance between conservation of natural resources and development.
Who: national governments (National Protected Areas Service, Ministry of Environment and Water and the Ministry of Rural Development and Lands), academia, international organizations and civil society.

How: in order to make the landscape approach practical and applicable on the ground, the stakeholders will need to be clearly identified at different levels – local, regional, and global with their roles being identified clearly and linkages between and among them. It is important to consider “hotspots” - priority conservation areas and intact resources, which contain high biodiversity. National governments should consider enhancing these environmental functions and orienting towards a sustainable use of natural resources and biodiversity, such as wild cocoa, açai, jatata, etc. - food systems that enhance the use of forest resources. It is also important to strengthen the interface between academic research and the needs for information and responses to the different problems on the part of local governments.

Participants recognized it was time to promote the GI business model that integrates all the dimensions of sustainability, i.e, not only economic but also social and environmental dimensions, including cultural heritage. Indeed, these dimensions are intrinsic to the GI concept. Participants also highlighted the power of inclusive approaches - by agreeing that all production practices can be made more sustainable we allow all stakeholders to participate, rather than setting unrealistic extremes that exclude some communities entirely. It is also important to note that all industries have some level of environmental impact – not just agriculture. Food is foundational to our survival and health, and while animal agriculture should (and will) do all it can to address challenges of sustainability, other industries need to mitigate their impacts as well and conversations around sustainability should be inclusive and collaborative while encouraging everyone to do their part.

The animal agriculture community should continue striving to optimize its nutritional and environmental impacts, and food systems should focus on encouraging consumers to build and maintain overall healthy diets, with attention to balancing needs including nutrient-density, diet quality, diet diversity, consumer acceptance, taste, value, convenience, safety, and more.

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.
Resilience and sustainability were two important keywords that anchored this discussion. The challenges of ensuring both resilience and sustainability, especially for marginalized and indigenous people, were discussed.

It was decided that sustainable consumption patterns would entail sustainability not just for the environment and the human body, but also over time.

It was agreed by all participants that a clear implementation strategy be designed in view to foster the rights of nature while substantially contribute towards a sustainable food systems transformation in Africa.

A food system that supports socially sustainable communities

We can shift to sustainable consumption patterns by creating a resilient framework for farmers to be properly educated from a tender age about the entire process of farming skills; reshaping the conversation about the purpose and the benefits of agriculture across the Caribbean; and by involving agriculture into schools to educate younger population from an earlier age.

Sustainable procurement practices need to also be more widely applied by the private sector. These should support preference for local and regionally produced foods. Expanding education programs on climate smart and resilient agriculture practices. Practices such as beekeeping, community gardens, no till agriculture, indigenous agriculture practices, agro forestry rainwater harvesting, stormwater management and mitigation Utilize contract farming/sustainable procurement as means of reducing food loss, reducing carbon footprints and having farmers know exactly what varieties of crops to grow. This can support improvement in relationships and also support more collective approaches. Support community led action and procurement of community produced food in local institutions such as hospitals, hotels, schools and juvenile institutions.

Developing targeted and tailored education programmes for all age groups and communities is seen as critical to ensuring that all stakeholders are aware of sustainable practices. In our community we can take action by educating and creating awareness, encouraging persons to plant and also by setting up community gardens, backyard gardens, expanding school gardens, community food hubs and community based slow food restaurants. Slow food restaurants can be a niche for eco tourism communities that actively promote on organic and regenerative principles on a community scale.

Adoption of a context-specific approach to food systems resilience and sustainability at individual, household, social class and regional levels, taking into account shocks and stresses.
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.

Need for stronger governance arrangements and sustainable procurement at all levels. There is a need to give preference to sourcing healthy nutritious and affordable food. There is need for improved support systems to regional farmers to create an improved market and a sustainable reduction of price of locally produced food.

Start at the community level to promote sustainable food production. Agriculture is about high technology. Use this high technology as a means of pulling youths in.

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.

This implies that we look at sustainability, a key feature of a true cost based economy, beyond a technical ESG approach. For this, an increased awareness, passion, curiosity, knowledge and inclusion in all sectors of the food systems are guiding features.

The summit addressed the importance of a sustainable Food System, the implications from an errred system, the precautionary and correctional measures, and the roles of the youths to the development of sustainable Food System in Nigeria. Sustainable Food Systems. The discussants were able to make clear the need for a functional and quite sustainable food system in Nigeria.

Theme 6: healthy and sustainable livestock food system Proposal: creating a benchmark for the whole livestock: from agriculture to food waste. Including data collection and transparency to prevent Antimicrobial resistance and zoonotic disease development.

At the public level, we need to strengthen good habits, promote sustainable cultures and find how to reach out to people and make an impact. The awareness of food waste is very low in Israel, and there is a fear of shortage. We need to connect food waste to costs and explain that it is also a waste of money.

The results of the discussion topics have shown that the DRC could become one of the largest agricultural countries on the planet because it has the opportunity to implement sustainable techniques that protect the environment and the sustainability of food systems.
Over the course of the discussions, participants agreed that fishing, livestock, and agricultural activities should be sustainable and protect the environment. 810

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing), reusing agricultural waste for composting, producing biogas, and feeding animals, among others. 811

Minimal environmental impact – biodegradable packaging materials using local biological resources; and multi-cropping to regenerate the fertile soil. 812

Train local producers so that they adopt sustainable production practices.
- Promote initiatives and projects for preventing contamination of aquifers and promote proper water management. 813

It’s important to understand the different actors and their dynamics. Aspects such as land ownership, collateral land use, local solutions, and the power of big companies surfaced as factors that should be taken into consideration. Sustainable solutions need to be based on local solutions and local ownership. 814

Panelists explained that sustainable resource management of aquatic food systems, from production all the way to consumption, is key to environmental sustainability and food systems resilience. • For instance, making full use of low-trophic aquatic foods that have low-environmental impact but contain high nutritional value, such as jellyfish and mussels, must be recognized in upcoming national food-based dietary guidelines. 815

Improving sustainable aquatic food production is crucial, in particular, diversifying target species (e.g. non-traditional species, seaweed and low trophic position species), promoting native species and avoiding the introduction of invasive species, reducing environmental impacts, and establishing and managing MPAs and sustainable fisheries. 816

As a final note, Canada’s livestock sector wants the world to know that “sustainable production of livestock is not an uncomfortable conversation for Canada – we care, and we want to do better. 817

Sourcing: Optimise sustainability & accounting for local resources & traditions 818

Practical decisions concerning all systemic changes in this area must proceed from the possibility of safe and sustainable development of a human being and society, the
preservation of nations and of all mankind. These decisions must be moral and responsible.\textsuperscript{819}

But profit must not be the only consideration. Business must be supported by governments to pursue sustainable practices and to do ‘what is right for the world’ not just what will make the most money. Business should be rewarded for doing good and called out for failing.\textsuperscript{820}

Ensure trade agreements guarantee sustainability requirements\textsuperscript{821}

Dr. Fengying Nie proposed five main countermeasures, such as practicing new development concepts, increasing sustainable productivity, reducing food waste, ensuring the nutrition and health of vulnerable groups, and strengthening international trade and cooperation.\textsuperscript{822}

...the food system must be sustainable, and it must be able to help reduce greenhouse gas emissions;\textsuperscript{823}

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.\textsuperscript{824}

Together, by putting environmental sustainability at the centre of the Canadian agri-food sector’s identity we can ensure Canada has the tools it needs to continue having one of the greatest food systems in the world.\textsuperscript{825}

Action track 3 calls for improvement in the sustainability of agri-food systems, in terms of protecting, managing, and restoring ecosystems to “produce more from less”. Clearly, it does not bode well for Africa to continue the practice of deforestation to expand agricultural land.\textsuperscript{826}

Sustainable livestock farming can make an important contribution to climate change mitigation and biodiversity protection, however many questions arise that have room for debate as we consider the role of livestock production in our future food system.\textsuperscript{827}

However, significant efforts are needed to ensure that safe, nutritious and affordable food produced in environmentally sustainable systems is available and enjoyed by all, rural livelihoods and areas are protected and value is distributed equitably.\textsuperscript{828}

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.\textsuperscript{829}
Financial institutions to have top management-endorsed sustainability objectives and to create incentives for staff to get this type of deals off the ground.  

Financial institutions should have clear objectives to advance sustainability in addition to profitability, which can help efforts at the regional/national level to shift business models to more sustainable pathways.  

Nutrition and healthy diets through sustainable and resilient food systems is the ultimate form of prevention of noncommunicable disease. Public health institutions must include this in their curriculum.  

There is much potential to apply technical adaptation in waste recovery. Ultimately, we need to embrace new, more sustainable approaches to farming, rather than trying to alter a broken system.  

We urgently need more efficient, inclusive, resilient, and sustainable food systems.  

Zhao Bing, Director of Department of Food Systems and Smallholder Support at the World Food Programme (WFP), described the context of the United Nations Food systems Summit and the efforts of WFP as the world’s largest humanitarian aid agency in advancing the food system transformation. He said that the international community needed to make more significant efforts to establish sustainable and resilient food systems.  

Social Enterprise Mechanism for Sustainability: Social enterprise mechanisms must be a part of implementation frameworks of different policies and strategies to ensure timely and cheaper sustainability of the renewable energy systems used in the farming system.  

Private Companies may focus on knowledge and technology transfer where currently inaccessible. Encouraging corporate social responsibility departments to direct projects towards sustainable development (e.g. greenhouses’ potential to save 70%-90% of water consumption), and relaying the potential for the projects to them, may contribute to this effort.  

Identifying issues of vulnerabilities and losses. This should include environmental sustainability dimensions as well as local solutions based on cultural, social, and ecological systems.  

Generate sustainability seals throughout ALL the value chain, and us as consumers to take better choices.  

To ensure food security as a leverage for access of markets, different pillars have to be approached: availability, access, stability, agency and sustainability.
Increase investments to ecosystems restoration recognising its importance in building sustainable food systems among local communities particularly of indigenous communities and pastoralist.  

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

promote sustainable prices that can benefit farmers to sell producing should promote technology farming and innovation...

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.

Developing a sustainability food tick similar to the Heart Foundation tick

Looking at long-term experiments for sustainability and adopting a multidisciplinary research approach (e.g., introduce multi-disciplinarity in curriculum and teaching).

Development of sustainable seed systems, facilitating conservation, access, availability, use and exchange of high-quality seeds of forgotten foods by farmers

We need food solutions that not only fulfill the health needs of everyone, but are also sustainable and carbon neutral.

Invest in technology and pilot projects for sustainable agriculture in South Florida, especially in partnership with local universities.

Many of these organizations would be willing to partner with one another or with universities on pilot projects for sustainable agriculture, if the opportunities and funding were made available to them.

It is important to recognise the need to follow on with a structured CPD programme that builds on sustainable practices

Sustainability is a life-long learning area, and there should be an expectation that CPD will have a role throughout the career of all AKIS actors.

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.

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Programmes and projects at all levels and sectors along the food systems need to be sustained  

Use sustainable systems of production; The group proposed the universal use of a sustainable system of production by primary producers  

There is a strong need for collective responsibility to create pathways to sustainable agriculture  

It was agreed that agriculture must be organized, resilient, and sustainable  

The fight against the climate is a global battle. For this reason, demand thresholds must be established throughout the world. Food systems must make an effort to reduce their emissions throughout the chain and improve the sustainability of their processes so as to contribute to the mitigation of climate change.  

The common task of the livestock-meat chain is to meet this demand in an efficient and sustainable way, in order to ensure that the food allows full development and promotes the health of all people around the world.  

A number of groups believe that the environment should be the primary and ultimate beneficiary of sustainability focussed developments in aquaculture. By prioritising the environmental aspects of sustainability first, many participants believed there would be longer term beneficial implications for society and economy to follow.  

3. Legislation must protect aquaculture investors, guaranteeing their use of allotted land or water for long periods: In many regions, there is a significant lack of aquaculture legislation which results in excessive delays for investors or prospective farmers to enter the industry. International assistance from industry experts could be useful to guide regional legislators to reduce entry barriers, and promote sustainability measures in early legislative frameworks around aquaculture.  

4. Third-party sustainability reporting for the entire food system: Mandatory third-party sustainability reporting could dictate a particular producer’s available government subsidisation level and offer investors a standardised sustainability indicator prior to investment.  

5. Create a market for innovation with legislation. Legislation that enforces industry adoption of sustainable alternatives could create a market for innovators to compete against each other rather than against more financially attractive, often cheaper and less sustainable options  

Promotion of stubborn and indigenous/local crops through revival of millets and other crops on a community led campaign mode, introducing appropriate technologies for millet cultivation/processing.
Foster innovative approaches to expand the availability and affordability of traditional African vegetables.863

Provide traditional vegetable seed for vulnerable refugees living in camps.864

The group also discussed the role of culture and farm animals in different countries. Culture impacts food and consumption decisions. Farm animals have an important role, for example in East-Africa where they are financial safety nets. Keeping small farm animals is important especially for women in terms of supporting their economic independence and domestic food safety net. It is important to note that measures should be implemented to promote sustainable and climate positive animal husbandry practice.865

In West Java, precisely near the Lembang area, the majority of farmers are mushroom farmers. Many say that mushrooms are superfood and future food because they are considered more environmentally friendly and quite easy to cultivate. With a high protein content, mushrooms are thought to replace the role of meat in meeting our nutritional needs. In addition, in some research, mushrooms have been developed into environmentally friendly materials such as imitation leather for fashion or building materials. If the cultivation of this fungi is more developed, the carbon footprint generated from the livestock industry will be reduced. The potential in Bandung City, also in West Java, to develop mushrooms is higher, given the trend of coffee shops is increasing rapidly and we can use the coffee grounds to become a more environmentally friendly mushroom growing medium. Lemang is a typical glutinous rice dish roasted in bamboo tubes. It has sticky texture and can be eaten with other side dishes such as rendang (caramelized beef curry), rich jam, and durian and can generally be enjoyed by almost all ages because it’s not hard and easy to carry anywhere. Dishes created can be Lemang Dessert Box and Lemang-based pastry, or Baked Salmon Lemang. Megono, a typical food from Pekalongan, Central Java, is made from jackfruit, shredded coconut, torch ginger, bay leaves and other herbs and spices. The price is cheap and suitable for breakfast, lunch, and dinner menus. Usually it is cooked using firewood so the production is still traditional. The process from upstream to downstream is very sustainable because traditional food packaging uses banana leaves. So it does not pollute the environment. Future food should return to the past, for example by using baskets for containers. Instead of using plastic, the use of baskets is more natural and environmental friendly.866

Indigenous and heritage varieties of food should be prioritised for subsidies by governments when they are more nutritious than rice and wheat. Indigenous food should also be included in school feeding program meals and communities should have a say in what food is used for these meals & be able to shorten supply chains using locally grown food giving children nutrient dense food and not empty calories just to fill their bellies. Providing school meals and school feeding programs is good, but the food also has to be nutritious as this has a direct impact on learning & concentration.867

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. We, therefore, call for enhanced recognition and

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864 16:22 p 9 in 251_Jan_25_21_World Vegetable Center
865 81:24 p 8 in 118_Apr_21_21_Huvio T
866 90:18 p 10 in 174_Mar_20_21_Niode K
867 311:12 p 6 in 544_July_13_21_Omved Gardens_Chefs’ Manifesto

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protection of farmer-managed seed systems including enabling legislative environments. We also call for stricter adherence to the safeguards enshrined in the Convention on Biological Diversity and its expansion to regulate new bioengineered technologies because of unforeseeable off-target effects, patent, and ethical issues associated with this evolving science.\textsuperscript{868}

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.\textsuperscript{869}

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.\textsuperscript{870}

Small farmers should shift towards more sustainable agriculture by looking into the alternative crops that can be grown. Specifically, those that are traditional or native to their lands. For instance, those that can be grown all year round or that thrive within their country specific environmental conditions. However, one of the limitations to this is that there may not be an easily accessible market to the small farmer for them to sell their produce.\textsuperscript{871}

Improved selection and crop variety for farmers is essential for adapting to climate change and rainfall variability in the coming years. • On one side it will be pivotal to select a wide variety of crops, whereas on the other side it is crucial to use native species whenever trying to apply Sustainable Agricultural Intensification to avoid invasive species.\textsuperscript{872}

Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider: • Training farmers on how to innovate and be competitive on the market. • Training on how to link agricultural production to food and nutritional requirements. • Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. In this respect, the active engagement of leaders in the rural communities is crucial. • Not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge (e.g. Traditional crops vs GMO; certification of local seeds, allowing and promoting locally-adapted, cheap and good quality seeds).\textsuperscript{873}

For women, crops grown on less land are more resilient than those grown on a large scale. The emphasis is on the variety of crops, since it ensures that the failure of one item has a reduced impact on the food security of the communities. The recognition of ancestral knowledge is advocated to ensure the incorporation of knowledge which over
time has been successful in food production. The women also argue that there should be a reduction in waste and the use of chemicals. The dissemination of family crops (Conucos) is recommended for their efficiency in food security.

The imposition of foreign food programs has encouraged the substitution of own community farming practices. To counteract its effect, they propose the preparation of recipe books for traditional dishes for the recovery of techniques for the conservation of native seeds such as chigo, kupe, guapo, healthy food and traditional gastronomy, taking advantage of the communities' existing collective memory. Apply ancestral knowledge and own technology to generate greater production and benefit of food.

Encourage specific policies such as development policies, not welfare, based on the enormous potential of Family, Peasant and Indigenous Agriculture, Shepherds and Fishermen.

It is essential to involve young people in reviving traditional cultures in order to avoid the consumption of processed foods and bring back traditional foods.

The need to bring back traditional foods and recipes was highlighted, as well as the need to promote actions and strategies within the agri-food chain that have a human rights approach

Positive production for nature

Most groups called for greater support for and much wider adoption of agroecology – even for it to become the ‘norm’ in agriculture. Even where the term agroecology was not used, there was a wish that policies be developed that encourage sustainable primary production.

Agricultural colleges should make conservation and agroecology compulsory elements in all their agricultural courses.

Agricultural transformation to work closer with farmer’s market and the local populations in order to shorten value chains and advance the 13 principles on agroecology and other innovations of the HLPE report.

In order to improve access to food and food security, participants suggested that the current production systems need to change and adopt agro ecological approaches.

Nature-positive Production - The shift to agro ecological approaches and nature-positive production systems (such as regenerative or conservation agriculture) needs to be taken up on a priority basis. This transition needs to go hand in hand with a change in the narrative around farming in the Global South. Agriculture is often associated with poverty, and adopting nature-based approaches could help change this to one of pride and joy.

The participants began by addressing the question of whether it was possible to shift to nature-positive production while maintaining productivity. The example of regenerative agriculture was brought up, which can be undertaken even in dryland ecologies.
type of production is environment friendly while also increasing productivity and profitability. A few participants spoke of their personal experience as farmers practicing conservation agriculture in India. They had seen improved yields, soil health and fertility and increased incomes. Another participant illustrated the experience of Thailand in implementing integrated land and water management in agriculture. The participants noted that traditional farming practices are also regenerative and scientific concepts such as permaculture and agroecology validate their significance.885

Use Rights of Nature as some of the tools to oppose prominent destructive agricultural practices which clearly are in violation of natural principles and values e.g. criminalized ecocide. • Promoting and Supporting Indigenous Food Systems: Native seeds, smaller farms and agroecology generally produce more and healthier foods and the Rights of Nature can support governments to promote these types of Food Systems because doing otherwise means continuous devastation of nature. Based on these understanding, promoting rather displacing food sovereign communities is a good step in securing healthy and nourishing agriculture.886

Support and promote agro-processing in rural areas887

Support agriculture and ecology and limiting the use of chemicals888

The practice of Agroecology can offer many solutions and close the loops of linear production type systems as well as to enforce the linkages that build resilient agricultural systems. There is need for mechanism to support wider adoption of agroecological practices regionally/. A national and regional agroecology committee should be considered with the mandate of developing a strategic plan, aligning policies, legislation, processes and practices with nature positive agriculture, engaging stakeholders and bridging the gaps in research and the farming community. Wider use of the agroecological standards and model can enhance biodiversity, bio capacity and reduce the carbon footprint of the food system across CARICOM889

For Farmers: invest in beginning professional farmer training programs, free, transparent education for all farmers on agroecological practices that support the environment, especially in the face of climate change and severe weather patterns890

Create accountability for land stewardship through consumer tax programs that invest in regenerative land practices (i.e. a public utility model to develop agroecological practices that benefit the ecosystem in and around developed areas).891

There is need for an increase focus in agroforestry, as the practice reduces water utilization and improves yields whilst using less energy from utilities Wider use of urban farming techniques that build on the circular economy concepts and models in water, energy and waste utilization.892

Embed principles of agroecology in these incentives, policies, and priorities. Principles of agroecology are needed, and not just principles of chemical industry. Figure 18 shows what the principles of agroecology are in terms of scientific research approach to agro ecosystems, food ecosystems, with principles of enhancing resilience from the bottom up. It is also a socio-political movement; it is changing urban areas. Some years
ago, people in Cagayan de Oro started with communal gardens. It is very important to have these examples so the youth can engage and take up the demanding issues because this is the challenge of the youth.\textsuperscript{893}

Encourage agroecological production to reduce the use of pesticides and agrochemicals.\textsuperscript{894}

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.\textsuperscript{895}

Possibly this instance (GFS 2021) can serve, rather than to spend or direct funds and resources of the countries towards these unsustainable initiatives or projects, to help ensure that they are directed in the first place to processes of high social impact and resolution of the problems of rural development, improve the quality of life, education and health and support the initiatives of independent science, which based on Agroecology (really the first support of what the UN at least calls in the papers, Solutions based on Nature), can come true.\textsuperscript{896}

Development of agroforestry systems and efficient irrigation systems were also discussed as transformative solutions, together with the adoption of clean technologies and improvement of recycling capabilities.\textsuperscript{897}

Financial incentives to communities to promote agro-ecology. o Community to benefit at least 20% of revenue from natural resources exploitation and conservation. o E-vouchers whereby financiers can support farmers: electronic provision of loans - introduced also in emergency situations. Also leads to more generation of information such as gendered allocations of the e-vouchers.\textsuperscript{898}

Diversification of activities in the field and on the farm is crucial for building the resilience of mountain people’s livelihoods, and agroecological approaches can help at different scales.\textsuperscript{899}

Map agroecological potential in mountains, and establish mountain-specific crop and livestock databases, to promote understanding of the ecosystem services they provide to upstream and downstream communities, to address trade-offs and promote opportunities for mountains in regional and global fora.\textsuperscript{900}

Embed principles of agroecology in these incentives, policies, and priorities. Principles of agroecology are needed, and not just principles of chemical industry.\textsuperscript{901}

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through
extension workers or other food organization. Increasing research and innovations delivering it in the indigenous languages. There’s also an urgent need to rethink and transform production models.

Innovations that could reduce energy use in food production/value chains over the next decade include: - Agroecology and better farming practices  - Using balanced feeds in livestock rearing - Low pack/no pack solutions: shops using no packaging and customers using own recycled materials when shopping in stores. - Irrigation using gravity feed systems. - Using wastewater for energy: methane could be used to produce gas for other things such as cooking and heating. - Solar PV for pumping water - Intensive farming rather than extensive - Internet purchasing: small scale farmers chain to market is long, therefore using online shopping small scale farmers can shorten this and improve their on farm economics.

Seed security is crucial to food security and livelihoods and is part of a community’s disaster risk management, especially in the context of climate change. Together with agro-ecological practices, and farmers accessing weather information and collecting weather data themselves, farmers use plant genetic resources as part of their climate adaptation strategies.

Promote agro-ecological approaches that complement the conservation and use of plant genetic resources for sustainable food production, and for the restoration of lost biodiversity, degraded soils, and water management. It should be the economic driver of food and nutrition security based on sustainability, resilience, and increased food production.

Focus RDE directions on agroecosystem and landscape scale; long-term studies and observations of agroecosystems; alliances with local communities, NGAs, and private sector.

HEIs need to set up incubators for green startups and other businesses that are much needed for enhancing the uptake of agroecology practices.

There are already a number of technologies and approaches that we could taking off the shelf - agroecology for example. Such technologies to address interrelated climate and water management risks such as irrigation are perhaps not ground breaking, but will be essential.

Concerted efforts in participatory plant breeding to improve the adaptation of forgotten foods and forgotten foods to social, economic and ecological conditions, and nutritional value.

...prioritizing agro-ecological practices (e.g. using ecological pesticides, supporting soil health, and developing agro-forests).

Agroecology has been recommended as the best way to assist smallholder farmers especially regenerative agriculture and permaculture.
Promote the protection of wetlands: The group was clear in the understanding that wetlands provide vital ecosystem services. They supply water, improve water quality, support primary industries, provide food and storm mitigation, act as a carbon sink, provide habitat for biodiversity and threatened species, and provide communities with recreation and tourism.\textsuperscript{912}

Shifting to nature positive production: (a) Identify intervention areas where farmers and other concerned actors to protect natural ecosystem; (b) Assess the contribution of novel sustainable farming practices such as Agroecology; (c) State relevant measures for decarbonisation and resilience with innovation; (d) Suggest roles of the public and development sector in de-risking and funding the transitional period.\textsuperscript{913}

Assessing the contribution of novel sustainable farming practices such as Agroecology: 1) Introducing green belts around vegetable fields. This can help to act as wind breaks, but also attract pollinators; 2) Agro-forestry is also good practice as a good agricultural practice for both crop plantation as well as for rearing animals (grazing grounds). Over years, farmers have been encouraged to shift to organic farming, which is more ecological way to safer food production; 3) Engaging in sensitisation campaign not only to educate farmers but also to consumers is equally important as they are the one setting the demand aspect; 4) Organising seminars on different value addition methods; 5) Encouraging young farmers to implement new farming techniques to increase productivity and to ensure a sustainable production; 6) Developing soil regeneration programmes (F.A.L.C.O.N Association provides both theoretical & practical courses on soil biodiversity management) and that can only happen through controlled and minimal use of fertilizers and other agro-chemicals that add to greenhouse gas emission such as nitrous oxides and methane.\textsuperscript{914}

The integration of leguminous trees can improve soil fertility. Breakdown of organic matter from trees also improves soil texture and fertility.\textsuperscript{915}

In natural systems, the production follows functions. 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. Technology is manured enough to make a difference which requires collective actions for system-level transformation- it must combine resilience, conservation, and restoration with co-benefits.\textsuperscript{916}

The discussion was opened by Dr Agnes Kalibata, UN Special Envoy for the Food Systems Summit, who insisted on the need to address poverty and inequality, which are at the root of global conflict and hunger. She called for deeper dialogue in light of the UNFSS, to emphasize the idea of human beings as a critical element of agroecology and the necessity to come through for the people who need it most.\textsuperscript{917}

Agro-ecological practices were highlighted as a contribution to the resilience of family farming.\textsuperscript{918}

The importance of effective framing and messaging to shift decision-making, with a focus on a positive (value-based) decision-making narrative was highlighted. For example, repurposing subsidies can create value for nature, people and society. Indeed,
internalizing in policy and regulatory frameworks the natural, health and social costs that are currently unaccounted for, will facilitate upscaling of sustainable and healthy food production and consumption. Consumers are considered as drivers in their demand for more sustainable and healthy food. The need to highlight the importance of TCA in capturing the value of i) nutritious food, and ii) nature-positive agriculture. Emphasis was put on how TCA and associated approaches can support the creation of enabling environments for agroecology and regenerative approaches to nourish and benefit all, including local institutions, communities, smallholder farmers, Indigenous Peoples, and women. Participants referred to the power of TCA to inform policy decisions that allow markets to do a better job at rewarding responsible stewardship of the capitals, ie: rewarding sustainable, affordable and healthy food production and consumption.

Medium and long-term plans – Revive the role of the Federal Government in the access to food, with public policies and educational processes at the center of the debate, thus enabling access to natural resources (land and water), agrarian reform, technical support for social technologies aimed at ecologically-based agriculture, policies aimed at agroecology, price floors for family farming, transport, and logistics structuring, and public food acquisition programs (for donations and building stocks), among others.

The representations of family farming must work with town councils, prioritizing local systems, rethinking distribution and consumption mechanisms, and expanding the dialogue with consumers. Additionally, build a narrative that highlights the viability of ecologically-based agriculture to address the hegemonic narrative of commodity agribusiness, which is promoted in the mainstream media and the representatives of large producers.

Developing and scaling up new agricultural technologies and innovations to enhance the resilience of family farming systems, as well as to preserve the health of agro-ecosystems, animals, humans and biodiversity, and to reduce post-harvest losses.

With climate change, the water needs of plants and/or crops may increase and investments in infrastructure, technologies and agricultural innovations may be needed to cope with periods of drought, floods, severe pest attacks and to compensate for shortages. Given the increase in the frequency of extreme weather conditions, the impact varies according to the severity of the condition, leading to losses in yield and quality, or even the total loss of some crops. For example, when droughts and/or floods occur, they result not only in considerable economic losses, but also in the complete loss of crops. Thus, the use of green agricultural technologies and innovations, such as agroecology, climate-smart agriculture and/or climate-smart varieties, is necessary not only to maintain healthy soil conditions and reduce the need for synthetic inputs, but also to jointly address the three climate change objectives of greenhouse gas (GHG) emission reduction, carbon sequestration and adaptation to future climate within family farming systems.

Alternative models, such as agro-ecology and small local farming, do not entail a loss of profitability for the local farming families. Moreover, they involve advancement of innovation processes, so that the community members who so wish can have access to
market production levels, and those who do not can achieve effective sustainability for their communities.\textsuperscript{924}

Some of the actions these countries are taking (or planning) to address these challenges were also shared. Proposed actions included the sustainable management of land & water; sustainable use of natural resources and of farm inputs (e.g. agroecology); promoting healthy dietary choices and sustainable consumption; strengthening urban-rural linkages; promoting sustainable rural entrepreneurship through the development of capacities and skills, with a focus on women and youth; reducing food losses and waste; improve and harmonise SFS governance at national and regional level, fostering reforms and strategies that cut across sectors (e.g. OneHealth), considering trade-offs, complementarities, also using some of the existing frameworks (e.g. F2F, FSS); etc.\textsuperscript{925}

Proposal to support and scale up organic farming and agroecology through financial models for organic farming and maybe consider awards for farmers pursuing this.\textsuperscript{8}

Push governments to create policy to reduce use of pesticides and chemical fertilizers. Ban these. Promote organic fertilizers. Policies that support small scale organic farmers to create favorable environment for them to thrive and become productive. It should include policy to introduce good post harvest facility for farmers. Subsidy not adequate. Some more support for farmers to store product to get better price for products.\textsuperscript{926}

Priorities of the governments in many countries are misplaced, which are pushing small scale and marginalized farmers further in the periphery. The proposed solution are all in the agroecology framework of FAO, but as part of the output of the dialogue, there is a strong recommendation to include the political dimension, specially farmers right recognition, to bring the back the resources (land, biodiversity, knowledge, technology, market) into the hands of the farmers, as this is basic requirement to have a better food systems.\textsuperscript{927}

Coastline Management: Mapping seaweed can be useful for managing the coastline better and understanding the biodiversity and ecosystems present in these areas. The coastline is one of the most vulnerable spaces to climate change.\textsuperscript{928}

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.\textsuperscript{929}

Establish agroforestry landscapes with fruit trees and integrated with forest rehabilitation in Northwest Vietnam to reduce soil erosion, landslides, and extreme weather condition.\textsuperscript{930}

Diversify the cropping system and other agro-ecological system research.\textsuperscript{931}

Building a sustainable bridge between nutrition science and agriculture sector to achieve sustainable production systems (agroecology, regenerative agriculture) is vital to transform food systems. There are active and transformative things happening in
agriculture right now, however they are only on a small scale and they need to be scaled up. There is a movement there to be built upon for change.932

Although results are mixed and further research is needed, a positive relation between agricultural diversification and diversified diets, is true for many different farming systems. Agroecology does not deliver immediate results. Different voices highlighted that despite the broad and holistic innovation strategy agroecology is offering, there is a need to address challenges such as the time lag be-tween the moment when agroecological measures are implemented and the moment when the effects become visible or measurable933

It is important to identify and support local actors, recognize the wisdom of the people that are there (first and foremost Indigenous Peoples) and prioritize transformative innovation (e.g., agroecology), building on local knowledge with science to create jobs and build resilient food systems. Local private sector actors are key players in working together to build a better system. Academic institutions should join local actors in documenting and reviewing relevant experience, providing technical assistance and linking with national or global research institutions.934

Territorial alliances to advocate action for structural challenges: Structural issues around effective landscape/ecosystem action including poverty and food insecurity are significant challenges for cities/regional governments and impose pressing demands on budgets. Recovery packages could strengthen local food provision and build from innovative modalities (e.g., participatory budgeting). Structural issues need long term solutions, including shifting the narrative around food systems so needs are at the center. 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. https://www.oecd-ilibrary.org/sites/2d810e01-en/index.html?935

Invest in agricultural production that integrates restoration actions (positive conversion) of ecosystems.936

Promote sustainable plant production, including for animal feed.937

Advocate strongly for AE through various methods including media938

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. -Revise the National agricultural research agenda (NARA) to incorporate agroecology issues. -Mapping of research needs for generating appropriate AE technologies.939
As soil health is often neglected and is far from a renewable resource, regenerative agriculture should be a primary aim towards a just food system that supports future generations of farming.940

We urge the UNFSS to call for an urgent increase in budgeting and focus on agroecology at all levels of governance including donor funding and government funding. The time is now for deliberate and increased financing, investments in agroecology for the health of the planet and people.941

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. We, therefore, call for enhanced recognition and protection of farmer-managed seed systems including enabling legislative environments. We also call for stricter adherence to the safeguards enshrined in the Convention on Biological Diversity and its expansion to regulate new bioengineered technologies because of unforeseeable off-target effects, patent, and ethical issues associated with this evolving science.942

Agro-ecology as a concept should be integrated within the policy framework and educational curricula. 943

The standardization and efficiency of field management could facilitate addressing the food loss in harvesting, which can be achieved by implementing quality standards for harvesting machinery, as well as operational norms for harvesting operations, planting and agronomic norms, with attention to promote land merging and appropriate grain varieties.944

Participants agreed that policy needs to catch up to forward-thinking companies’ ambitions and the scientific consensus as to the impact of the current global food system on planetary and human health. 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. By supporting and scaling regenerative supply chains, farmers can make a living wage while companies gain better access to healthy ingredients and these products are accessible to all consumers. 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.945

Participants noted that focusing on scaling-up the circular economy plays an important role in helping the system catch up to the private sector’s ambitions. Regenerative farming needs support so businesses can access healthier and more sustainable ingredients at scale. Making sure everyone has access to these foods can also ensure that there is an equitable and fair playing field for all companies developing these products.946
Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how ‘old’ concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems.  

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.

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.

Agroecology is weakened if small farmers do not own the land they work. Therefore, Governments must do more to ensure that the land rights are in the hands of those who work and live on the land rather than the corporate sector. However, this contention is complicated by the fact that in countries that do not have property records, the Governments (mainly postcolonial Governments) are persuaded by TNCs to digitise land records. In the process they are denying indigenous practices where there isn’t one individual that owns a certain plot of land but rather a communal style of ownership. Therefore, capitalism is running against indigenous traditions to dispossess people of the land that they have lived and worked on for many centuries.

Small farmers should begin by looking at what is feasible under the current system. By asking themselves ‘what can I do within the current system to grow more sustainably?’. For instance, if the farmer is reliant upon growing rice and has no other option within the current system but to grow rice, regardless of the negative consequences, then they should undertake the necessary enquiries to unearth the modern techniques or methods that would allow them to grow rice but with less water consumption and less pesticides.

Valorization of traditional knowledge by discovering local and ecological resources, thus reducing the use of harmful chemical products or pesticides, is important.
Management of natural vegetation (buffer strips, hedgerows) is also considered important to encourage presence of wild pollinator populations.\(^{953}\)

Investing in sustainable resource management and regenerative production practices that deliver benefits for people and the environment. These include agroforestry and agroecology for crop and livestock production, as well as protecting key ecosystems such as watersheds or coral reefs and mangroves. Local and indigenous knowledge can be as an important source of know-how for resilient food production practices.\(^{954}\)

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.\(^{955}\)

Boost environmentally-friendly production. Priority was given to tools [instruments] to quality food production by FFs, and to advance systems that reduce gas emissions, increase carbon sequestration, and/or that are useful in protecting valuable ecosystems: • Non-returnable [financial] support for co-innovations by FFs and research institutes to expand biologically, environmentally and economically sustainable production systems. • Train extensionists in practices needed to move from current to proposed production systems, favorably influencing factors related to climate change. • Subsidized investment loans and working capital for the transition from conventional to agroecological systems. • Ensure that FFs have access to quality seeds, based on the collection, selection and genetic improvement of native seeds. • Promote local consumption of agroecological FF products (short distribution channels, internet sales, public procurement, gastronomy sector), avoiding unnecessary transportation.\(^{956}\)

Peru prioritized tools [instruments] to boost quality food production by FFs, and to advance systems with low emissions, greater carbon sequestration, and useful for protecting valuable ecosystems: • Non-returnable financial support to co-innovations of AFCI organizations and research institutes to expand agroecological-organic production. • Train extensionists in agroecological practices, in order to influence factors related to climate change. • Allocate budget for measuring and certifying the quality of systems implemented by AFCI. • Ensure that AFCI has access to quality seeds for the collection, selection and improvement of native seeds. • Promote local consumption of AFCI agroecological products (short distribution channels, internet sales, public procurement, gastronomy sector), avoiding unnecessary transportation.\(^{957}\)

Develop waste collection to be used in the production of organic fertilizers that return to production quickly and efficiently. - In the countryside we are experienced in using stubble as an input for organic fertilizers, compost, bokashi and biopreparations. - In the forest, the concern is with fruit trees that are wasted. We would like to have pulpers, which would reduce losses, and use the peels to make essential oils. - Training and raising awareness in order to eradicate the burning of stubble and dry grasses.\(^{958}\)
The OPA, an organization for agroecological rights in Parana, has been working for 25 years to build a State Rural Development Institute.¹⁵⁹

What actions should be disseminated beyond the Summit? Margarita: Take these events to a national level; people do not know about the Summit; many farmers’ organizations contribute to increasing the political vision, disseminate it in the media. Family Farming NGOs in each country should promote reflection. Jerónimo, SPP Small Farmers Network: Promote methods of cultivation and consumption, unite the efforts of the organic and agroecological movement; there are common points. On a small scale, there is collective strength, horizontality, and dialogue.⁶⁰

For women, crops grown on less land are more resilient than those grown on a large scale. The emphasis is on the variety of crops, since it ensures that the failure of one item has a reduced impact on the food security of the communities. The recognition of ancestral knowledge is advocated to ensure the incorporation of knowledge which over time has been successful in food production. The women also argue that there should be a reduction in waste and the use of chemicals. The dissemination of family crops (Conucos) is recommended for their efficiency in food security.⁶¹

Therefore, we need to talk about food sovereignty, which is defined as people’s right not simply to food, but to also ensure that what is consumed is nutritious and culturally appropriate, accessible, produced sustainably and ecologically, and that they exercise their right to decide on their own food and productive system. Employing this logic, young people play a leading role in transforming the way people think about the country and the practices developed there in the search to claim and guarantee these rights; that pursuing this will return it to a livable space, reducing multidimensional inequalities by creating space with decent living conditions and for producing, which in turn establishes food systems that are healthier and fairer.⁶²

...the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform.⁶³

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 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.⁶⁴

Training young people and adults for development of new knowledge which allows for improvement of production based on technology and agroecological logic⁶⁵

We are in the midst of a pandemic causing a serious crisis to the system, so it’s time to turn the crisis into an opportunity for the peasant and agroecological production sectors to be at the center of the discussion. It must be made clear that there must be healthy, resilient food and healthy production to overcome the circumstances

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¹⁵⁹ 345:3 p 6 in 416a_June_16_21_Mone S_Spanish_Eng
³⁶⁰ 346:0 p 6 in 416a_June_16_21_Mone S_Spanish_Eng
³⁶¹ 346:2 p 6 in 417a_June_18_21_Fernandez L_Eng
³⁶² 347:3 p 6 in 418a_June_18_21_CLOC_Eng
³⁶³ 347:5 p 7 in 418a_June_18_21_CLOC_Eng
³⁶⁴ 348:3 p 6 in 419a_June_08_21_CLOC_Eng
³⁶⁵ 348:11 p 7 in 419a_June_08_21_CLOC_Eng
permeated by the pandemic. It is necessary to accomplish a good local presence in local, national and international spaces. Resilience is only possible if there is food sovereignty and agroecology.

Tax benefits that improve competitiveness of quality and sustainable FA products • Comparative studies "agroecological vs industrialized consumers", to support tax benefits for lower health costs.

Because the country has so many vulnerable crops such as cocoa, coffee, beans, impacted by climate change, people are stopping producing and these have increased in price. There is even no generational replacement for production. Only large companies have continued the production of these crops, which are also produced for export.

Benefits and risks of climate warming; e.g. crop diversity can increase, but locally adopted crops and farming systems (including animal) are required in combination with pest management methods to address emerging pest pressure from northwards shifting ecosystems.

Diversified and sustainable intensification of production strategies appropriate to different geographies, cultures and a wide variety of farm types and scales to produce high quality protein, grains, and fruits and vegetables and reconnect production processes that re-integrate livestock, aquaculture, and crop agriculture as systems to better recycle nutrients.

Improve the efficiency and sustainability of resources use in agriculture and food-processing industry in order to minimize biodiversity losses, climate change impacts and pollution generation.

For this, changes needed to be made not just in production systems and government regulations but also in consumer behaviour.

On the production side, this could manifest in smallholder producers’ lack of access to knowledge or quality organic inputs. Thus, efforts should be directed towards improving access to resources for marginalized communities, through initiatives such as fair price shops or facilitating local production and sale of organic inputs.

Promoting and establishing decentralized local markets, in partnership with small farmers, enables the access to healthy food in times of crisis.

In meeting the aim of Boosting Nature-Positive Food Production, respective Government agencies have responsibilities of providing farmers with biofortified crop seeds and adequate training to boost production of farm outputs as well as incentivizing regenerative food production.

Increase the production of more nutrient dense foods by exploiting new plant varieties, better animal genetics and better crop husbandry to deliver better outcomes with minimal additional cost.
We need to tap into the huge market for organic products/raw products and sustainably produce more indigenous species, for pest control, natural beauty products, and consumption, and market them well.\textsuperscript{977}

Practices such as beekeeping, community gardens, no till agriculture, indigenous agriculture practices, agro forestry rainwater harvesting, stormwater management and mitigation Utilize contract farming/sustainable procurement as means of reducing food loss, reducing carbon footprints and having farmers know exactly what varieties of crops to grow.\textsuperscript{978}

Prepare a national action plan to develop sustainable consumption and production systems • Exchange experiences and success stories and educate consumers and producers to move towards sustainable consumption and production patterns.\textsuperscript{979}

Review national social protection programs, and replicate successful experiences from other countries • Establish laws to ensure product quality, impose quality control and penalties on violators, and apply food taxes • Ensure the establishment of an institutional framework concerned in transforming food systems into sustainable and healthy consumption and production systems and developing legislations that contribute to accelerating this transformation.\textsuperscript{980}

Development of new seed varieties that guarantee longer shelf-life and the ability to withstand the rigors of harvesting, transportation, and storage\textsuperscript{981}

Starting from raw materials with low emissions, the production process from upstream to downstream also needs attention to implement an environmentally friendly process. Transparent production processes are used as one approach towards consumers so that consumers can choose healthy, safe, halal, and sustainable food. Manufacturers also need to increase honesty and responsibility in the production, sales and promotion processes. It is also important to have informative and interactive smart food packaging that is easy to understand, to provide information on nutritional value, product processing flow, and the quality of food ingredients contained in packages such as level of maturity, and product freshness.\textsuperscript{982}

A fresh look into production, transformation and distribution towards a healthy and sustainable diet for all will bring us to profound systemic changes.\textsuperscript{983}

Theme 7: local food systems are central to the solutions. Municipalities can take part in all SDG’s Proposal: since food systems are so complicated, each municipality or region must have an inclusive food and sustainability council led by the mayor and lead the region’s healthy and sustainable policies. Proposal: connecting the municipalities’ private sector to be part of the solutions to changing the local food systems to healthier and sustainable ones\textsuperscript{984}

As we all realize today, the broken food systems, especially from the livestock industry, set a global danger and must change to suit the global resources and human health.\textsuperscript{985}
Reverse the production focus from animal- to plant-based protein. Logistical drivers should be considered in providing plant-based foods into different regions/countries.

The practices of the food system, from upstream to downstream, and types of food that have the potential to become future food. Examples: Sago has a great potential to become future food. Most parts of the plant can be used thoroughly. Starting from sago starch, sago waste, to the leaves. The leaves can be used as food packaging. Sago can be used as main meal (carbs) or as a snack. Sago waste can be made into fertilizer and animal food.

To preserve human and planetary health our food systems must transition to be majority plant based that relies on a wide diversity of fruits, vegetables, and grains that are culturally and bioregionally appropriate.

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Add a Track 6 on transforming corporate food systems. Corporate food systems are the elephant in the room. Our silence actually affirms their role and their ability to advance. In the South, it is very difficult to get the needed accountability. Radical partnerships looking after food-water-energy nexus are needed. The indigenous peoples know the best water sources in the mountains; they can be empowered to sustain those.

With imports, the agricultural and food supply is adequate, the rate of undernourishment has dropped significantly in China. China’s ability to guarantee its own food security is one of the greatest contributions to the world. At the same time, the agricultural market, agricultural products, and processing industry are transforming and changing dramatically in China.

The food system must produce healthy and nutritious food.
viability, prevention of damage to the environment, and socioeconomic equity. To arrive at those, on the one hand it is necessary to build awareness among local stakeholders regarding agricultural best practices (awareness-building largely using modern communications channels, adoption of shock communications methods if necessary) and on the other hand to implement the means necessary to promote these sustainable and resilient production methods while preserving the food security of households. 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. 995

Recognizing that the best alternative to in-person school meals is delivering food parcels to all students' families (thus guaranteeing the principle of universality of free school meals), which also include fresh/natural foods that come from family farms or traditional communities, to incentivize and ensure the continuation of local food production. 996

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. 997

Strengthen/make visible the role of women in the production and commercialization of food with specific policies. 998

Strengthen generational turnover (rural succession) with the adoption of specific policies. 999

Publicize the existing regulations on planting and harvesting cycles, as well as those related to commercialization both in the national and international markets, and those other regulations that can be used in terms of chains, public-private alliances, public purchases, incentives for agricultural and agro-industrial production. This is so that the public policies that influence the optimal planning of national agricultural production, both for planting, harvesting, and for the import of certain items, supplies and substitute and/or similar products are better known and implemented. • Update those policies and/or laws necessary to guarantee the implementation of the objectives of a properly planned production, oriented towards sustainability, and healthy consumption. 1000

Promoting planting of basic products in rural areas. 1001
Sustainability problems

To protect indigenous territories from industrial pollution, genetically modified or synthetic biological organisms or elements.\textsuperscript{1002} ...

generate data to assist decision making and particularly on climate change risks and adaptation.\textsuperscript{1003}

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.\textsuperscript{1004} Public research agencies should adopt these new technologies but need political will and commitment. Regional cooperation is needed for technology transfers.

A dynamic exploration of the important nexus in food systems, such as agriculture-climate-food or food-nutrition-health, considering synergies, trade-offs, costs and benefits, should enhance transformation potentials.\textsuperscript{1005}

Special focus on identified climate hotspots and plans to manage, mitigate, and adapt to climate stress and shocks in accordance with government plans. For that, detailed vulnerability mapping, heavy investment in disaster risk reduction and innovation of insurance mechanisms and targeted subsidies are required.\textsuperscript{1006}

Develop a program for adaptation of agriculture in the north to global climate change.\textsuperscript{1007}

Employing smart initiatives that require lesser natural resources and produces more food such as hydroponic, aeroponics...\textsuperscript{1008}

Health systems should recognise climate change and its impacts on human health in policy and practice and take responsibility for reducing their own climate footprint.\textsuperscript{1009}

Climate change and urbanization: Urbanization negatively impacts food systems. Need to improve access to quality water through exploiting climate-Smart technologies.\textsuperscript{1010}

Regenerative food systems with a focus on regenerative foodscapes. These are meant to be food, action land- and seascapes that show the transformative impact of improved management practices which restore nature – climate-freshwater-biodiversity – in ways that are attuned to the local culture, economic and biophysical situation.\textsuperscript{1011}

22. We recognize climate change is affecting more and more people. We commit and ask for all parties to include Indigenous Peoples’ leadership, knowledge, and management practices to face and mitigate impacts of climate change. 23. We commit
to and ask all parties to join us in focusing on long-term water security by prioritizing watershed health, decontaminating streams and rivers, and working towards restoring potable water sources across large regions.\textsuperscript{1012}

Recommendation 5: Natural resource management and local biodiversity are key - water and soil are key elements to sustain biodiversity and lower climate impact. Poverty remains a major obstacle to proper natural resource management. Who: private sector and national governments to develop and enforce legislation, farmer organizations. How: balancing the demand and utilization of water through solutions like the smart water system (Internet of Things). A prerequisite for the recommendation is better soil data. To improve soils, governments need to encourage the use of biodegradable products and promote the use of technology to valorise biodegradable waste. Local governments and farmer organizations should inventory and use more neglected species (with local nutritional value/agroecological virtues) as they are the ones that promote biodiversity. Communities and farmer organizations can promote ancestral practices, where importance was placed on the planting of diverse species of "lesser" economic utility but containing other values (e.g. various trees that shelter flora and fauna). Governments and communities should organise small areas that rebuild natural biotopes (protected micro areas).\textsuperscript{1013}

Recommendation 5: Natural resource management and local biodiversity are key - water and soil are key elements to sustain biodiversity and lower climate impact. Poverty remains a major obstacle to proper natural resource management.\textsuperscript{1014}

Moving towards more integrated approaches for smallholder farmers, a partner identified the need to set a climate change adaptation target within its organization (i.e. 75\% of approved projects focusing on sustainability) as a way of pledging support to the campaign, along with a commitment to evidence building (from proof of concept to scale).\textsuperscript{1015}

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.\textsuperscript{1016}

Organic offers a host of benefits for the environment and for overall human wellbeing and longevity. Organic farms sequester 26\% more carbon than conventional farms and increase biodiversity by some 30\%. Organic agricultural practices also build and foster healthy soil, mitigate climate change, conserve water use, reduce pesticide consumption/exposure, boost pollinator populations, allow for long-term self-
sustaining farming viability to meet the growing needs of our planet and are ultimately more resilient to extreme weather conditions.\textsuperscript{1017}

2. In contrast with industrial agriculture, FFPOs and Indigenous Peoples territories routinely integrate biodiverse patchworks of agricultural land with forests in agroforestry systems, woodlots, fallow lands and conservation areas that are offering inclusive climate resilient development.\textsuperscript{1018}

Resilience to extreme events, shocks, pandemics Youth are thinking more about climate change; inclusion of smallholder farmers in the discussion; more proactive support for climate smart farming and permaculture.\textsuperscript{1019}

The importance of reconnecting to and valuing Nature was central. “Nature has its rules: if we understand them, we can implement a new, symbiotic economy” and “while dominant cultures sustain a sense that our species stands apart from the natural world, others have always nourished a deep sense of connection and harmony with Nature.” Bridging indigenous knowledge and science can help foster a “mindset reboot”, including one that “accords trees, water, soil the dignity and intelligence of living things”.\textsuperscript{1020}

Finding ways to optimize environmental resources by eliminating wasteful patterns of food consumptions, reducing water use, soil degradation, and greenhouse gas emissions still needs to be further discussed.\textsuperscript{1021}

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.\textsuperscript{1022}

Ghana Cocoa Board and its subsidiaries are focused on mitigating climate change and other environmental sustainability threats through cocoa agroforestry practices, climate smart cocoa production and irrigation.\textsuperscript{1023}


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.\textsuperscript{1025}
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.\textsuperscript{1026}

Sustainability must not be viewed as a single, exclusive destination, but rather as a diverse, continuous, and inclusive journey.\textsuperscript{1027}

Participants expressed serious concern that the FSS may be defining sustainability and healthy in ways that exclude the majority of stakeholders in the food and agriculture supply chain. Such approaches will exclude valuable expertise, ignore practical solutions, and impact consumers’ understanding of the current and future impact of their food choices. To gain the support needed to actually work, FSS approaches must be inclusive and flexible.\textsuperscript{1028}

Participants suggested that to reduce the risk of food production caused by climate crisis, we need to diversify and sustain production strategies that is customized to our geolocations, cultures and different variety of crops.\textsuperscript{1029}

The true cost of food has to be recognized and rewarded, while making healthy and sustainable food available and affordable to all.\textsuperscript{1030}

Furthermore, the Mediterranean diet was highlighted as one of the levers of change for bridging sustainable consumption and production.\textsuperscript{1031}

Improve the efficiency and sustainability of resources use in agriculture and food-processing industry in order to minimize biodiversity losses, climate change impacts and pollution generation\textsuperscript{1032}

Although there is a need for a national level policies that facilitate the shift towards sustainable production and consumption, their implementation should be decentralized\textsuperscript{1033}

The challenges of ensuring both resilience and sustainability, especially for marginalized and indigenous people, were discussed.\textsuperscript{1034}

The participants then addressed the issue of transitioning to sustainable and nutritious consumption patterns\textsuperscript{1035}

It was agreed by all participants that a clear implementation strategy be design in view to foster the rights of nature while substantially contribute towards a sustainable food systems transformation in Africa.\textsuperscript{1036}
Enhance land management systems that protect access to land. Promote use of efficient water management systems that are accessible to small farmers (c) Optimizing Sustainable Production

Optimizing Sustainable Production

Government is encouraged to effectively implement a sustainable national home grown school feeding program, taking lesson from Osun State.

The importance of attaining sustainable consumption patterns can hardly be overemphasized.

A food system that supports socially sustainable communities

Sustainable financing regimes need to consider supporting and scaling circular economy projects.

Sustainable procurement practices need to also be more widely applied by the private sector. These should support preference for local and regionally produced foods.

We acknowledged that shifting the status of food from a commodity to a public good can help in contemplating its true cost and value and we recognized that a new perspective in the way to produce, process and distribute food, orientated towards achieving healthy and sustainable diets for all, will lead to profound systemic changes.

This implies new traditions, a new concept of sustainability and affordability (in its broad definition) and social proximity. The day that we will be collectively able to bring diversity as a fundamental aspect of belonging will imply the creation of a new narrative in the shape of a clepsydra. Diversity will be the unifying factor and the narrative won’t imply a homogenization of diversity but will rather embrace it as a source of richness.

Over the years the food services industry has helped influence and enable shifts in the global food system given its buying power, scale of infrastructure and user reach. Today, the business and institutional food services industry (tech, financial services, academia, entertainment, etc) has a sizable opportunity to positively advance the global narrative as well as consequent actions on sustainability, social equality and access to healthy, nutritious food.

The major focus of the dialogue was to envision a future for food service centered on equity, sustainability and economic well-being for food and farm workers.
To unlock sustainable finance, a distribution mechanism is needed to ensure equitable value distribution all the way down to the farmers.\textsuperscript{1048}

Participants acknowledged the need for a change of narrative, with a stronger focus on embracing diversity, bringing about a culture of empowerment, and rethinking our habitats while reconsidering the value of food with the lenses of a true cost approach. This implies that we look at sustainability, a key feature of a true cost based economy, beyond a technical ESG approach.\textsuperscript{1049}

The municipality should lead processes of assimilating a healthy and sustainable food system.\textsuperscript{1050}

Sustainable agriculture: 1. Promotion of a holistic view, focusing on local eco-friendly agriculture as a primary provider of food\textsuperscript{1051}

Ensure holistic, aligned communication on sustainable food systems, by: o educating the public about the versatile aspects of the food systems, o breaking the communication silos, o avoiding generalisation and tailoring the messages and formats to specific audiences, o framing healthy sustainable diets around culture, social norms, and values, o integrating practical aspects that people can relate to and directly benefit from (e.g. cooking classes, weekly menu planning, sustainable grocery lists, food waste reducing practices). \textsuperscript{1052}

The sustainability of food systems is a global issue, facing diverse challenges, so the response must be global. The attention to the external dimension of the F2F is especially important, as Europe’s agricultural and food system impacts outside Europe.

- An integrated approach should be embraced with third and developing countries, and align the trade, development policies and decisions in standard setting organizations.\textsuperscript{1053}

To address the main topic of the dialogue in a comprehensive way, three specific topics were defined to motivate the exchange of experiences, ideas, and proposals: 1. Toward a healthier food system 2. Toward a more secure and sustainable food system\textsuperscript{1054}

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.\textsuperscript{1055}

In fact, in shifting to more sustainable consumption patterns, wholesale markets are examining solutions such as promoting food waste reduction and distribution of food surplus that makes nutritious food accessible to the vulnerable populations.\textsuperscript{1056}
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.  

At the same time, the food system is transforming towards a more sustainable future.

Sustainable Agriculture: Information was exchanged about the challenges of climate change on food production in Central America. The objective was to develop solutions for improving access to food worldwide and share how transformative solutions could accelerate sustainable food production.

The event brought together a diverse set of stakeholders for a bold, solutions-oriented discussion on sustainable diets.

Sustainability is a journey not a destination.

Growing economic opportunities without compromising our sustainability goals: To what extent, and how, can changes in livestock keeping, livestock ownership or livestock as a business help advance equitable livelihoods and achieve healthier diets – without damaging our natural resources or leaving anyone behind?

The shift to sustainable consumption patterns with the theme: Sundanese Sustainable Gastronomy where there is a Sundanese food culture and ritual with the resulting diversity will affect the demand for food commodities by quantity and this has an impact on the food balance in Indonesia.

Preliminary data suggest that although progress is still needed, our producers are often among the most sustainable on the planet. Canada can embrace the idea that we are the world’s trusted producers of safe and sustainable food and put agriculture at the centre of a green economic recovery program.

Benchmarking and showcasing sustainability practices and outcomes in regional and national agricultural and food systems

Policy supports to ensure the market generates a fair return to producers will be critical also if more sustainable, and possibly more costly, products are to dominate.

The benefits/impacts of implementing the agreed actions include helping to address the climate and biodiversity emergency and avoid a potential food security emergency.

Most farmers or policy makers are not aware that the current practices of using and producing chemical NPK fertilisers are so destructive to our biodiversity, ecology and
natural life supporting system. As there are symbiotic relationships among, air, water and land (soil).1068

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through extension workers or other food organization. Increasing research and innovations and delivering it in the indigenous languages. There’s also an urgent need to rethink and transform production models.1069

The benefits of protecting nature are tangible to people through improved water, energy and food security. In addition to this starting point, it was noted that nature can teach us a lot. Especially when it comes to food production and consumption systems, we can learn a lot from nature in terms of circular economies, reducing waste, and increasing nutritional value.1070

Put up farmer field schools that integrate climate resilience and sustainable organic farming1071

There is much potential to apply technical adaptation in waste recovery. Ultimately, we need to embrace new, more sustainable approaches to farming, rather than trying to alter a broken system.1072

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. It was suggested that we shouldn’t wait to be certain it is 100% safe before starting to think about implementing this in a safe and sustainable manner1073

We have become dependent on unsustainable practices: As an effect and outcome of isolation from our lands, waters, traditional lifeways and diets, knowledge systems, languages, communities, etc. - we have become dependent on unsustainable practices and ways of life engrossed in the current individual-focused and dominant culture society. Oftentimes the foods we eat, the ways we live, the places we live, the jobs we work, the ways we earn money and exist in the present day are reliant on the extractive economies, industrialized food systems, and non-representative political institutes. Our dependence on unsustainable practices has been for survival and default.1074

The mentimeter one-word analysis done shows the emphasis on three themes: Resilience, Sustainability and Participation, as core pillars in the concept and promotion of food systems resilience.1075
Investments towards building sustainable systems that guarantees safe and nutritious food right from farm to fork.\textsuperscript{1076}

If we understand ourselves in a symbiotic relationship with the natural world then we have no other option than to reorient how we treat it, what we take from it, how we consume, and how we replenish and restore it. It’s an important epistemological shift that if taken seriously will help us make decisions that co-benefit humans and the earth.\textsuperscript{1077}

Worker justice -- People and the land cannot be see an objects to be exploited for profit - Workers will not treat the land with dignity if they are not treated with dignity - Farm and food workers need to be provided a living wage. Too many farmers don’t earn enough to adequately provide for their families\textsuperscript{1078}

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.\textsuperscript{1079}

To address these issues, the group discussed the need to share costs of sustainable development equitably across the value chain. Greater investment in small-scale farming, and encouragement of farmer and food cooperatives would help dairy industries grow local communities. Reducing reliance on export markets and imports will also help develop domestic industries and build resilience to global shocks like COVID19.\textsuperscript{1080}

Better resourcing and funding of extension and adoption including adoption of any sustainability goals; a roadmap for how farmers can implement any goals and improve; practical help to dairy farmers so they know what to do\textsuperscript{1081}

Farm to table concepts to support smallholders - some supermarkets and small shops are already moving towards sustainable products, but this is not yet enough to support the smallholder farmers at this time.\textsuperscript{1082}

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\textsuperscript{1083}

Shift to sustainable consumption patterns We need to engage and educate populations about the health and environmental impact of food and food waste: engage communities in garden developments, 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), implement sustainable
nutrition education components in schools, expand composting efforts through a municipal-based pick-up and drop-off system for composting facilities.  

The efficiency increase of food production must take into account social aspects. Small-scale production, when combined with innovative technologies, may provide positive impact on the quality of food and sustainability.  

Sustainable nutrition should support food safety, observe social impacts, reduce climate impacts, implement regenerative agriculture and circular solutions. Actions must be global and not only local, as the supply chains generate effects on planetary scale.  

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.  

Developing more sustainable food systems requires many elements to be connected in a cohesive and collaborative way in order to make progress across all of the Action Tracks identified.  

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.  

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. Specifically this means strengthening farmer organizations, co-operatives, and digital services that serve as the vehicles for scaling up successful approaches.  

If we are truly to understand what sustainable, healthy diets look like we need these metrics to track net environmental impact and nutrient density and diversity.  

Sustainable agricultural practices; Sustainable agricultural practice training should be given intensively to food producers through field schools.  

There is a strong need for collective responsibility to create pathways to sustainable agriculture.  

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Further, implementation of sustainable practices in Agriculture and manufacturing which can decrease carbon emissions is a global priority in mitigating future resource-based conflicts and mass migrations of populations.

Sustainability can be inexpensive, small changes can make a huge difference and make a big impact.

There was a difference between the definition of sustainability for the panellists along with having different sustainable food system priorities. They included; climate change effect, increased yield in a more environmental way, policies or self-driven changes.

Low consumption of fish by the poor and low income households, who usually, experience high malnutrition levels. 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.

Manage sustainably on food production systems, Change Consumption behavior.

The participants agree that food culture is an underrated discussion. Sensitivity to culture issues is vital, and can also have potential to restoring the food system to sustainable levels.

This cannot be understated, and as a matter of policy, investing in the individual benefits accrued from farming--such as the awarding of government grants or funds--should be an immediate priority to preserve the future of sustainable food systems.

Family Farming gained visibility during this pandemic, as the importance of local and sustainable food consumption has been highlighted during the crisis.

For a transition towards more sustainable food systems, it is essential to adopt a horizontal approach, going beyond the sectoral one, for integrated food policies that are able to be implemented in line with the peculiarities of each context. Furthermore, it is important to ensure adequate participatory monitoring and evaluation of projects and activities, especially with young people.

Resilient and Sustainable Food Systems are connected to every facet of the 2030 Agenda, either through primary, secondary, or tertiary system connections – and are, therefore, a Nexus of economic, social, and environmental development.
Build policies and mechanisms related to population planning, production areas, invest in key models, build agricultural policies to support the family through cooperatives, promote agricultural transformation towards ecological sustainability.\textsuperscript{1104}

Guidance Theme 3. \hspace{1em} Equity

**Advancing equitable livelihoods and value distribution.**\textsuperscript{1105}

Russian government needs to significantly step up its sustainability efforts and begin to implement mechanisms to address existing inequities. Today’s decisive action in economic, social and environmental dimensions of food policy will be critical in ensuring that the decade ahead delivers a sustainable food future. There is little time to lose, today we are witness to the pandemic of mistreated biodiversity. We must urgently reconcile humans with surrounding environments and restore our relationship with the nature. Russia’s move away from environmental agenda, continued policy of weakening indigenous legislation and needlessly destructive resource development are the most severe threat so far to country’s indigenous communities. Since the warming temperatures mean more natural resources to exploit, no other country stands to benefit from climate change more than Russia. And under the pretext of the economic feasibility of extractive projects, it substantially ignores already modest standards and requirements for environmental protection.\textsuperscript{1106}

Panelists agreed that inclusivity and equity is key to ensuring better food livelihoods in rural areas for vulnerable groups including women, youth, indigenous peoples and other communities.\textsuperscript{1107}

**Equitable livelihood (i.e., women empowerment).**\textsuperscript{1108}

-WET markets can advance equitable livelihood and this underrated benefit should be discussed more and considered as a goal in future projects.\textsuperscript{1109}

The breakout room discussions covered (1) the impact of the long domestic supply chain on prices and food safety, (2) balanced international trade to fulfill domestic consumption, (3) the health and nutritional values of the food circulated in the market, (4) food loss and waste, (5) Equitable food production, (6) Youth and agriculture
innovation, (7) Food prices disparity between producers and consumers prices, and (8) inability of policies to respond to challenges of food systems on the ground.\textsuperscript{1110}

Co-responsibility and equity as the basis for education about the sustainability of the food chain was mentioned. More transparency is needed, making traceability technologies more accessible and widely implemented, also widening and integrating multi-stakeholder communication and education, throughout society, in schools and across consumer classes.\textsuperscript{1111}

Co-responsibility and equity as the basis for education about the sustainability of the food chain was mentioned.\textsuperscript{1112}

4. Advancing equitable livelihoods: Recognition of Indigenous Human Rights to Maintain Equitable and Culturally Relevant Food Systems.\textsuperscript{1113}

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.\textsuperscript{1114}

Food systems need to be EQUITABLE and promote the livelihoods and NUTRITIONAL STATUS of the MOST VULNERABLE in food systems both in urban and rural areas (including smallholders, children, youth, and women) with a view to addressing their specific needs, access to safe, nutritious food, and enabling them to catalyze income generation to be drivers of change through their food choices. Investing in agri-food systems which make nutrient-rich foods available, at affordable prices for all, is needed in the region.\textsuperscript{1115}

effectively participatory, integrated, rights-based approaches to governance at all levels in order to address the structural inequities in food systems.\textsuperscript{1116}

Equity and inclusion are core principles for transformation. Women and Indigenous peoples are essential to sustainable food production and biodiversity preservation; however, land tenure systems make both groups particularly vulnerable.\textsuperscript{1117}

It’s said that women feed the world, but we say that they feed us on somebody else’s land. Women are 60% of the agricultural labour force, but own only 15% of the world’s land. Women have less security and rights, and in emergency situations such as the pandemic, they are the first to suffer from the current food system, as they have little to fall back on. Indigenous peoples also face major vulnerabilities, and this translates to vulnerabilities of their land as well – including the ecosystems, biodiversity, and the carbon storage they protect.\textsuperscript{1118}
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.1119

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.1120

...building partnerships that are equitable and fair and transparent...1121

1. For food insecurity in the past, we have mostly focused on yield, income, and very particular metrics, but we know that we also have to look at equity, health and access.1122

Labor market governance and institutions need to be strengthened to advance more equitable livelihoods.1123

Poor women’s nutrition needs to be addressed as an equity issue.1124

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.1125

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.1126

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1122 423:31 p 6 in 424_June_10_21_FAO_UNFFS_Multi
1123 429:290 p 21 in 430_June_17_21_Burian_Multi
1124 430:35 p 9 in 431_June_08_21_van Liere Mult
1125 457:60 p 10 in 458_Apr_27_21_Mauderli_U
1126 458:53 p 10 in 459_May_04_21_Mauderli_U
1127 459:52 p 10 in 460_May_11_21_Mauderli_COSUDE
competitiveness of smallholders in developing countries and the environmental sustainability of food production.

Whilst we recognise that mechanisation would be necessary in some parts of the food value chain, particularly in addressing wastage during harvesting, we resonate more with protecting the livelihoods of farm workers, given that equitability in food systems should encompass all actors. To reduce production cost, however, farm owners could explore low-cost, natural farming methods like JADAM.1128

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.1129

Governance/Policy/Finance re healthy food access: Access to healthy products should improve and become equitable.1130

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.

But the conversations focused mostly on the solutions to reestablish connection and compassion to foster food systems that are regenerative, equitable and nourishing in all senses of the word.1131

We require a language of equity, working with natural bio-markers such as soil and watersheds, to create a common language amongst all stakeholders.1132

There is a need to focus on improving economic conditions, food access and living wages to work towards a future of equitable livelihoods.1133

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.1134

They are calling for equitable, nutritious and sustainable food systems that provide healthy diets for all.1135
Placing equity at the center of our solutions and especially targeting vulnerable communities. Ensure that basic services are provided to low income and vulnerable populations.  

Ensure equity and inclusion of leading regenerative farmers.  

Promote gender equity and equality in SSF sector. 

Promote gender equity and equality in SSF sector.  

NURTURING EQUITY across our food system: We need to build models that support economic equity and benefit all stakeholders in order to see true systems change. By creating examples and mechanisms how sustainable practices can bring value and opportunity. With this we can build a new culture around the value of our food. 

EDUCATION IS KEY to bridging inclusivity and social equity across all cultures. EDUCATION needs to be democratised: accessible and recognized by all class systems to ensure adoption and a shift in behaviors. It should also be responsive to the diverse communities and represent food customs and heritage. 

build opportunities for people to realize the benefits to shift their behaviour: social stewards to connect social equity to economic equity. 

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

Ensure women have the same access as men to education. 

Redesign Farm Schools to promote and support women - Invest in ethical micro-finance and training to support women. 

Education opportunities for women farmers include working on food supply chains (processing) and teaching agribusiness, managing savings etc. Youth friendly women’s farmers’ federation increases economies of scale to be able to access to markets and improve consistency of supply. 

Mama programme - supports women to distribute their product through building an inclusive supply chain and access to market and training and finances.
Ensuring financial and nutritional education through cooperatives to move women on a path to agency and empowerment.\(^\text{1148}\)

...helping entrepreneurs, providing knowledge and access to training and financing.\(^\text{1149}\)

Education. If we are going to generate change, we need to focus on education. It is the true pillar for change. We need to educate on resources and systems, and teach people the real value of food.\(^\text{1150}\)

### Awareness of the role of women

At the same time, women play a major role in the Food system – in production, processing, trading of food and in making decisions about consumption and purchase of food at household level.\(^\text{1151}\)

Gi initiatives allow space for dialogue and recognize the roles of the most vulnerable actors (smallholders, women, youth) in defining and adding value to the specific characteristics of a given GI.\(^\text{1152}\)

Vijay Kumar of RySS, India, described the pivotal roles of both government investment and grassroots, women-led collectives in increasing access to sustainable agriculture practices.\(^\text{1153}\)

### Recommendations to scale up and scale out Solutions: ...

Provide spaces for women and young fishers to act. ... Empower and organize women and youth fishers.\(^\text{1154}\)

Women are the farmers that must be empowered and have their own economic weight to pull in their communities.\(^\text{1155}\)

Any policies developed in the sphere of food security, biodiversity, climate change and other related areas should include legal measures and standards protecting the knowledge, cultures and traditions of indigenous peoples. These measures should be based on human rights and international law and elaborated collectively with the full and active participation of indigenous peoples at every stage of development process; should include productive institutions in the dialogue and ensure indigenous women’s participation.\(^\text{1156}\)

The enhancement of local rural and coastal communities was considered relevant with particular attention to the inclusion of youth and women.\(^\text{1157}\)
The participation of women and youth in food systems following (dis)empowerment is queried. This participation is also examined based on "how we can incentivize women, youth, people differently-abled, and other vulnerable groups to aid their participation in food systems more meaningfully."\[1158\]

While governments and policy makers play a critical role in providing the incentive schemes and frameworks needed to achieve our ambitious development targets, local farmers, governments and other stakeholders are the ones ‘localizing these agendas’. For instance, as recent events in Chile’s social uprising showed, governments need to work closely with the stakeholders impacted by their decisions, including farmers, local communities and particularly women as protagonists who effectively manage entire landscapes.\[1159\]

With more people migrating to urban centres and changes in traditional jobs, gender-related roles and responsibilities are changing, which has subsequent impacts on diet and health. In Fiji, for example, more women are now in the formal workforce, yet they maintain responsibility for the bulk of the care work for their families. The need to balance paid and unpaid work is increasing the reliance on convenience foods, which are often cheap but ultra-processed and lacking nutrition. Across the Pacific, women continue to play key roles in agriculture and fisheries sectors; however, they tend to be undervalued and underrepresented actors in agriculture and fisheries development and decision-making. This underrepresentation means that typically unheard voices in crucial industries go ignored, exacerbating inequalities.\[1160\]

Michelle Nunn, President and CEO of CARE US, emphasized the role of women and gender equality in transforming food systems. She emphasized the need for providing tools to allow people to hold their governments accountable.\[1161\]

Recognize women and youth as purveyors of wild foods and continue to support them through capacity building.\[1162\]

It’s said that women feed the world, but we say that they feed us on somebody else’s land. Women are 60% of the agricultural labour force, but own only 15% of the world’s land. Women have less security and rights, and in emergency situations such as the pandemic, they are the first to suffer from the current food system, as they have little to fall back on.\[1163\]

Awareness for women, youth, and farmers
Raise Students’ awareness of the true cost of food. Based on the existing nutrition and health perspective, expanding monitoring dimensions of the intelligent system to fully
utilize its scientific, accurate and transparent information, can raise students’ awareness of the true cost of food and the benefits of healthy eating from all aspects. Thus, they can be nudged to better eating habits.\footnote{1164}

Another core finding is the need to reduce the gap between consumers and farmers and change behaviour through awareness raising campaigns. The participants felt that a way to bridge the information and knowledge gap was by implementing large-scale awareness campaigns on the value of food production and its role in environmental sustainability, targeting both consumers and producers. The next step in moving from awareness raising to behaviour change for healthier food choices is focusing on youth at schools and local women’s groups. By involving the next generation of change makers through dedicated school programs, and women as potential agents of change at the community level, it is possible to influence family decisions.\footnote{1165}

Agri-food as a career option: Not enough is being done on career training; students are not aware of the diversity of agri-career options; there are few role models speaking to schools to encourage youth about careers in agriculture.\footnote{1166}

Financing should be a package where we combine financing, capacity building in both financial literacy and Good Agricultural practice. We should also have credit products that are tailor made to suit different farmers requests such as the women and youth. Their needs are different.\footnote{1167}

Elevate the Voice of SMEs: Food entrepreneurs are incredibly diverse. Hence, collectively they neither easily influence nor hear the policy decisions that determine their future. Policymakers are often simply unaware of this quiet majority and are instead swayed by more powerful voices that are easier to engage. Positive examples exist of institutions and processes that elevate the voice of SMEs. The best of these also manage to amplify more marginalised entrepreneurs such as women, youth and indigenous people. Replicating these efforts around the world will ensure our food systems are designed and managed in ways that realise the positive contribution of SMEs.\footnote{1168}

We insist upon recognizing and respecting the role of Indigenous Knowledge in relation to our food systems and the opportunity for the ethical and equitable engagement of our knowledge through genuine co-production of knowledge processes, research and decision-making.\footnote{1169}

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.\textsuperscript{1170}

There is a much needed boost in helping farmers become more aware of their role and value in improving and ensuring the sustainability of agri-food systems. The focus of agricultural education should not be solely on the science and technical aspects of agriculture. Much needs to be done on what it can do for society, primarily on empowering smallholder farmers as transformers --- agents of good nutrition, stewards of the environment, and drivers of economic change.\textsuperscript{1171}

One of the highlights was that farmers learn from peer groups, so increasing awareness of access to seeds is crucial. However, information is not always fully shared with farmers, so they are not aware of the availability of resources. Therefore, it is very important that farmers' needs and expectations can be included by those (private or public actors) that would like to undertake the research and development work for new varieties in accordance with farmers' demands.\textsuperscript{1172}

This discussion group emphasises the role of young entrepreneurs and the role of the youth in general. We should target the younger generations, since they will be the ones establishing new, more responsible and inclusive consumption trends, and kick start innovations in recognizing and revaluing the role of food producers.\textsuperscript{1173}

Indigenous Peoples’ representatives should have a formal role in the UNFSS, and governments should ensure their participation in national dialogues / Indigenous peoples, including women and youth, should have equal opportunities to participate in local, national, and international processes and policy discussions, such as Food System Dialogues, the UN Food Systems Summit 2021 and other decision processes affecting food systems, climate change, and biodiversity.\textsuperscript{1174}

Youth need to be included, women need to be included in the policy making process, the whole process, from the start.\textsuperscript{1175}

Food systems need to be EQUITABLE and promote the livelihoods and NUTRITIONAL STATUS of the MOST VULNERABLE in food systems both in urban and rural areas (including smallholders, children, youth, and women) with a view to addressing their specific needs, access to safe, nutritious food, and enabling them to catalyze income generation to be drivers of change through their food choices.\textsuperscript{1176}

The role of youth and the next generation in food systems conversations is not to be underestimated. Youth can influence and change perspectives in innovative ways unheard of by many other stakeholders. As digital natives, their understanding of the internet provides them with the tools to examine all information with a critical lens. In
this VUCA world, youth are thinking & acting differently than different generations. They are purpose-driven, idealistic, not loyal to brands, want to see change, and put value systems at the forefront, global citizens, open-minded, and changemakers. Youth see challenges as opportunities and can be trained to seek nuance in today’s information overload through equipping themselves with the skills to be mindful of media & information consumption. As more youth are taking leadership roles in food systems, it is important to build bridges, listen, ask them questions, and help them establish a shared purpose behind their work, to substantively shift food systems to be more positive for future generations. There is a strong need to connect with youth and listen to their perspectives through humble and open attitudes. Everyone has a role to play in food systems conversations.

Women-specific program interventions should be taken up widely, as they are one of the most vulnerable and food insecure groups. Food security should be assessed through a gender lens and women’s participation should be ensured at all levels of decision-making and implementation.

Capacity of women, youth, and farmers
Mentoring, and particularly formal mentoring schemes, can play an important role in helping women making key decisions and supporting them in their careers, the MBW mentoring scheme launched in 2021.

Provide women-only training in some cases so they have access to customized training.

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.

It was also necessary to empower communities and facilitate development that spreads from farmer to farmer. Women’s SHGs and farmers could be considered as the unit of knowledge transfer. Universities could be enlisted to provide financial and capacity building training to these communities.

Empowering Indigenous communities, rural women and youth as drivers of change. This can be done through capacity building on leadership skills, advocacy and knowledge areas relevant in advancing nature’s rights in their respective communities.

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.1184

Participants also made an additional proposal for a global programme to set up local technical assistance hubs for women farmers and entrepreneurs, with particular focus on strengthening their business skills. The important role that farmers’ organizations and local SMEs can play in delivering or channelling business development support, facilitating peer learning and mentoring for women entrepreneurs was emphasized. Similarly, participants stressed the need to strengthen the digital infrastructure for information sharing among both women entrepreneurs (or aspiring entrepreneurs) and financial institutions.1185

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.1186

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.1187

...providing women with information about existing initiatives that can support them to grow as entrepreneurs -able to provide or link women to training programmes... 1188

Mentorship and coaching. b) A community ecosystem accelerator including that would be accessible to women and youth with capacity to develop start-up business solutions to needs at the community level, enhancing local self-sufficiency and self-reliance from a food system perspective. This would address a number of key needs including: • Training programs for women on basic financial education. Access to finance to start business. Bringing markets to SMEs, develop the mechanism to bring produce to markets.1189

Including women. Participants emphasized that women—including women of color—must have equal access to vital resources including financial capital, technology, and land tenure. That women need educational opportunities. That women must have a voice in decision-making.1190
Promote linkages between producers, transporters and markets and increase participation of the youth to agriculture.\textsuperscript{1191}

Develop training plans for new technologies in Indigenous languages that allow, within the framework of interculturality, to develop the capacities of Indigenous Youth to create local plans for the conservation of traditional knowledge through actions of innovation that combine ancestral knowledge with new technologies.\textsuperscript{1192}

Strengthen the education (access to higher and formal education).\textsuperscript{1193}

Teaching traditional food harvesting and preparation in schools.\textsuperscript{1194}

Investing in rural development, skills development, capacity-building, and entrepreneurship training for youth and farming communities.\textsuperscript{1195}

By 2030, agriculture is attractive to the next generation as a sector with opportunities, and young farmers are empowered and equipped with the skills to work sustainably.\textsuperscript{1196}

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).\textsuperscript{1197}

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.\textsuperscript{1198}

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).\textsuperscript{1199}
promote linkage to the market and youth participation.\textsuperscript{1200}

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.\textsuperscript{1201}

Encourage and attract young people into agriculture: Our education systems in the universities...previous processes taught simply what was on offer but today, there is a switch to agriculture as business...thus...show youth that agriculture is beyond food production.\textsuperscript{1202}

Stakeholders and partners have been encouraged to join a systems approach to localize sustainable production and identify areas of action ranging from the shift to healthy diets for poor communities, to resilience for people most exposed to shocks, to the recognition that unless a positive effort is made to engage the youth the food systems transformation will not be sustainable. Inclusion is key and the convenors work has to be accessible to all.\textsuperscript{1203}

This discussion group emphasises the role of young entrepreneurs and the role of the youth in general. We should target the younger generations, since they will be the ones establishing new, more responsible and inclusive consumption trends, and kick start innovations in recognizing and revaluing the role of food producers.\textsuperscript{1204}

There is a strong need to connect with youth and listen to their perspectives through humble and open attitudes. Everyone has a role to play in food systems conversations.\textsuperscript{1205}

It is essential for IP, youth, and women to have full and effective participation in the FSS processes, as they have a different but important lens to the food movement.\textsuperscript{1206}

Panelists believe that research must engage women, youth, Indigenous groups, and other communities that are most impacted by the food system in order for transformation to be possible.\textsuperscript{1207}

Affirmative actions for better land policy that consider women and youth.\textsuperscript{1208}

Engaging women, youth, and vulnerable or marginalized communities and enhancing their access to finance, risk management, entrepreneurship, and other opportunities.\textsuperscript{1209}
Engaging youth in the identification of key policy issues related to food systems.\textsuperscript{1210}

Involve young people. Make farming more appealing to young farmers, who are often in the best position to advance evidence-based scientific innovations and technologies for sustainable farming.\textsuperscript{1211}

1. Empower youth, include them in decision making and power sharing.\textsuperscript{1212}

Young farmers have a vital role in bringing innovative solutions to farmers; young farmers are the early adopters and change-makers. Young people as tech-conduits for both innovation and the application.\textsuperscript{1213}

Facilitate young people moving back to farms if they see such careers as a choice.\textsuperscript{1214}

We commit to, and ask others to join us, in embracing Indigenous youth voices, input, and engagement in Indigenous Peoples’ food systems.\textsuperscript{1215}

Increasing farm mechanization and engage youth, Engaging women labour especially in harvesting and vegetable production.\textsuperscript{1216}

The next step in moving from awareness raising to behaviour change for healthier food choices is focusing on youth at schools and local women’s groups. By involving the next generation of change makers through dedicated school programs, and women as potential agents of change at the community level, it is possible to influence family decisions.\textsuperscript{1217}

The next step in moving from awareness raising to behaviour change for healthier food choices is focusing on youth at schools and local women’s groups. By involving the next generation of change makers through dedicated school programs, and women as potential agents of change at the community level, it is possible to influence family decisions. Another mechanism for raising awareness is through legislation, and promotion of packaging and labelling standards. The packaging and labels need to inform consumers on the nutritional value of their consumption. Here there is a wealth of experience to build on, particularly in North America and Europe.\textsuperscript{1218}

A participant of the ‘main’ Dialogue also proposed that farmers be turned into a “trans-farmer” - one who is business-minded and utilises technologies, especially those in relation to finance. This could be attractive to the young people who are being encouraged to pursue farming as a profession.\textsuperscript{1219}

Agri-food as a career option Create a bank of agri-food professions and professionals that can be used by career counsellors at high school; use Tik Tok to attract youth to...
these careers; more professional development programs need to be created to bring youth into the field; make better use of social media and digital tools.\textsuperscript{1220}

Empowering the community, particularly the youth, to take part and advocating for these initiatives is essential to building a foundation for change.\textsuperscript{1221}

Engage youth: youth led campaigns.\textsuperscript{1222}

Agricultural and food systems must be treated as profitable and viable businesses to become more attractive to larger numbers of African young people and women...\textsuperscript{1223}

Young people are abandoning the rural areas. Agriculture in these areas is practiced mainly by women and young people; the state must put in place mechanisms to make agriculture attractive in these areas and promote a return to the land.\textsuperscript{1224}

Sustainable food education needs to be more systematic and easily accessible on campus.\textsuperscript{1225}

Raise awareness among young people to change their mentality and perception of agriculture\textsuperscript{1226}

Child nutrition and food education at home and at school.\textsuperscript{1227}

The conversation revolved around the question of how to promote the reuse of waste. The group proposed the generation of skills and knowledge through education. Two population segments were given greater importance: children and young university students. Children are important in order to generate long-term changes. While importance was given to academia and young people, in order to bring the new generations of professionals closer to circular economy.\textsuperscript{1228}

Young people are abandoning the rural areas. Agriculture in these areas is practiced mainly by women and young people; the state must put in place mechanisms to make agriculture attractive in these areas and promote a return to the land.\textsuperscript{1229}

Sensitize the rural population to the integration of women in development.\textsuperscript{1230}

To cope with the growing pressure of crop diseases and water access difficulties, several actions must be taken: - Establish and / or consolidate effective agricultural advice systems at the service of producers; - Disseminate technical itineraries adapted to different production systems and strengthen the technical skills of producers and...
technical support mechanisms; - Promote agro-ecological practices (organic fertilizers, biopesticides, limited and reasoned use of chemical inputs, etc.) promoting sustainable production systems adapted to climate change. Good practices and educational tools (technical manuals, videos, etc.) can be shared and disseminated; - Disease control; - Awareness and effective control of sanitary procedures to limit the spread of diseases (crop rotation, access to good quality and healthy seeds, water management, etc.).

**Improve the enrollment of women in schools and their representation in professional organizations...**

The conversation revolved around the question of how to promote the reuse of waste. The group proposed the generation of skills and knowledge through education. Two population segments were given greater importance: children and young university students. Children are important in order to generate long-term changes. While importance was given to academia and young people, in order to bring the new generations of professionals closer to circular economy.

**Young people should be community promoters of new forms of production and consumption. It is necessary to encourage them to focus on professional or technical careers related to rural areas. It is recognized that it is difficult to generate technological transfers and training should respond to the needs of rural youth. The difficulties associated with transportation and accessibility must also be addressed in order to generate short production chains.**

**This hinders the future of the rural population in terms of migration to the cities**

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.

**Empower and organize women and youth fishers.**

**Empowering farmers and making farming sexy again. We must harvest the talent of female, minority, and youth populations.**

To initiate conditions for a youth entrepreneurship and build opportunities for young people to engage in a greater data collection, sharing and exchange at various levels,
innovations and practices of local food systems and traditional agriculture of indigenous peoples and local communities.\textsuperscript{1238}

increase access to land and capital, connect younger farmers to the land, address heir property issues making sure that land is deeded to someone, build strong partnerships with 1890 Land grant Institutions and community NGO organizations.\textsuperscript{1239}

Panelists agreed that inclusivity and equity is key to ensuring better food livelihoods in rural areas for vulnerable groups including women, youth, indigenous peoples and other communities.\textsuperscript{1240}

The dialogues provided an opportunity for government and people to take account of the learnings of the covid disruption and think about the strategic options for moving towards a national transformation of the food systems. Sustainability and resilience will be at the heart of this and rebuilding will focus on sustainable food systems, ensuring that women and youth are more central. This seems to be a common pattern especially in the Pacific. Inclusivity is making challenges and gaps turning into actions and the dialogue process is showing its value and will continue beyond the Summit.\textsuperscript{1241}

National dialogues in the region emphasized the involvement and empowerment of all stakeholders, and especially youth and women. Regional cooperation and national transformation are the cross-cutting actions that can make this happen, and make communities and collections of stakeholders join national governments and local authorities to transform food systems and achieve the SDGs.\textsuperscript{1242}

One innovative idea is to utilize night market as places where the youth can learn how to cook, where to find food that tastes good, and where to incubate future livelihoods. This considers time constraints and busy schedules of young people living in urban areas in China.\textsuperscript{1243}

It is emphasized that consumption habit can be guided and adapted to a more sustainable way. One solution proposed is to involve chefs in the transformation. Chefs, especially celebrity chefs, can help promote a plant-based diet while guiding young consumers to re-appreciate food from production to consumption end.\textsuperscript{1244}

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.\textsuperscript{1245}
6. Develop and apply innovative methods of ICT (Information and Communication Technology) use within the food system in ECA E-agriculture in many parts of ECA still suffers from underinvestment. The younger generation is the bearer of IT skills and knowledge and “loosing” more youth from the countryside will constitute a big problem for modernizing agriculture. The digital gender divide in the region also remains a reality, with still fewer women than men benefiting from Internet use. The ITU which is involved in monitoring and changing this situation called for more action in building an equal digital future.  

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).  

This means there must be more emphasis on increasing participatory research with youth, smallholder farmers, and Indigenous communities. 

Recognize women and youth as purveyors of wild foods and continue to support them through capacity building - Multi-platform approach to engagement.

Youth is the glue within communities. We need to forget how we envisaged youth in the past and move away from tokenism, as they are already a part of the solution. Youth are innovators; they need to be viewed as co-creators and enablers of the transformation we need.

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

Youth are an important part of the conversation because they are pushing for diets to change in many ways. They are not willing to have the same sort of calorie rich but nutrient deficient diets that have been part of our global diets for so long. 

Empower women and youth to be directly engaged with agriculture value chains and improve market access for both income generation and nutrition outcomes. 

Facilitating youth involvement to find solutions for a sustainable future.

It is important to ensure young people are at the table, as youth are not only our future, but the planet is their future.
It is important to consider gender as a core part of social networks: by encouraging women and young people to form associations, by involving men to encourage and enable their wives to engage in production.\textsuperscript{1256}

Recommendation 3: there is a need to reduce the gap between consumers and farmers and to shorten value chains.\textsuperscript{1257}

Social components are important for sustainable development of aquaculture, such as inclusion of female and the youth... \textsuperscript{1258}

All groups called for inclusivity, respect and dignity, recognizing the need to hear the voice and empower farmers, women, youth, indigenous peoples and minorities. Participants advocated for nonconventional partnerships and open dialogue that fosters creativity.\textsuperscript{1259}

Consider young people and their initiatives to generate companies with a different perspective.\textsuperscript{1260}

Prioritizing capacity building. Participants stressed the importance of capacity building to enable small holder farmers, women, youth, and people of color. This includes access to technology, financial capital, and land tenure, as well as information-sharing, networks among farmers, training and education.\textsuperscript{1261}

Capacity-building especially among women and youth through training to resolve the lack of human resources and technical skills for easier access to finance is critical. Such education usually takes place at the tertiary level, but this is considered too late.\textsuperscript{1262}

Advocacy: Field practitioners should carry out massive awareness campaigns to understand the gap of women and youth exclusion in the food system. Practitioners, government and private sector stakeholders should provide information to women and youth to build their knowledge and capacity to enable them to better engage in the food system. This should be with the aim of changing mindsets and equipping them with knowledge and skills to effectively participate in the food system.\textsuperscript{1263}

It is essential to improve communities’ knowledge of good growing and nutritional practices through well-established programs as well as train women and youth in various agricultural business sectors such as vegetable gardens and livestock.\textsuperscript{1264}

The key role of women as food producers in the south is to be highlighted and their training and extension is to be increased.\textsuperscript{1265}
Examine opportunities to build women’s capacity on all levels, recognizing women as holders of agroecological knowledge and agrobiodiversity conservation for mountain food systems.\textsuperscript{1266}

Facilitate women’s access to insurance and health services. Build the capacity of elected women members of local councils in mountainous regions to protect natural resources.\textsuperscript{1267}

They then offered suggestions to make the industry more inclusive. The discussion on women’s empowerment focused on the need for gender-specific training and protective gear. For example, women in Tanzania are pushed to farm seaweed in ever deeper waters due to ocean warming, leading to a number of unsafe conditions. In the Tanzanian context, women are not taught to swim so additional training and gear is needed to ensure their safety. Local governments and multilateral institutions must provide these resources to create a socially inclusive industry.\textsuperscript{1268}

Support coaching and training to increase effectiveness of women’s engagement in production and along the food chain. In some countries and for specific products, women are important in agricultural production, unfortunately women are less represented further along the value chain.\textsuperscript{1269}

Mentorship and coaching through programs such as bootcamps (e.g. Goldman and Sachs training for women; Erasmus program for entrepreneurs) provide an opportunity for women to learn business skills as well as interact and network with other women entrepreneurs, encouraging and creating a community of practice. Such models should be supported and replicated to allow more women to benefit from the coaching and mentorship.\textsuperscript{1270}

Enterprises can be established to develop the capacity of women in pre- and post-harvest activities. Moreover, market infrastructures can be developed to support the increased participation of women in the value chains. Female extension agents can be employed to increase access of female producers to technology and market information.\textsuperscript{1271}

Therefore, it is essential to build the capacity of women and youth for efficient use of the technology. This can be across the incubation centers or other ways of mechanism for capacity building.\textsuperscript{1272}

To solve the financial issue for women, a women’s cooperative can be created to train them on business practices and technology and increase the ratio of women extension agents in agricultural services.\textsuperscript{1273}

Build the capacity of women and youth for efficient use of the technology. This can be across the incubation centres or other ways of mechanism for capacity building.
Capacity building is needed for the private sector to address the specific needs of women and youth in terms of technologies and solutions that fit their needs and other productive resources to increase sustainable agribusiness development. Build technical skills and capacity of women researchers and provide mentorship to women who tend to be grossly underrepresented in research leadership on the continent.\textsuperscript{1274}

At the policy, legislative and technical levels, institutionalise farmers’ active participation and capacity building in decision making and implementation of Farmer Seed Systems, taking into account the diversity of farmers seed perspectives, cultures, gender, economic and social inclusion and knowledge management systems.\textsuperscript{1275}

ICT can also be used to provide agricultural advisories and training to women in farming communities.\textsuperscript{1276}

Issue identity cards for women farmers in order for them to access government services such as educational programmes and trainings.\textsuperscript{1277}

Their desire and efforts could use support through trainings, organising them into groups and easy access to land and credit facilities.\textsuperscript{1278}

Women and youth in piggery enterprises have technical needs such as know-how on executing veterinary operations.\textsuperscript{1279}

Trainings and support tailored for women and youth to flourish in cereal production.\textsuperscript{1280}

They still need trainings and exchange visits to progressive women farmers to inspire them to participate in large numbers.\textsuperscript{1281}

Women and youth are active in this industry and programs that support and capacitate them are much needed.\textsuperscript{1282}

A support system for women and youth who are already in the industry in the form of trainings among others to capacitate them with the necessary skills and knowledge to thrive in poultry production.\textsuperscript{1283}

Innovative programs that promote women and youth leadership, behaviour change towards environmental stewardship, and training in job skills should be prioritized.\textsuperscript{1284}

Set-up of specialised institutions that assist youth, women and other farmers to write projects that would help grow their business.\textsuperscript{1285}
Capacity building and skill development of women farmers and laborers on farm planning, farm management, marketing and supply chain management.\textsuperscript{1286}

FST starts locally, involving all stakeholders, who must be enabled to take part in this process. Effective capacity building is needed, linking researchers and innovators to the beneficiaries (farmers/fishers/foresters, investors, etc), fostering the development of skills and inclusive entrepreneurship, especially for women and youth. This needs a strong policy pull from governments and an enabling environment where all parties cooperate equally under a shared vision embracing everyone’s requirements (e.g. policy labs). Capacity building is key to overcome the risk of smallholders seeing sustainability only as a bureaucratic burden.\textsuperscript{1287}

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.\textsuperscript{1288}

Capacity limitation for women entrepreneurs emerged as the key constraint hindering their equal participation in food systems, therefore a recommendation was made to develop the capacity of women entrepreneurs in technical, business and soft skills.\textsuperscript{1289}

Participants attributed limited business growth among the majority of women owned agro-enterprises in Africa to poor access to finance, market information, technologies and women’s limited technical and business capacities and knowledge. The absence of post-training support and follow-up also contribute to low business growth. They identified fostering a growth-oriented mindset among women entrepreneurs through training and mentoring as a potential solution. It was observed that women entrepreneurs tend to be concentrated in specific value chain areas partly because most women go into agribusiness out of economic necessity to provide for their families as opposed to pursuing an opportunity. It is thus necessary to provide open-source business and market information and step by step business guidance through channels and format that are easily accessible and attractive to women.\textsuperscript{1290}

Strengthening capacities and resources of farmers, indigenous groups, women, youth, and micro-small, medium enterprises (MSMEs) to effectively engage along with the agri-food production systems.\textsuperscript{1291}
Training for youth and women groups.\textsuperscript{1292}

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.\textsuperscript{1293}

Support for inclusion of women and youth within territories, particularly through targeted interventions for capacity building in business development, self-awareness, self-confidence, and agricultural work.\textsuperscript{1294}

Invest in skills to increase financial literacy in small/family farms (particularly among women).\textsuperscript{1295}

Local financial opportunities for indigenous women represented by Earth Empower. 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. This is possible thanks to: Development of partnerships with local and international actors. Capacity building of the women that are part of EarthEmpower, including in relation to business, marketing, product design and use of computers to contribute to their economic and social empowerment. Not dependent on external funding or donations but rather financially self-sustainable via selling of tea products, consultancies and capacity development. Pandemic regarded as an opportunity to democratize further the organization and to the development of small home factories.\textsuperscript{1296}

Women centric development programs: Women produce around 60-80\% of food. It is important to acknowledge the feminization of agriculture. Women’s roles are diversified and inclusive in every step of the dryland food chain. We need to reduce women farmers’ dependency on governments, and empower them to have entrepreneurial mindset and develop management capabilities within themselves.\textsuperscript{1297}

In this respect, access to formal and informal education for farmers in remote areas needs to be enhanced. In some contexts, informal education and innovative ways of raising awareness among farmers towards innovation can be more important and effective than formal education. In addition, improving access of women to education must be taken into consideration, also in light of the importance of enhancing and valorising gender crops (such as Fonio) in Sustainable Intensification strategies in order to ensure women’s social and economic empowerment.\textsuperscript{1298}

Digital literacy and accessibility could make a difference. ICTs, especially mobile technology, could improve and overcome the constraints related to training and
extending services. Technologies are available, but they do not reach those interested. A great effort must be demanded for these technologies to reach those that are most interested and in need. ICTs are helpful in teaching farmers on reproduction and preservation of seeds. People on the field and experts alike are also essential to educate farmers to new technologies in order to boost their productivity.  

Dialogue on Agrifood Systems; IICA promotes the Network of Champions, a dialogue within IICA with an International Seminar on Agrifood Systems. Familiar farming with socio-entrepreneurial management, market linkage, capacity building for farmers, research on products that are little known or little used in the food industry.

Engaging women, youth, and farmers

Promote grassroots policy engagement with relevant stakeholders.

"We need to audit the future concept from a consumer point of view".

Education and engagement with people were seen to be important, including information about the importance of local and seasonal food for human health, the environment, local economies and communities.

Need for continuous engagement. It was also agreed that 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.

Sense of urgency is required, but we must bring all stakeholders along the journey.

We can seek to engage stakeholders in the educational ministries and lobby effectively.

We can ensure access to safe and nutritious food for all by involving manufacturers in the decision-making dialogues to ensure nutrition in food is maintained even while on the shelf. We can also do this by empowering more persons to participate in farming at home that way they can guarantee how it has been produced.

They further recommended engaging farmers’ organizations and institutions working on gender and financial inclusion among the local providers of technical assistance to be facilitated through the TA component of the facility.
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.¹³⁰⁹

Need for wider and ongoing engagement on the issues. Active engagement in the solution finding, solution design and solution execution and joint action in monitoring (studying) and improving actions implemented.¹³¹⁰

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.¹³¹¹

There is a need to engage the private sector: with tighter regulation on one hand and a call to join forces for the good of all. They are part of the problem, but should be part of the solutions, based on public health interests.¹³¹²

The Dialogue has also shown a desire of the public to be involved in the process of transformation and decision making. The voice of the consumer needs to be taken more seriously on both the industry and policy level. The diverse perspectives of all involved need to be taken into consideration when approaching the complexity of sustainable food systems.¹³¹³

Participation of those who are further down the food chain, such as farmers and consumers, must be ensured in decision making processes, and the general public needs to be included in this discourse.¹³¹⁴

Due to the complexity of the challenge, and to address the needs of different people and environments, we need to ensure all stakeholders are represented in defining solutions. Civil society groups and farmers are often left underrepresented.¹³¹⁵

It was suggested to establish a European Food Policy Council and include stakeholders.¹³¹⁶

It was also mentioned, that in the future, it will be crucial to empower and engage the beneficiaries more, to address the root causes and follow a holistic approach, so that
Food Banks become more of a community hub. Also being eco-friendly not only due to saving food, but also looking at the means of transportation and packaging for instance.\textsuperscript{1317}

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.\textsuperscript{1318}

Although the majority of participants were in some way connected with the livestock sector, there was consensus that further engagement is needed with those beyond the sector, whether in health, nutrition, food security, equity, environment, etc., or those who believe that animal agriculture and the consumption of livestock products should stop. Facilitating such engagement will require deliberate efforts from livestock stakeholders, including multi-stakeholder processes within and beyond the sector. The UN FSS provides a forum to expand and continue these conversations.\textsuperscript{1319}

Such change needs to be informed by robust evidence and must include engagement well beyond the livestock sector itself.\textsuperscript{1320}

Changes in livestock systems can best be achieved by mobilizing diverse groups of stakeholders to a more positive common narrative, recognizing that incremental transitions, innovation, and continuous learning are needed.\textsuperscript{1321}

Multi-stakeholder approaches, noting that time and effort are required to reach consensus. Central leadership to bring different stakeholders together. Creation of a world body that moves the world towards a sustainable food production system.\textsuperscript{1322}

“The success of the 2021 Food Systems Summit depends on the engagement of representatives from a wide variety of actors, organizations, movements and initiatives. The independent dialogue in support of the Summit, organized by the Eurasian Peoples’ Assembly, is an open platform for finding solutions to real problems...”\textsuperscript{1323}

Looking forward and stressing the need to improve (not replace) existing structures is a priority. UN Food Systems Summit is a great tool for having a more structured dialogue and ask for specific engagement with different stakeholder (e.g., private sector guiding group and leadership teams of each of the action tracks).\textsuperscript{1324}

Study and document the traditional knowledge of mountain communities. Promote the engagement of a broader set of actors.\textsuperscript{1325}

Small actors in the food system need a greater voice, that goes from the small farmer to the individual consumer and includes SMEs which are the majority of the food production sector.

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\textsuperscript{1323} 97:3 p 7 in 252_Apri_29_21_EU Commission
\textsuperscript{1324} 100:24 p 8 in 282_May_18_21_Romeo R
systems actors (99%) and are often not accessing the innovation being produced by researchers and innovation providers. It is key also to understand the sectoral and regional/cultural aspects of food systems, thus a multistakeholder approach is needed at different levels (global, European, national, regional), and shall be facilitated by policy makers. It was noted that multinationals (e.g. seed companies) are relevant in the discussion, but must not be allowed to ‘abuse’ their power.1326

Involve all players and stakeholders.1327

A broad range of actors will need to be mobilised, including players in the full supply chain, retailers/wholesalers, consumers, marketers, the organic value chain and government (to support the higher cost of organic/high environmental standard food). Consumers’ willingness to pay was also identified as a key consideration.1328

The key actors that need to be involved include producers, regulators, financiers of big agriculture, OIE, educators (especially on the link between welfare and performance), certification bodies and risk assessors.1329

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.1330

Multistakeholder partnerships are key. When all stakeholders are engaged, then the incentive structure of different agents is distinct and becomes better discernible.1331

PDBs have the mandates, positioning and tools to play a more catalytic role in accelerating the transition towards more inclusive, sustainable food systems. As public bodies, they are able to convene diverse stakeholders and set and promote the adoption of shared standards to accelerate investment.1332

Promote grassroots policy engagement with relevant stakeholders.1333

Furthermore, regarding implementation and real impact on the ground, the importance of mobilizing different stakeholders according to the sectors (including governments, financial institutions and investors) and value chains was expressed, so that, common goals can be achieved through joint work.1334

They should be developed using transformative approaches that allow for the engagement of all stakeholders at a community level where gender norms are deeply entrenched.1335
Comprehensive approaches/strategies that engage multiple sectors (i.e. health, education, health insurance companies, nutrition, culinary art, hospitality, tourism, producers, retailers) are essential to changing consumption patterns.

**ACTION POINT:** Engage with the tourism sector at global, regional and local levels (e.g. hospitality sector, airlines) to market the local tastes and flavors of indigenous food as part of tourism promotion.

Increase participation of stakeholders including farmers in program planning, implementation and monitoring progress of DRRM programs.

Community-based engagement of stakeholders in managing aquifers and groundwater is extremely important to address the availability of water issues for productive agriculture.

The policy formulation process needs to be made more demand-driven, in that key stakeholders should be involved in the formulation of policies, to ensure that the issues of all the relevant stakeholders are addressed. Thirdly, the private sector can be involved to promote equitability in the WEF nexus.

Participants of the session highlighted that currently WEF nexus mainly applied within on-going projects and working groups on WEF nexus also established and promoted by donor supported projects. This donor supported initiatives are not sustainable in the long run and there is a need stronger engagement from Central Asian government representatives and they should feel that outcomes of WEF nexus improve inter-sectoral cooperation and help to develop coordinated policies on WEF nexus at national and regional level in Central Asia.

We need to reach different stakeholders and there needs to be more sharing of successes and failures between different benchmarking initiatives.

Decentralization of natural resources would stimulate the engagement of the private sector which would eventually contribute to constructing a more sustainable development path hand-in-hand with government.

Connecting communities with decision makers to ensure their involvement in the policy making processes.

Access to proven technologies will help improve food production and food security, and job and wealth creation for women and youth across the value chains. Having the technology at scale will help more women and youth to access the technology for their
agribusinessdevelopment. Thus, the need for private sector engagement to produce the technology and put them at scale.\textsuperscript{1345}

Stakeholders should therefore examine the involvement of the private sector because most are looking at profit-making as their primary interest.\textsuperscript{1346}

Multi-actor processes and having key actors including vulnerable communities at the decision making tables - all groups should be able to participate, including across civil society.\textsuperscript{1347}

UNFSS representatives should take urgent action in engaging underrepresented groups more actively. Informing about the term Food Systems is essential to raise awareness across all levels of engagement. Explanation/storytelling is needed to create necessary common approach/synergies. Engage UN Member States as champions for the solutions that the FSS recommends. Stakeholder engagement in different states /cities is necessary to include vulnerable groups.\textsuperscript{1348}

Directly reaching out to national governments is crucial – preparations to engage with existing actors to bring in different actors.\textsuperscript{1349}

**Recommendation 2:** At the policy and legislative levels, farmers and dialogue stakeholders recommend engagement with multiple stakeholders to define the complementarities between the commercial seed systems and farmer managed seed systems (FMSS).\textsuperscript{1350}

In general, participants agree multi-stakeholder platforms (MSPs) are key for SDG2 and the 2030 agenda. Only together stakeholders can address the challenges ahead. Despite the challenges they face, for instance, to level the playing field for each stakeholder to participate and contribute meaningfully, participants agree MSPs can be a good vehicle for the much-needed transitions of food systems, provided they respect a few crucial rules.\textsuperscript{1351}

Ownership: Furthermore, legitimacy relies on the adequacy of the process to engage stakeholders in a meaningful dialogue in which they feel a sense of ownership and the possibility of gaining benefits. This requires transparency, continuous communication, openness, and respect. In this regard, participants highlighted the importance of (1) having an independent convenor; (2) establishing and respecting transparent processes and governance mechanisms in the MSP; (3) defining clear principles, and in particular, making sure human rights are respected, and (4) instead of having a pre-defined agenda and solutions, ownership requires focusing on country, local and community-owned challenges and solutions.\textsuperscript{1352}
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.\textsuperscript{1353}

This implies that multi-stakeholder initiatives in this domain need to proactively address communication, trust, and alignment challenges, fostering continuous engagement and knowledge sharing. Working with neutral academic and knowledge institutions may help tackle the lack of trust, if applicable. It is also important to build a core team, and a delivery unit.\textsuperscript{1354}

To build a multi-stakeholder platform that incorporates or focuses on finance, it is important to involve specific key stakeholders: commercial banks, who have a local infrastructure; public and private investors; clients (traders, aggregators, producers, farmers), governments (local, global), academic institutions, NGOs.\textsuperscript{1355}

For MSPs to be effective, both businesses and local communities need to be engaged from the beginning, as well as representatives of the government. All relevant stakeholders are needed to generate a successful initiative, develop incentives for action, and build political will.\textsuperscript{1356}

At the actor level, the participation of actors should be needs-based. To involve all actors, the leadership and participation of local actors through a holistic approach can be facilitated using integrated landscape management.\textsuperscript{1357}

...engaging men in discussions of women in agriculture...\textsuperscript{1358}

Visions for community-led food systems within this group involved incorporating diverse actors such as women and indigenous populations into existing food systems, protecting and promoting local food systems, and generating community ownership of these systems. The recognized the need to speak of not a single food system but the diversity in food systems.\textsuperscript{1359}

Engagement of government agencies and corporations play a crucial part in the transformation of the food systems. Key decision makers can and do support the process of achieving fundamental changes on a regular basis. Solutions rooted in practical needs of industries and social development are particularly impactful and effective.\textsuperscript{1360}

In the coming years, it is crucial to introduce a shared approach, coming along with a pre-discussed agenda with local authorities, relevant stakeholders and international development agencies.\textsuperscript{1361}
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...  

Stakeholders and partnerships - Women and youth including regional and international women and youth groups - Civil society and international organisations - National and local government authorities - Financial institutions.  

...mechanisms for multistakeholder engagement in landscape/ecosystem-based land use planning and for integration of multisector and agency plans...  

We must make use of knowledge sharing platforms for inter-sectoral and multi-institutional approaches and inclusive multistakeholder engagement processes should be a priority.  

Key stakeholders: Actions will require the participation of food organizations, local elected officials, government, farmers, distributors and businesses.  

The creation of a formal Committee with stakeholders across the ecosystem will yield the greatest returns -- Faith-based organizations, educators, youth, non-profit orgs, relevant special interest groups, and elected officials.  

Different actors should think together and provide solutions that can tackle the challenges of a complex system. Governments, academia, private sector and civil society should take actions together to reduce CO2 emissions, reduce food waste, secure access to healthy food, preserve biodiversity, water and make production more sustainable.  

We need to adopt a more ‘multi-actor’ approach in problem solving, innovating and implementing new practices.  

...utilising more ‘multi-actor’ approaches in order to improve collaborations and connections to provide innovations and solutions...  

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.  

All the stakeholders successfully engaged from farm to fork.
Thus, all relevant stakeholders must play their role to ensure sustainable rangeland management which will in turn improve productivity of wool and mohair in the country.\textsuperscript{1373}

Hence, numerous policy dialogue fora must be held where different stakeholders with women and youth at the centre, are brought together to consider how they can work and move together for the success of the industry.\textsuperscript{1374}

Participants believe that in every leadership situation, there should be key actors such as the government leaders, community actors, nutrition champions, policy entrepreneurs, academics and other relevant stakeholders who will contribute to a holistic food system.\textsuperscript{1375}

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.\textsuperscript{1376}

All stakeholders have unique and important roles to play. Policy makers and researchers should work together to have more evidence build a better understanding of food systems. The academia will do research, the private investor will invest, but we need the farmers as well. If the small-scale farmers who are important players of the economy are left out in foods systems decision making, this will perpetuate current inequities.\textsuperscript{1377}

Private sector must be more engaged by working closely with researchers and policy makers to improve food systems. They have valuable consumer insights that are effective in promotion of their products (whether healthy or not). Such insights should be leveraged to bring about improved food consumption patterns for better nutrition and health and environmental sustainability.\textsuperscript{1378}

Local experts and community food systems actors should be linked to the state institutions in a way that engages them in various planning and execution of food systems actions. The government, the private sector as well as the academia need to support this process.\textsuperscript{1379}

Engage governments to ensure refugees can access work permits so they can find job opportunities in their host countries.\textsuperscript{1380}

For further meaningful discussions and assisting in the creation of pragmatic policies, more multi-stakeholder workshops would have to be organised.\textsuperscript{1381}
Participants recognized that the complementarity of different actors contributes to resilience, where each can use their knowledge (in issues such as productivity, climate change, access to technology) and tools that allow producers to be more resilient.\textsuperscript{1382}

Civil society organizations such as Consumer Advocacy for Food Safety and Nutrition initiative (CAFSANI) should also be more actively engaged in monitoring the Home-Grown School Feeding Programme.\textsuperscript{1383}

National Agricultural Seeds Council should be engaged in ensuring the availability of planting materials for biofortified crops.\textsuperscript{1384}

Nigerian Institute of Food Science and Technology should be engaged regarding street foods and food safety, as they have implemented a successful program in 7 LGAs in Lagos, Nigeria. There is a need to also extend this program to other parts of the country.\textsuperscript{1385}

National Agency for Food and Drug Administration and Control (NAFDAC), Standards Organization of Nigeria (SON), and Federal Competition and Consumer Protection Commission need to be effectively engaged in setting, monitoring, and enforcing standards.\textsuperscript{1386}

Mobilization of people and communities.\textsuperscript{1387}

Engage all society.\textsuperscript{1388}

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.\textsuperscript{1389}

FST starts locally, involving all stakeholders, who must be enabled to take part in this process. Effective capacity building is needed, linking researchers and innovators to the beneficiaries (farmers/fishers/foresters, investors, etc), fostering the development of skills and inclusive entrepreneurship, especially for women and youth. This needs a strong policy pull from governments and an enabling environment where all parties cooperate equally under a shared vision embracing everyone’s requirements (e.g. policy labs). Capacity building is key to overcome the risk of smallholders seeing sustainability only as a bureaucratic burden.\textsuperscript{1390}

Participants felt that the role of innovation needs to be encouraged and facilitated to drive forward the agricultural transition. Two types of innovation in particular were highlighted - incremental innovation that works alongside existing practices; and transformational innovation that brings new technologies to innovate new ways of doing agriculture. Significant conclusions were that it is key efforts are made for
innovation to be inclusive and work with stakeholders rather than leave them behind.\textsuperscript{1391}

The participants discussed how to ensure different forums are diverse and reflecting a wide range of stakeholder views. An example of positive behaviour to encourage is connecting with on-the-ground action and transferring that upwards. The need to ensure that coalitions come together to actually advance sustainability and shift mainstream production practices was emphasised, and participants highlighted the need for further communication to stakeholders outside of these associations to actually drive forward change.\textsuperscript{1392}

Multi-stakeholder engagement was underscored throughout the discussion: as a top-down approach with government-industry-academe partnerships; and from the bottom-up, where grassroots stakeholders are empowered to participate in identifying and developing solutions for their community and financial mechanisms, project planning, and investment opportunities are devolved to local government units.\textsuperscript{1393}

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.\textsuperscript{1394}

Co-develop metrics and policies for sustainability with communities and different interest groups. Ensure that the interests of all affected parties (including future generations and non-human organisms) are listened to and taken into account during decision-making processes.\textsuperscript{1395}

Everyone (all stakeholders) must be involved in dialogue. This includes taking into account traditions views and practices (e.g. Indigenous practices).\textsuperscript{1396}

Cater to more different individuals and communities and unmet needs. Successful innovations often leave people behind, who are considered too hard to reach, or are just less important or visible to those doing the innovating. For a just transition and equal access to good diets, innovation must cater to more parts of society and do more to address everyone’s unmet needs around healthy, sustainable eating.\textsuperscript{1397}

India needs more inclusivity, more safety standards, more involvement from banks and governments, and more research.\textsuperscript{1398}

The group also identified certain actors needed to take this forward - Researchers and research institutions - Farmers - Coastal communities - Private sector industries - Policymakers - Conservationists – Designers.\textsuperscript{1399}

...infrastructure to enable ‘trained’ and upskilled researchers to carry out proper research. Multiple risks approach – which encompasses all stakeholders within Pacific
food production systems in order to understand the issues and solutions to suit our Pacific context...\textsuperscript{1400}

Youth, women, children, and other marginalized groups are key stakeholders for addressing food security.\textsuperscript{1401}

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.\textsuperscript{1402}

More participation of all stakeholders in the policy making process.\textsuperscript{1403}

Vibrant Agri-food-systems and institutions engaged in the agricultural value chain, from food production to food consumption, are key to delivery of the continent’s development Agenda 2063.\textsuperscript{1404}

Involve policy makers and authorities in production planning.\textsuperscript{1405}

Engage the private sector to maintain farmers’ production.\textsuperscript{1406}

Strategic actors should be involved in design, especially government actors.\textsuperscript{1407}

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).\textsuperscript{1408}

More involvement and capacitation of local stakeholders from diverse backgrounds.\textsuperscript{1409}

We need more conversations between people working in different sectors, and academics need to consider how to support practitioners. E.g. researchers should ask practitioners about problems & research questions.\textsuperscript{1410}

The primary producing industry in general should be engaged as part of the conversation, as quite often they will have a lot to say and they need to be on board for transformative change to occur.\textsuperscript{1411}

The need for Sri Lanka to mobilize different funding avenues including blended finance, impact bonds, etc, were discussed. The need to access Green Climate Fund and other
vertical funds through collaborative engagements with Government, banking sector and other actors coming together was reiterated.\textsuperscript{1412}

The onus on agriculture sector, finance sector and government to collaborate in exploring partnerships towards promoting such agricultural methods was underscored.\textsuperscript{1413}

The importance of inter-sectoral cooperation with different stakeholders in order to deepen dialog and mutual learning: academia, consumers, health services, municipalities, insurance companies, regulator. The importance of cooperation between the industry and academia for development of innovative products and technologies to assist in reducing carbon and water footprints.\textsuperscript{1414}

Integrate inclusive, demand-driven, and adaptive agricultural research prioritization and technology development across all agricultural research and development efforts, including social sciences and policy research, ensuring R&D investments reflect choice and actively and meaningfully include smallholder farmers and innovators, women, and youth.\textsuperscript{1415}

Discussion addressed the need for the inclusion of the user community to understand what their needs are so that research can respond to these needs with emphasis on product life cycles, gender, and farmer choice.\textsuperscript{1416}

Establish multi-stakeholder partnerships: The critical point of institutionalization is to make councils/groups/partnerships, such as National Food Councils, official with links to financing and institutional support as a structure for planning and budgeting in a multisectoral multilevel and multi-actor way.\textsuperscript{1417}

To build functional territories, urban-rural linkages are key. UN Habitat helps to map complex linkages—particularly documented cases that illustrate effective vertical and horizontal multilevel linkages to provide guidance to actors at all levels.\textsuperscript{1418}

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 conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.\textsuperscript{1419}

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.\textsuperscript{1420}

Development of a new agricultural policy which breaks with the past and is participatory: a policy which defines the outlines of a change of approach is urgently needed and must result in an approach which involves the different stakeholders of the channels: farmers but also the stakeholders in the private sector must be active participants in this reflection and in the strategic choices to be implemented because they will then be those who implement it; a paradigm shift is required at the level of the ministry in charge of agriculture: it must become a ministry of sustainable agricultural production.\textsuperscript{1421}

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.\textsuperscript{1422}

There is need for greater community involvement in land reform policies that may include taking vacant lots and making agriculture plots as part of a promising community intervention. Efforts should be made to support backyard efforts, roof top efforts, community gardens and small holder plots.\textsuperscript{1423}

Establishment of a multi-stakeholder partnership forum to tackle insecurity, engage communities and, provide support to security agents to deliver adequate security to farming communities.\textsuperscript{1424}

Leverage the power of community to increase support of local farm direct produce in institutions, incorporate food into the curriculum, and increase connection to traditional food knowledge specific to a location by embedding local indigenous leaders into institutional food program planning and procurement (ie The Intertribal Agricultural Council in the USA; rural community leaders in Indonesia).\textsuperscript{1425}

There is a need for new platforms and fora to examine these issues with different lens and flexible arrangements to impact on communities. We must find ways to allow communities to influence sustainable actions that affect their lives.\textsuperscript{1426}

Need community support for students and the general public to engage sustainable behavioral change.\textsuperscript{1427}

Involve citizens in innovation processes from early on, to secure a buy-in and get ownership of the process.\textsuperscript{1428}
Without community participation, it will not be complete. Because the community is the party who best knows the potential of their area.\textsuperscript{1429}

In indigenous communities, major stakeholders are teachers and school systems. When teachers and school staff were involved in a project to start gardening on the grounds, there was a change in mindset amongst teachers/staff, students and the broader community as to why food was valuable and valuable within their indigenous culture.\textsuperscript{1430}

...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).\textsuperscript{1431}

Empower consumers as a force for change. Engage consumers at the EU-level.\textsuperscript{1432}

Together, by working to empower communities to develop locally-relevant programs to address the root causes of food insecurity we can ensure Canada has the tools it needs to continue having one of the greatest food systems in the world.\textsuperscript{1433}

Significant efforts in relation to education, communication and public engagement will therefore be needed.\textsuperscript{1434}

There needs to be inclusion, active engagement, collaboration, and empowering of the users including youth, women, and local communities/beneficiaries.\textsuperscript{1435}

Work with communities at their level, listen and understand their priorities Build trust in communities and have honest engagement.\textsuperscript{1436}

Tapping into communities, participants talked about the importance of considering the needs of the communities with which the work is done. For example, in Africa, one of the participants stated that there is still no success story that can be replicated, and yet there are still many barriers to project implementation such as lack of technical knowledge from farmers. For this reason, it was suggested to develop joint efforts to create a success story in Africa that becomes a role model and continues to advance and scale regional and globally.\textsuperscript{1437}

It is also important to understand what empowerment means in different communities. Local engagement is required to understand local perceptions.\textsuperscript{1438}

They should be developed using transformative approaches that allow for the engagement of all stakeholders at a community level where gender norms are deeply entrenched.\textsuperscript{1439}
There is need to identify non-tradition assets that can be used as collateral as well as working with communities and financial service providers to ensure that they open women’s ownership of assets.\textsuperscript{1440}

Community needs assessments on food security are needed in all islands to enable prioritization of groups at highest risk.\textsuperscript{1441}

To shift to healthier diets, communities need to be in charge. Decision-makers need to listen to communities and understand their challenges. Top down approaches alone are not effective. It is important to have a “together approach” - working from the ground up and from the top downward.\textsuperscript{1442}

Public health should focus on social determinants of unhealthy diets and undertake research involving communities to immediately respond to ill-health caused by the food system. Use family-centered approaches within communities to address unhealthy diets.\textsuperscript{1443}

Research on healthy diets need to be inclusive and useful to the communities. It is of critical importance to engage communities in meeting the gaps in data. Community assessments of needs in relation to availability of food and alternative ways of providing for nutritional needs of various age groups.\textsuperscript{1444}

Communities need to participate in relevant capacity training being organized by various donors or government organizations to learn new ways of protecting their livelihood from extreme events.\textsuperscript{1445}

Community-based engagement of stakeholders in managing aquifers and groundwater is extremely important to address the availability of water issues for productive agriculture.\textsuperscript{1446}

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.\textsuperscript{1447}

Engaging with and using cultural practices that help community members move through and heal from trauma and grief, with historical and current traumas, grief, shocks and stressors.\textsuperscript{1448}
Involving the community in all sustainability projects implemented on-the-ground to guarantee that their input will be taken into consideration and raise their own awareness on climate change impacts.\textsuperscript{1449}

Engaging communities and civil society in implementing climate smart interventions at all scales (farmstead to policy development).\textsuperscript{1450}

Weather forecast report should be produced in the 3 main languages spoken in the country and be broadcasted. Translated information should be distributed to central points such as worship centres, meeting places, market and CDA offices. Interventions must be community driven, community owned, gender responsive and based on community needs by strengthening indigenous adaptation method.\textsuperscript{1451}

TRLA is an approach which actively engages influential community leaders and whole communities in a participatory way to comprehend existing gender disparities and empowers them to address these for improved nutrition.\textsuperscript{1452}

Multi-actor processes and having key actors including vulnerable communities at the decision making tables - all groups should be able to participate, including across civil society.\textsuperscript{1453}

For MSPs to be effective, both businesses and local communities need to be engaged from the beginning, as well as representatives of the government. All relevant stakeholders are needed to generate a successful initiative, develop incentives for action, and build political will.\textsuperscript{1454}

Improve land governance, by adhering to land tenure rights, including the gender dimension, as a framework. Bring in the local voices - Focus on the vulnerable (e.g. legal aid) and include the community. Invest in empowering local representatives and other stakeholders, if needed to balance power asymmetries.\textsuperscript{1455}

In order to support the inclusion of nutritious food in local food systems, the following solutions were proposed to be undertaken at a community-based level: Working with communities to prepare better methods of storing food in order to safeguard food against natural and economic shocks.\textsuperscript{1456}

Solutions discussed towards overcoming these obstacles include implementing public policies that are community-centered and strengthening local community members’ sense of their own resilience and capability.\textsuperscript{1457}

One key is radical listening to communities, to create economy of care, learning from thousands of years of managing forests.\textsuperscript{1458}
We must value forest communities and build alliances around protecting them and also compensating them.\textsuperscript{1459}

Empower our community thru black church food sec network to build our own community based food systems that leverage our community resources.\textsuperscript{1460}

Working through the back church to engage the black community. Always been a hub and resource support. banks, colleges, universities. Assets found in community structures already supporting community resilience can be leveraged to support local food economies, access, and inclusion -Langar - a community based food system. Organic, veg, sustainable Sikh temples all have kitchens and everyone can eat no matter who they are...\textsuperscript{1461}

Take measures to guarantee both formal and informal women’s ownership of land. Such measures should be proposed in consultation with the affected communities.\textsuperscript{1462}

Recognise indigenous community lands and their customary lands systems as part of building sustainable food systems. Recognize Indigenous Peoples as agents to allow their self-determined food generation and production systems and practices in finding solutions.\textsuperscript{1463}

Rather than focusing on trade-offs, center human rights, livelihoods, and wellbeing of SSF communities in order to identify *synergies* between sustainability and food and nutrition goals.\textsuperscript{1464}

Recognizing how precious food is to our identities, as we continue to work towards a just transition of our food systems, we must not only address the systems at play, but also speak to the heart of those we are trying to change, to which, culture and religion are key levers to utilize.\textsuperscript{1465}

We need possibilities for citizens to organise, they should be given more freedom to do that: It might be easier at the national level to organize a stronger citizens movement. We need to make citizens feel empowered.\textsuperscript{1466}

Give control back to communities.\textsuperscript{1467}

Involve people in rural communities and farmers in solutions to food insecurity, don’t exclude them from the conversations.\textsuperscript{1468}

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).\textsuperscript{1469}
advocate for greater involvement of the local community in existing programming… 1470

broadening our understanding of the AKIS to be wider than just agriculture to include a more inclusive engagement of rural areas, communities and citizens… 1471

Inclusive leadership from government, media, civil society, and public health experts is needed. This should involve the community and the people at the grassroots levels from all sectors of the food system to enhance ownership and sustainability. 1472

Use of vernacular and local languages encourages participation and respect within programs. 1473

School-Based Management Committees, including Parent-Teachers’ Associations, must be more actively engaged in monitoring the quality compliance of school meals and reporting shortfalls. 1474

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 Welsh food system is optimised for the wellbeing of citizens, community and nature; ii) 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. 1475

Call for stronger unity, engagement and cooperation among stakeholders. Farmers and consumers should organize themselves, government and agencies should respect farmers rights so that there could be a foundation of lasting food systems around the world. There needs to be an improvement in consumers’ knowledge about organic food. This includes community engagement activities involving research with other partners to focus on ecological research & livelihoods, engaging the communities to participate in the research themselves to better understand, better understanding so that they work towards improving what they eat, plant. 1476

With this, all community members should be equipped to solve poverty-related hunger within their realm. In order to build a network together, the lived experiences of individuals, particularly those that have faced adversity or experienced food insecurity themselves, needs to be acknowledged, valued, and respected. Finally, all community supports and institutions need to be equipped to screen for and address food insecurity in innovative ways. This includes academic institutions, healthcare settings, local businesses, and employers of all types. Screening for hunger and having a community...
structure in place to refer people is necessary. Too often organizations work in silos, and collaboration is necessary to deliver on zero hunger.\textsuperscript{1477}

The group felt that education of citizens can be a powerful tool to empower change in individuals. 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.\textsuperscript{1478}

In other words, it is time for policymakers to take action, implement the information coming from research on sustainability and SDGs. There is a sense that policymakers listen to lobbyists from big corporations, while there should be more dialogue with scientists and more opportunities to engage and empower the consumers. The decision process at the political level is complex, fragmented and not-transparent. To overcome these barriers to sustainable progress, the participants agreed to the following solutions: 1. Information brokers (e.g. science communicators) to act as a bridge between the public sector, scientists and communities. They should be funded by the public sector ideally. 2. Science-policy co-creation sessions: Workshops and dialogues between policymakers and scientists 3. 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.\textsuperscript{1479}

Co-develop metrics and policies for sustainability with communities and different interest groups. Ensure that the interests of all affected parties (including future generations and non-human organisms) are listened to and taken into account during decision-making processes.\textsuperscript{1480}

The conversation revolved around how organizations like C-Scapes would be responsible for translating the discussions and having conversations with coastal communities that are the most important stakeholders in the seaweed value chain.\textsuperscript{1481}

The UN FSS and other global dialogues must make efforts to actively engage all people in decision making in a transparent manner.\textsuperscript{1482}

Getting consumers interested and engaged with embedding sustainability in the dietary guidelines could help, particularly engaging with young people.\textsuperscript{1483}

Participatory monitoring efforts which engage/validate/build trust and measure contextually established indicators for success.\textsuperscript{1484}

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.\textsuperscript{1485}

**Integrate local communities and animals in the management of national forests.\textsuperscript{1486}**

Action proposed: a) Strengthen the capacities of local administrations to undertake territorial policies in their foodshed. “Unions of communes” are a positive territorialization process that could be extended. b) Develop local administrations’ capabilities to design projects and interventions. c) Create dissemination tools to explain financing opportunities and facilitate planning. d) Engage with local communities through participatory approaches rooted in the policy process.\textsuperscript{1487}

To achieve this, participants suggested that leaders in food system reform, including Indigenous elders, should be consulted during the curriculum revision process.\textsuperscript{1488}

Community can also play a key role in this; encouraging everyone to be active members in their food system and use their voices for change. Schools could be at the centre of urban growing initiatives (example given in discussion topic 2) in support of their community and vice versa. We need to be a part of nature’s ecosystem again and show children how to be part of that ecosystem rather than detached from it.\textsuperscript{1489}

Indigenous and heritage varieties of food should be prioritised for subsidies by governments when they are more nutritious than rice and wheat. Indigenous food should also be included in school feeding program meals and communities should have a say in what food is used for these meals & be able to shorten supply chains using locally grown food giving children nutrient dense food and not empty calories just to fill their bellies. Providing school meals and school feeding programs is good, but the food also has to be nutritious as this has a direct impact on learning & concentration.\textsuperscript{1490}

In south Korea, the youth tend to leave the rural areas and farmers are relatively old (> 60 years), have small plots of around 1,5 ha and have a hard time to make ends meet. Due to high price elasticity of the global food markets they are prone to high price fluctuations and small margins. Therefore the initiative advanced a potential disruption of local food markets and public meal centers. Potential for outscaling to other industrialised countries with rural areas characterised by an increasing elderly population of smallholder farmers was also identified. This is possible through: Government commitment in terms of financial investments, logistics, infrastructure and mechanisms in place for direct exchange with farmers. The local food market enables poor farmers to have stable prices so that they can diversify their cultivation to deliver throughout the year.\textsuperscript{1491}

Grassroots level Knowledge: UNDP, India identifies grassroot innovations which could be potentially scaled across rural communities. While doing so, it has catalogued

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traditional ecological knowledge to develop community goals and policies. Grassroot innovations have great potential to solve hyperlocal cropping problems.1492

Village seed banks and Seed Business Incubation: Making quality seed available at the farm gate will increase the chance of higher production by 15–20%. Research centres of the Indian Council of Agricultural Research (ICAR) has been working with rural communities in establishing rural seed systems. Agribusiness and Innovation Platform (AIP) of ICRISAT (http://www.aipicrisat.org/) has been promoting lead farmers and NGOs into seed entrepreneurs.1493

Involve the authorities of the communities in the process so that they assume a responsibility with the communities they represent so that vital problems are faced, solutions are carried out and the resources that are available are put to good use.1494

Opportunities should be available for youth to derive substantive income from working in food systems. Young people are already driving initiatives on organic food, climate and the environment. Their engagement in food systems – production, cooking and sharing --- provides additional opportunities to converge solutions that are community specific and sustainable.1495

Support entrepreneurial projects and grant provision for youth initiatives. Implement educational program on leadership in the field of agriculture and specializations related to urban agriculture.1496

First, about renewed traditions, the group underlined the importance of taking the best out of both traditions and innovations, as it would reduce the fear of losing something. It highlighted that while intergenerational dialogues are key, the voice of the youth should be strengthened in decision-making arenas, in a real and honest manner, in particular when it comes to taking actions with a sense of urgency.1497

Empowering youth and including young voices of people who are working in grassroots projects is so important to get different perspectives on student food insecurity and of students who have suffered from food insecurity. Hunger will only be solved through the collective action of students form all backgrounds, there needs to be a collective engagement between all members of the university community to create student food security.1498

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.1499

Get youths involved in group/community farming. Integrate Agri into the school system from primary to secondary level as well as trade schools, as a sustainable core subject
& not just an elective. Need community support for students and the general public to engage sustainable behavioral change.  

Actions to engage young people in science-based social movements include raising awareness by visualizing the potential future of food systems through education and exposure on social media platforms.  

Engage youth climate action leaders to incorporate food security, health, access, and systems innovation.  

Including youth. Success in transforming to sustainable food systems will require the engagement of young people. Participants urged that education be oriented to young people in addition to on-site problem solving to advance sustainable agriculture.  

Youth inclusion and intervention in the food systems will bring about a change in the trajectory because of their creativity. Collections and implementation of individual solutions from the youths will help meet our food sufficiency and sustainability needs. Youths were implored to connect and engage with Agriculture Movements to explore the possibilities of adaptive Food Systems in Nigeria.  

Bring youth back into mountains and restore degraded ecosystems by creating enabling economic conditions using traditional knowledge provided by older generations and farmers.  

Harness the ideas of young people.  

Participants emphasized that initiatives to incentivize and empower participation of vulnerable groups particularly youth and women are needed. These should include access to land and other resources that can facilitate their participation in food production.  

New strategies to motivate the youth to agriculture.  

Mobilize youth groups to spearhead action and to improve the visibility of healthy, safe and nutritious organic products via capacity building (i.e., training, discussion series, farm visits, information campaigns) and via social media to motivate demand and shift of consumers to sustainable consumption patterns.  

Finally, he called on more young people to participate in the dialogue of the food systems summit!  

Creating positive, safe, cultural spaces and opportunities for Indigenous Youth: Indigenous-led nonprofit, Diné Introspective, Inc. is focused on creating positive
opportunities for younger generations, serving as role model to peers, healing for family and culture, cultivating respect for land and animals, relationship with Creator, having a safe and cultural place to learn songs, prayers, and soaking up as much as possible from culture. Space holding and teaching through tribal communities and experience, growing through our clanship. Addressing the reality that so many youth are stuck in similar situations of not being able to express selves.\textsuperscript{1511}

Through this work, they are activating lands and getting youth back into community farming. The community has been involved in architecture as a design process and a great way to manifest feelings of trauma and grief through this work. As an example, the interdisciplinary program set up as part of the nonprofit allows youth to design something (chicken coop or greenhouse) and through this process building and creating art through design.\textsuperscript{1512}

Governments play a major role in enabling innovation and change and developing industries within a country. Getting the young people to exercise their right to vote will ultimately lead to electing capable and content people in government which with steer us all towards better food systems.\textsuperscript{1513}

Young farmers should be engaged and their interests and roles should be enhanced.\textsuperscript{1514}

Engage the youths in agriculture.\textsuperscript{1515}

Discussions revealed the importance of exploring the involvement of youth in food systems in order to strengthen their future structures. Youth have the ability to take ownership of the local food systems in their community. If given the opportunity to positively and meaningfully engage in their local food systems then they can transform these systems and make these systems more sustainable. In countries such as Haiti, succession of food producers is not assured to sustain / safeguard future food systems because younger generations / populations are not interested in a career in producing food. Strategies to effectively engage younger generations in creating a sustainable food system include: A combination of farm and school structures to build understanding amongst younger generations of their local food systems.\textsuperscript{1516}

Build partnerships with women and youth constituencies within this group.\textsuperscript{1517}

Focusing on younger generation, entice the youth to engage in farming.\textsuperscript{1518}

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.\textsuperscript{1519}
The issues of publicity, research system development and engagement of youth were voted to be most important priorities.1520

Strengthen organizational capacity of local organizations, center and amplify the voices of small-scale producers, and support the technical and economic needs identified by these communities (including women and youths).1521

Have young people talking to young people helps engage younger generations. 4) Have organizations led by young people to partner with school districts to engage high school students.1522

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).1523

Participants felt that more funding should be provided for youth involvement in food systems.1524

Young people need to be supported to go into careers in agriculture and get engaged with new technologies and approaches, especially given rural youth unemployment and the ageing population of farmers across many regions.1525

Integrating the whole farm family rather than just focusing on the one, usually patriarchal, landowner. This can be done by integrating women and young farmers through discussion groups, KT consultations, and recognition on correspondence related to the farm. The farming media can play a significant role here in reversing the usually male-dominated stereotype. There is a need to focus on integrating women more for future resilience and young farmers for generational renewal and innovation.1526

Need to engage with the youth from a young age and a lot of work is already ongoing in this area (for example, Food Buddies at national school level).1527

The voice of the producers with special attention to women and youth must be considered in the formulation of policies, incorporating among others e-extension services and the clientele be empowered to use these ICT platforms. Open trade needs regulation based on local supply levels.1528

Active involvement of women and youth to undertake the piggery industry successfully where their voices are heard and have access to the necessary resources needed for an enterprise to be stable and sustainable.1529
Ongoing activities that strengthen underpinning conditions, such as women/youth engagement...\textsuperscript{1530}

Finally, women, youth, and the private sector, each play a critical role and need to be engaged for future change.\textsuperscript{1531}

We need to engage young refugees productively in food systems as well as providing for the means of life in the time before they can return.\textsuperscript{1532}

Empowering women’s agency and young farmers for resilience: Government should allocate special schemes for youth and women having an interest in farming. Government needs to facilitate collaboration among private Agri and IT companies, farmers associations, academia to resolve gaps faced by the young & women farmers.\textsuperscript{1533}

Youth voices are powerful and helpful in helping to mobilize young people to open opportunities in the value chains and other sectors that can enable their meaningful contribution in the sector and economy. By involving young people and their voices, it will create opportunities in a sustainable way.\textsuperscript{1534}

Young people need to see the large opportunities in the value chains and see these opportunities as their launch pads for entrepreneurship. However, they ought to appreciate that this must be profitable. Further, because Africa has more mouths to feed and the ability to feed these populations, this enables to unlock the entrepreneurship, opportunities of jobs, activate other sectors...\textsuperscript{1535}

There is a whole paradigm shift that needs to happen in terms of getting young people into agriculture and garner their active participation in the food systems. It is also important to recognize that not every young person wants to be a farmer but there opportunities for young people beyond the farm.\textsuperscript{1536}

Engaging youth in farming, Embracing technology, & Preserving Culture: Farmers are aging, and it’s a problem. In order to move forward with agriculture and allow for more innovation, we must engage youth in farming. In doing so we can embrace technology and promote cultural and ancestral knowledge- blending the old and the new.\textsuperscript{1537}

Need for more youth engagement programs.\textsuperscript{1538}

Engagement of youth and technological innovations is crucial in revitalizing ethnic cuisines: It is vital to involve the youth through programmes such as fellowships to promote local cuisines, and ensure conservation of traditional knowledge and
agrobiodiversity. Likewise, use of appropriate technology across all food system actions can enhance the volume, quality, and branding of ethnic cuisines.\textsuperscript{1539}

Engagement of youth is paramount to increase awareness and deliver messages on food systems transformation, including through events, campaigns and media outlets (social media, cinema, etc.) at national and regional level.\textsuperscript{1540}

“The youth can have a significant impact on the food systems through education, empowerment & advocacy”. “Young people are not only the future leaders but the leaders of today”.\textsuperscript{1541}

Agroecology in Agroforestry 
Solidarity among farmers provide services to members that enables them to manage natural resources in an environmentally friendly manner, produce quality products that meet market demands, achieve fair and sustainable returns for their work and improve the wellbeing of all members of farming families. ... Recognize the Local knowledge and wisdom on agroecological approach to farmer. Youth engagement is important for continuity and sustainability.\textsuperscript{1542}

Stronger call for rights recognition of women and youth - Food systems have been developed against the disadvantaged. We should develop agriculture for women and young people so that agriculture systems could become beneficial to people. There is a need to organize the youth creatively for them to encourage the youth to engage in agriculture. A lot of youth are discouraged to go to the field to do agriculture. The goal is to also break the stigma in farming, because their mindset is that farming is boring or dirty and not profitable.\textsuperscript{1543}

A younger farmer-entrepreneur echoed the need for a supportive ecosystem to encourage the youth to engage in agriculture, and noted that transformation begins with habits, mindset, and culture.\textsuperscript{1544}

There is need to develop a digital driven agricultural policy aimed at attracting the youth engagement in food systems.\textsuperscript{1545}

Invest in youth, women, and children empowerment to lead and take part in policy-making mechanisms as they constitute the majority of the population and can actively participate in driving and implementing changes within rural and urban communities.\textsuperscript{1546}

Government to provide and strengthen youth mechanisms that will continue the ongoing participation of youth in addressing key Pacific issues; National councils – need to be strengthened to promote and support youth at work.\textsuperscript{1547}
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.\textsuperscript{1548}

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.\textsuperscript{1549}

It is important to hear the voices of youth themselves in terms of what they want to happen if they are to be involved in the agri-food sector.\textsuperscript{1550}

Young people need buy-in because they are very motivated to improve the food system.\textsuperscript{1551}

Getting consumers interested and engaged with embedding sustainability in the dietary guidelines could help, particularly engaging with young people.\textsuperscript{1552}

Support for inclusion of women and youth within territories, particularly through targeted interventions for capacity building in business development, self-awareness, self-confidence, and agricultural work.\textsuperscript{1553}

To conclude her session, Ms Adejoke noted that while children are mostly beneficiaries of the food system, they can also be prime actors in the food chain by learning not to waste food. Food wastage on a large scale can cause serious damage to the effective functioning of the food system. In addition, children can also be involved in school and home gardening in conjunction with their teachers and their parents, as such an avenue would make good and healthy food within quick reach.\textsuperscript{1554}

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.\textsuperscript{1555}

The indigenous women’s networks propose to create spaces for intergenerational dialogue with young people, girls and boys, for the transmission of ancestral knowledge, techniques and practices related to their own food systems, as a strategy of existence and cultural continuity. Disseminate the benefits of healthy and nutritious traditional foods, without any chemical component through awareness campaigns to current generations. Migration to urban areas has had a negative impact on the
importance of maintaining a healthy and nutritious diet, misinformation and/or transculturation of young people affects the preference of processed and non-nutritious foods.\textsuperscript{1556}

Stakeholder engagement o Universities must leave the ivory tower mentality - universities to should connect with communities to address food system challenges. Universities (in the cities) must connect with farmers in rural areas to ensure relevant research.\textsuperscript{1557}

We need to think about how to engage with the “emotional” side of decision making on farm, and provision of technical knowledge is not good enough any more as it doesn’t drive behaviour change.\textsuperscript{1558}

Engaging with farmers including poor resource farmers to benefit from the joint discussions and innovation.\textsuperscript{1559}

Most of the world’s farmers are smallholder farmers and through this dialogue, it was found that they needed a stronger voice at the negotiating table. Their interests should be prioritized moving forward in the discussions on food system transformation.\textsuperscript{1560}

Actions: Assist smallholder farmers—provide access to technology and seeds to improve productivity and diversify income streams.\textsuperscript{1561}

Creation of more sustainable engagements with small scale farmers for a swift paradigm shift as the population grows.\textsuperscript{1562}

In addition, the group discussed how to increase knowledge and communication at the grassroot level. In order to engage farmers in sustainability, the change process must be subtle. Gradual processes which advance by small steps carry further than major changes introduced suddenly. Improving production is central in mitigating deforestation. This should be achieved without impoverishing the soil.\textsuperscript{1563}

Involve more farmers and work with farmers that are trailblazing regenerative food systems.\textsuperscript{1564}

Support the engagement of Mountain Partnership members, and facilitate their linkages to decision-making structures.\textsuperscript{1565}

Cooperation and collaboration is critical. Government, science and industry need to come together and they must engage with the farming community to address current issues.\textsuperscript{1566}
Poor resource farmers have to benefit from innovation of water efficient technology such as drip irrigation through engaging with them.\textsuperscript{1567}

Farmers need to be better engaged in any development plan through stronger communication with water and agricultural agencies regarding the challenges that they face and the untapped opportunities that governments should seek to help improve farmers’ welfare.\textsuperscript{1568}

There should be regular outreach to involved actors, especially farmers, and a neutral convening partner.\textsuperscript{1569}

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. Chefs need to understand how sustainability and farming can work together; how food choices impact the environment and our carbon footprint. The effects of our food on the planet.\textsuperscript{1570}

Chefs engaging and learning from farmers, across the globe farmers work with different crops in different climates. Chefs need to understand how sustainability and farming can work together.\textsuperscript{1571}

Reforming research and extension work, wherein farmers must participate in the whole process of co-designing agricultural technologies and innovations.\textsuperscript{1572}

Smallholder famers, who still make up the vast majority of farmers in the region, are already actively practicing nature positive agriculture and growing interest in agroecological principles.\textsuperscript{1573}

Projects that can be funded for scaling up should be localized problems and the solutions are driven by the farmers themselves.\textsuperscript{1574}

Center needs and ideas of small-scale producers in decisions.\textsuperscript{1575}

Involve people in rural communities and farmers in solutions to food insecurity, don’t exclude them from the conversations.\textsuperscript{1576}

K-12 engagement is critical to building a pipeline for food system advocacy, including future farmers.\textsuperscript{1577}

There is a need for stronger farmer voices from the field. They need to be better organized to do so.\textsuperscript{1578}
Producers need to engage more with policymakers and the general public.\textsuperscript{1579} Integrating the whole farm family rather than just focusing on the one, usually patriarchal, landowner. This can be done by integrating women and young farmers through discussion groups, KT consultations, and recognition on correspondence related to the farm. The farming media can play a significant role here in reversing the usually male-dominated stereotype. There is a need to focus on integrating women more for future resilience and young farmers for generational renewal and innovation.\textsuperscript{1580}

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.\textsuperscript{1581}

Research and development------Input suppliers------Primer------production------Harvesting------aggregation------storage------Packaging------Distribution------agro processing------Markets and consumers The farmer plays almost every role, as they produce, process and take the products to markets.\textsuperscript{1582}

All actors of the food system need to be further engaged, not leaving behind farmer and producer needs in development planning for climate change mitigation.\textsuperscript{1583}

Smallholder farmers should be drivers of change in Agriculture sector.\textsuperscript{1584}

Participatory approach is a possible intervention where farmer organisations are encouraged to team up with scientists and submit competitive proposals for funding.\textsuperscript{1585}

It was suggested the supply chain needs to be reconceptualised as a web to broaden the idea of who counts as a stakeholder. Coalitions were agreed to be key as a way to give farmers, particularly smaller farmers, a voice, and there needs to be more work to make livestock farmers part of the agricultural transition rather than vilified. In addressing the issue of resilience, participants agreed that although supply chains are a major point of weakness to be addressed there needs to be recognition of the benefits and drawbacks of more localised supply chains.\textsuperscript{1586}

Through engagement with entrepreneurs and clearer guidance by financiers and governments, there is more potential to fully incorporate seafood as an element of the global food system.\textsuperscript{1587}

Significant number of farmers in Brazil have never heard about “carbon” and, therefore, increasing awareness on climate issues, negotiations and commitments is
needed for larger farmers engagement. Hence, farmers need to be involved in food systems/carbon discussions and help co-creating solutions.\footnote{264:78 p 11 in 497_June_24_21_Fontes_Mahi}

Farmers learn better from other farmers and they play a key role on this transformation, as it is deeply integrated at the local level.\footnote{264:70 p 11 in 497_June_24_21_Fontes_Mahi}

Protect, support and develop the role of small-scale fisheries and producers to optimise the potential of aquatic foods to help end malnutrition.\footnote{264:79 p 11 in 497_June_24_21_Fontes_Mahi}

Seaweed farmers and fishers need to have stronger involvement in decision making.\footnote{266:45 p 9 in 499_June_25_21_Edible Issues}

In India, whether seaweed farmers or fish farmers, they have a greater interest in biodiversity, and when they earn they spend in local economies. Bringing them into the decision making circles would be a way of strengthening the functioning of policies as well as making sure these policies are more effective on ground as they have been co-created.\footnote{267:65 p 12 in 500_June_26_21_Edible Issues}

Biggest difference will come from governmental, top-down policies that better regulate sustainable relationships with the ocean and support sustainable practices whilst not leaving fishermen behind in the transition.\footnote{270:13 p 7 in 503_June_29_21_Schnyder_Besora}

...the need to gather feedback from farmers on effectiveness of the said policies and further the need to harmonize policies to ward off confusion in their implementation.\footnote{273:6 p 7 in 506_June_30_21_EAFF}

Training of smallholder farmers to increase their market competitiveness, enabling them to meet sanitary and phytosanitary standards...\footnote{274:27 p 6 in 516_July_01_21_Anastasiou K}

Marginalized groups, farmers and primary producers deserve greater recognition at the policy table and global dialogues.\footnote{283:20 p 6 in 535_July_07_21_WBADB_ADI_Multi}

Panelists also recommended that smallholder farmers themselves be active voices and participants in this process.\footnote{301:16 p 8 in 534_July_07_21_WBADB_ADI_Multi}

Access to services to enable engagement to establish shared vision(s), action plans, participation from women/youth, conflict resolutions, technology integration, etc. 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.\footnote{302:25 p 6 in 537_July_08_UNESCO Chair on Food}

Convergence and organization of key stakeholders at multiple levels were proposed as solutions. These include institutional mechanisms, such as merging government development schemes with agricultural plans, and expanding disaster risk, reduction
and recovery plans to cover smallholder farmers. Organizing and clustering farmers is needed to improve their access to inputs, capacity building, and formal financial services. Mechanization and its associated increased productivity were also seen as pathways for increased participation of women and youth. Crop insurance and other safety nets can help smallholder farmers bounce back from climatic shocks.\textsuperscript{1599}

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.\textsuperscript{1600}

Greater global governance. On the one hand, from the public perspective, they discussed the need to position the relevance of agri-food systems transformation at a more significant level on the world political agenda. In this sense, global governance appears as a crucial element in reducing system imbalances and avoiding the differences in competitiveness that may exist, depending on the production systems and place of origin of the companies. In the view of the Ministry of Foreign Affairs, European Union and Cooperation, the first step towards a faster and more efficient transformation would be for all stakeholders in the system to adopt the Voluntary Guidelines on Responsible Governance of Land and Resource Tenure (promulgated by FAO), which guide responsible and sustainable practices to ensure food security. On the other hand, from the third sector’s perspective, a paradigm shift is needed in the approach to agri-food systems governance; currently more focused on the commercialization of food than on quality food for people. This change would require greater involvement of small producers, and collaboration between all actors in the value chain.\textsuperscript{1601}

Development of a new agricultural policy which breaks with the past and is participatory: a policy which defines the outlines of a change of approach is urgently needed and must result in an approach which involves the different stakeholders of the channels: farmers but also the stakeholders in the private sector must be active participants in this refection and in the strategic choices to be implemented because they will then be those who implement it; a paradigm shift is required at the level of the ministry in charge of agriculture: it must become a ministry of sustainable agricultural production.\textsuperscript{1602}

Listening to the women in the communities, in the farms, in the grassroots about their stories and experiences.\textsuperscript{1603}

The best way to know what the key challenges are for women in the food and agriculture system, is to talk to them.\textsuperscript{1604}

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.  

Participants emphasized that initiatives to incentivize and empower participation of vulnerable groups particularly youth and women are needed. These should include access to land and other resources that can facilitate their participation in food production. 

Bridging the missing middle entails building capacities for innovation from the bottom up. Women constitute a large part of food production, thus supporting the self-organized groups with structural assets can increase women’s participation in decision-making. 

Getting the voices of SMEs and women entrepreneurs into the dialogues, especially the country-level dialogues, within the process of the UNFSS is critical. 

Develop Strategies for implementing a gender-responsive food system. Women need to be provided with the solution because they need the solutions, research products, communication products, market access and linkages. So, women need to be involved in developing the solutions. Research needs to have them at the table to let the researchers know what they need and vice-versa. There is a need to put the women at the forefront, to be the advisers to researchers as they conduct their research and other field experiments. 

Using ICT technology to foster awareness and engage women’s voices in policy issues; demystifying computer and social media skills. 

It’s important to recognize the role of women in connecting us to sustainable food systems. In the Dine community they are matriarchal. Men are in charge of the sky and women are in charge of the Earth. The Lakota were given the sacred pipe from the Buffalo Woman 17 generations ago. They were starving and had no harmony. Everything hinges on equality. Everything else is a symptom. If we support women, we have our hand on the pulse of the next generation. Talk to those in touch on an intuitive spiritual level of what that next generation needs. 

Engage and empower women. Women compose a majority of the farming workforce and yet have a limited voice due to cultural and religious mores. 

Build partnerships with women and youth constituencies within this group.
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.\textsuperscript{1614}

Strengthen organizational capacity of local organizations, center and amplify the voices of small-scale producers, and support the technical and economic needs identified by these communities (including women and youths).\textsuperscript{1615}

Integrating the whole farm family rather than just focusing on the one, usually patriarchal, landowner. This can be done by integrating women and young farmers through discussion groups, KT consultations, and recognition on correspondence related to the farm. The farming media can play a significant role here in reversing the usually male-dominated stereotype. There is a need to focus on integrating women more for future resilience and young farmers for generational renewal and innovation.\textsuperscript{1616}

The voice of the producers with special attention to women and youth must be considered in the formulation of policies, incorporating among others e-extension services and the clientele be empowered to use these ICT platforms. Open trade needs regulation based on local supply levels.\textsuperscript{1617}

To keep the sectorial vision on the rail, policy dialogues giving women and youth an opportunity to give opinions.\textsuperscript{1618}

Ongoing activities that strengthen underpinning conditions, such as women/youth engagement.\textsuperscript{1619}

Stronger call for rights recognition of women and youth - Food systems have been developed against the disadvantaged. We should develop agriculture for women and young people so that agriculture systems could become beneficial to people. There is a need to organize the youth creatively for them to encourage the youth to engage in agriculture. A lot of youth are discouraged to go to the field to do agriculture. The goal is to also break the stigma in farming, because their mindset is that farming is boring or dirty and not profitable.\textsuperscript{1620}

Address socio-cultural issues which impede opportunities for women.\textsuperscript{1621}

Role of Women: Women are the ones managing the ecosystem at the local level and women in the coastal community are also some of the most affected by climate change. Coastal women need to be invited to decision making spaces and their aspirations and fears need to be addressed if there is going to be change in the industry.\textsuperscript{1622}
Youth, women, children, and other marginalized groups are key stakeholders for addressing food security.\textsuperscript{1623}

Ensure participation quotas for women in learning opportunities (despite the larger numbers of male applicants) and empower young women champions as mentors and service providers to other youth.\textsuperscript{1624}

Support for inclusion of women and youth within territories, particularly through targeted interventions for capacity building in business development, self-awareness, self-confidence, and agricultural work.\textsuperscript{1625}

An important insight about the impact of increasing women’s participation in value chains is its impact on embedding nutrition as a key food value chain priority of agri-food systems—essentially scaling women’s nutrition-centred decision-making from the household to community. Improving community nutrition can help improve quality of life and productivity, leading to more opportunities for participation within the agri-food system.\textsuperscript{1626}

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.\textsuperscript{1627}

Using women entrepreneurs to engage in dialogues with other women regarding roles in the home and the importance of nutritious food for family diet, provide positive reinforcement for modified norms of household roles, and serve as role models for women nutrition champions.\textsuperscript{1628}

The indigenous women’s networks propose to create spaces for intergenerational dialogue with young people, girls and boys, for the transmission of ancestral knowledge, techniques and practices related to their own food systems, as a strategy of existence and cultural continuity. Disseminate the benefits of healthy and nutritious traditional foods, without any chemical component through awareness campaigns to current generations. Migration to urban areas has had a negative impact on the importance of maintaining a healthy and nutritious diet, misinformation and/or transculturation of young people affects the preference of processed and non-nutritious foods.\textsuperscript{1629}
Equity problems

The transformation of food systems is a political, economic and environmental issue, but above all it is a question of gender equality.\textsuperscript{1630}

A fair, transformative and gender equitable food system can be defined as one that allows countries, communities, households, and men and women, to have what is necessary to produce enough food and have the access to it, for their families and populations through sustainable, environmentally sound and climate resilient practices that favour gender equity and equality.\textsuperscript{1631}

The group has discussed following question in the breakout: how could be promoted equity and inclusion in WEF nexus governance to create opportunities for transformation towards more just food, water and energy systems?\textsuperscript{1632}

Equitable and inclusive livelihoods in food systems through skills and entrepreneurship.\textsuperscript{1633}

There was also consensus on the ideal vision of a sustainable, equitable food system: which regenerates the environment, ensures decent incomes and livelihoods for producers, and facilitates access to and consumption of nutritious, safe food.\textsuperscript{1634}

Advancing Equitable livelihoods to proffer economic recovery and growth solutions for the vulnerable within the context of subsisting challenges is further hampered by lean access to agricultural inputs, distribution, transportation and value addition opportunities to uplift vulnerable people and communities in Nigeria.\textsuperscript{1635}

Implement transparency in the supply chain to ensure equity to all stakeholders.\textsuperscript{1636}

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.\textsuperscript{1637}

Addressing issues of inequalities associated with gender, age and marginalization, especially but not exclusively those relating to the food system and that impinge on food security and nutrition and equitable, sustainable and resilient livelihoods including equal pay for equal job, access and ownership of resources, and forced child labor.\textsuperscript{1638}

This integrated “game changing” solution was developed within AT 3, however, it links mainly to action tracks 1, 4 and 5 due to food systems developing within action tracks and their local decision making for access to safe and nutritious food for all, advance
equitable livelihoods, and build resilience to vulnerabilities, shocks and stresses all occurring at a landscape level.\textsuperscript{1639}

In general, success for all these proposals appears to participants to hinge upon close coordination and new partnerships among governments, investors, financial institutions, development partners, women’s entrepreneur groups and farmers’ organizations.\textsuperscript{1640}

The dialogue sought to reinforce the need for stronger, inclusive, and equitable food systems in Nigeria that can withstand shocks and disruptions, are inclusive of the population, and are equitable for all.\textsuperscript{1641}

Ensuring representation for the most vulnerable groups (e.g., women and youth) in society in the food systems through equitable access to resources (land, agricultural inputs, social nets, business development, etc.) has helped in creating more inclusive sustainable food systems in Nigeria.\textsuperscript{1642}

Over the years the food services industry has helped influence and enable shifts in the global food system given its buying power, scale of infrastructure and user reach. Today, the business and institutional food services industry (tech, financial services, academia, entertainment, etc) has a sizable opportunity to positively advance the global narrative as well as consequent actions on sustainability, social equality and access to healthy, nutritious food.\textsuperscript{1643}

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.\textsuperscript{1644}

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.\textsuperscript{1645}

To unlock sustainable finance, a distribution mechanism is needed to ensure equitable value distribution all the way down to the farmers.\textsuperscript{1646}

In order to close the gender gap, access to family care and child support are essential to enable women to work in agriculture. Other enabling factors are reinforcing women networks, equal payment for men and women ensured by the private sector and recognizing women for their work.\textsuperscript{1647}
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, such as access to land, markets and decisions.\footnote{1648}

Panelists agreed that inclusivity and equity, based on a people-centered approach, is key to ensuring better food livelihoods in rural areas for vulnerable groups including women, youth, indigenous peoples and other communities with distinct livelihood systems.\footnote{1649}

To have an inclusive conversation and truly embrace diversity, thus avoiding a Eurocentric (or romantic?) vision of the future, we must discuss and dive deeper into the topics of inequality, power concentration and accessibility.\footnote{1650}

Equality and dignity should be integral part of the nutrition security policies.\footnote{1652}

The Dialogue showed that a social justice approach is needed when talking about food systems.\footnote{1653}

The true cost of food has to be recognized and rewarded, while making food available and affordable to all.\footnote{1654}

In conclusion, the speaker emphasized that in achieving the vision of equitable livelihoods for small-scale producers, rural connectivity has to be improved, the basics are in place, and effective partnership facilitation is ensured in implementing programs. Innovation is needed in doing all these and that the benefits produced from bundling these innovations are shared equitably in the chain.\footnote{1655}

Ensure equity, dignity & inclusion: Participants emphasized these as cross-cutting themes. They shared how to involve stakeholders in food systems solutions, particularly farmers and students, who have historically been omitted from the conversation. Participants urged coherent strategies to eliminate the stigma of receiving free and reduced-price school meals and other forms of food assistance.\footnote{1656}

Equitable livelihoods require a broad systemic change to increase food access to all individuals. This change will take time and immediate ameliorating action is needed. A raised minimum wage will combat food insecurity among low-income individuals and families and recognize the value of workers within our food system.\footnote{1657}
This issue approaches healthy consumption from an equity lens, highlighting social determinants across socioeconomic lines.\textsuperscript{1658}

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.\textsuperscript{1659}

Providing equitable access by all to diverse as well as safe and nutritious foods: To what extent, and how, can changes in livestock systems benefit everyone, including the most vulnerable and poorest people, overcome food poverty and help end hunger and malnutrition in cities and rural areas.\textsuperscript{1660}

Providing equitable access by all to diverse as well as safe and nutritious foods: To what extent, and how, can changes in livestock systems benefit everyone, including the most vulnerable and poorest people, overcome food poverty and help end hunger and malnutrition in cities and rural areas – without compromising other goals in areas like health, environment or animal welfare\textsuperscript{21661}

In order to reduce inequality, we need to support smallholder farmers with the digital for financial markets, which can improve investment.\textsuperscript{1662}

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.\textsuperscript{1663}

Equity in water is essential. Tailenders crops also have the right to adequate water to protect their welfare. Disseminating the data regarding the transition in dietary habits of households can have a significant impact on policymaking. The recent shift in households’ consumption pattern from an unhealthy diet to a more nutritious diet can be taken as a guide to shift from water thirsty crops to Water thrifty crops.\textsuperscript{1664}

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

\textsuperscript{1658} 88:3 p 9 in 162_Apr_16_21_Fountain G
\textsuperscript{1659} 93:31 p 9 in 217_May_6_21_Schwartz A
\textsuperscript{1660} 95:69 p 5 in 227_May_18_21_Tarawali S
\textsuperscript{1661} 95:78 p 5 in 227_May_18_21_Tarawali S
\textsuperscript{1662} 120:74 p 9 in 117_Apr_22_21_Dinesh D_Multi
\textsuperscript{1663} 120:75 p 9 in 117_Apr_22_21_Dinesh D_Multi
\textsuperscript{1664} 129:91 p 12 in 159_Apr_21_21_Hafeez M
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.\textsuperscript{1665}

Creating positive, safe, cultural spaces and opportunities for Indigenous Youth: Indigenous-led nonprofit, Diné Introspective, Inc. is focused on creating positive opportunities for younger generations, serving as role model to peers, healing for family and culture, cultivating respect for land and animals, relationship with Creator, having a safe and cultural place to learn songs, prayers, and soaking up as much as possible from culture. Space holding and teaching through tribal communities and experience, growing through our clanship. Addressing the reality that so many youth are stuck in similar situations of not being able to express selves.\textsuperscript{1666}

Create Indigenous innovation tracks in higher education institutes: University of Hawai‘i - West Oahu has an Indigenous Studies track that includes Sustainable Communities Food Systems course - where students, many who are Native Hawaiian students, are learning foundational practices and values, working with Indigenous Science and transforming their educational experience; there is an entire degree focused on Indigenous led restoration work. These tracks of study are opening up opportunities for Indigenous and non-indigenous students alike to build capacity, be supported in their advancement and give rightful validation to their knowledge base and innovations.\textsuperscript{1667}

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.\textsuperscript{1668}

The main challenge identified is how to promote women’s empowerment and improved nutrition and health in such a way that women’s individual needs are being met. Often nutrition programmes that focus on better community and childhood nutrition are targeted at women, but their own nutritional status is neglected.\textsuperscript{1669}

On the topic of equal access – There is ample evidence suggesting that there is substantial difference in women and men access, use of financial services and capital. Women, however, still lack savings, collateral to start new businesses and grow existing ones. Most often, social, and institutional support systems do not protect farmers, particularly women farmers against lost and shocks.\textsuperscript{1670}

Improve gender equality and women’s empowerment as pathway to get closer to food and nutrition security.\textsuperscript{1671}

Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change).\textsuperscript{1672}
All actions must be transdisciplinary, inclusive, and aligned with rights-based approaches to achieve equitable food systems transformation.\textsuperscript{1673}

Proper data management is urgently needed to accelerate equitable support systems.\textsuperscript{1674}

To advance equitable livelihoods of youth and secure their inclusive interest in Agriculture, the dialogue noted that seemingly invisible barriers be lifted. For instance, the Land Use Acts needs to be reviewed and allowed for access to land for agricultural purposes in addition to enable access to farm inputs and financing.\textsuperscript{1675}

Livelihoods: There must be equity within payroll and living wage that is adhered to by all countries to ensure accessibility and affordability.\textsuperscript{1676}

End practices that cause people to disassociate from the land; End practices that extracts without replenishing; End practices that exploit without regard for people or planet; Put an end to the violence of the food system that exploits people and the planet; Put an end to child labor; Even out systemic imbalances built into food systems that disempower smallholder farmers, workers, women; Move development money away from mega-growers; Create and enforce international regulations to discourage the exploitation of farm workers; Mandate living wages for farm workers; Change worker conditions and pay structures that incentive a reliance on migratory workers and working conditions that allow for abuse and exploitation; Break down socio-cultural mores that disempower and exploits women’s labor.\textsuperscript{1677}

How can we advance equitable livelihoods for farm and food workers? Provide protections for farm and food workers through policy. Reorient the value-chain to bring protections and living wages to workers. Provide incentive and protection structures for smallholder farmers. Regulate the land and the people who protect the environment and the people in leadership who need to help secure the livelihoods of those who work. Establish cooperatives and collectives to give workers ownership of the lands they work. Engage and empower women. Women compose a majority of the farming workforce and yet have a limited voice due to cultural and religious mores. Install mechanisms to redistribute the monopoly of power held by major agro-corporations and other big businesses to workers and smallholders. Provide education and opportunities to young people so that they can farm their own land or land help by co-ops to encourage a new generation of healthy, community farms.\textsuperscript{1678}

Take all possible measures to guarantee equal land ownership between women and men.\textsuperscript{1679}

Recognize Indigenous Peoples as agents to allow their self-determined food generation and production systems and practices in finding solutions.\textsuperscript{1680}
Seek to incorporate perspectives of marginalized racial, ethnic and gender groups, and recognize that the groups that are marginalized will be different in each context, and thus tailored approaches are necessary.\textsuperscript{1681}

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.\textsuperscript{1682}

**Suggested Action:** To address these issues, the group discussed the need to share costs of sustainable development equitably across the value chain. Greater investment in small-scale farming, and encouragement of farmer and food cooperatives would help dairy industries grow local communities. Reducing reliance on export markets and imports will also help develop domestic industries and build resilience to global shocks like COVID19.\textsuperscript{1683}

Advance equitable livelihoods. We need to integrate youth into the agri-food system by educating them using technology (social media, apps), having young people talk to other young people to engage them, increase communication on career opportunities in food systems, create a community education component on food systems and community growing in higher education.\textsuperscript{1684}

Finally, shame and inequality were two major themes to emerge from the breakout room sessions. Participants felt that hunger was stigmatized within communities, and noted that this would be a challenge to overcome the burden of malnutrition. Participants also recognized inequality, and in particular, gender inequality, as a challenge to food access; it was stated that girls and women were not prioritized for meals, and that disparities in school attendance could also prevent girls from being empowered to participate in advocacy and agriculture through education.\textsuperscript{1685}

At the university-level, it was recognized that male students purchase more fast foods than their female counterparts (as most young men do not cook in the African context), underscoring the importance of teaching young boys about nutritious foods, and eliminating the stigma around cooking. Moreover, promoting gender equality, through the sharing of domestic and agricultural duties, and through encouraging men to attend health services with their wives and children (to receive health information), were recognized as important actions.\textsuperscript{1686}

**Visionary statement:** Equal access of all parties to land. Trainings and support tailored for women and youth to flourish in cereal production. Financial aids in the form of loans and grants to support the take-off and expansion of existing enterprises.\textsuperscript{1687}
Food environments are gendered. For example, the role of informal food environments where women are the majority who are selling and buying. Policies must account for the gendered components in food environments.  

Gender Equality and Social Inclusion Participants identified increased gender equality and inclusion as key aspects of resilient food systems. The lack of gender and environmental lenses for all processes and stages of the food value chain was highlighted by participants as a barrier to inclusive and equitable food systems. 

Fair distribution and trade. Prices are not good enough for farmers and are more often played by the market to the detriment of farmers. Farmers get the least profit compared to other chain actors. The bargaining position of farmers is still low due to various obstacles such as weak institutional capacity, inadequate product quality, and contribution, and others. 

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 firm legality for their existence and living space areas to minimize cases of expropriation of customary law communities’ territories by companies and the state. Revitalization of a more inclusive education system for agriculture; build an education system that is contextual with the region and existing resources to answer the problems of farmer regeneration.

Opportunities should be extended to economically disadvantaged students to acquire technical and scientific skills in agriculture. This will widen participation to transform food systems and uplift the welfare of families.

The difference between designing something for farmers, rather than with farmers. 

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.

Promote youth and women decent employment and income in the crop and livestock value chains.

Secure land tenure rights lead to planned food systems based on individual or collective community choices and community driven demands. Land tenure rights for a given duration empowers deciding on efficient, scheduled, appropriate and suitable cropping system and serve as a strong foundation for economic empowerment. It is the basis of human dignity of all communities including indigenous peoples, pastoralists, local
communities and landless farmers forming the pathway for right to food among these communities and beyond.\textsuperscript{1696}

Focus more on the implementation of laws and policies which guarantee women’s ownership of land; Simplify administrative procedures that facilitate women’s access to land. Such procedures should be easily understandable and accessible; Tackle cultural norms which hinder women ownership of land with sensitivity; Include women and youth in decision making processes particularly relevant to customary tenure systems; Discriminatory practices based on patriarchy should be addressed through confidence building showcasing the benefits of achieving gender equality; Accessing common land can be the basic opportunity for women and youth to access land. To achieve this, the natural and socio-cultural values of the commons should be recognised at local, national and regional levels. Further, development of a chain or mode of marketing of the communal production give them incentive and allow them to better position themselves in the market. Study the existing customary rights and traditions and remodel them to adapt to the present socio-economic circumstances.\textsuperscript{1697}

Equitable and comprehensive networks among producers and consumers are necessary for sustainable action.\textsuperscript{1698}

Equitable and comprehensive networks among producers and consumers are necessary for sustainable action.\textsuperscript{1699}

He elevated solidarity, subsidiarity, equity, and the respect for human dignity as essential pillars to guide international action towards resilient food systems, starting from the enhancement of local food production to ensure greater availability and affordability of food and youth engagement programs to integrate future generations into food systems, based on a renewed set of values.\textsuperscript{1700}

Need for stronger and more targeted policies to regulate market competition and ensure equitable prices of final food products.\textsuperscript{1701}

Huge inequalities leading to exclusion of poor fish farmers, especially women who have restricted opportunities to participate in aquatic food systems. There is urgent need to increase access of poor farmers including women, to public water bodies. Additionally, financial opportunities should be developed and accessible to small-scale fishers to enable their participation in the profitable aquatic food systems' value chain.\textsuperscript{1702}

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.\textsuperscript{1703}

AT4 Equitable livelihoods: 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, creating jobs to young and Promote youth in Agriculture and access to funding.1704

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 natural resources and reform present-day technological and financial structures to support the transformation of food systems.1705

Farming is uniquely multi-generational in terms of both ownership and geographic location: as such, past inequities and injustices in a given location and upon a given farm are inextricably linked to modern-day outcomes as previously stated. Inequitable access to capital in the past has left many Black farmers behind in terms of their success, to the point where their capacity to farm has not kept pace with overall societal trends.1706

A second theme arose around the question of equitable access. More specifically, this included access to economic markets as well as the need for streamlining the connection between the US Department of Agriculture (USDA) and individual farmers. Farmers spoke extensively about the barriers to qualification that exist in order to compete for lucrative contracts. For example, the certifications and qualification standards often change rapidly, and without a robust infrastructure to connect regulatory bodies with individual farmers, these individual farmers cannot keep up with rapidly changing requirements. Additionally, the language and jargon involved with the complex legal bureaucracy is often inaccessible to smaller farmers: simply put, the increased bureaucratization of agriculture in the United States has weakened the links in the food system between political systems and the individual farmers. This, again, creates a highly concerning failure point within the food system: namely, the risk of alienating (and the potential to entirely lose) small farmers from the overall food system. Without building the requisite infrastructure to connect bureaucracy to individual farmers—including the simplification of language and streamlining the communication of updated regulations—small and mid-sized farmers are at risk of being left behind in the current food environment.1707

A keynote on the gender lever of UNFSS was also included to ensure that solutions for transforming food systems are gender transformative and responsive to the needs of different groups and sectors.1708

Transforming the current food systems to reach the SDGs requires an approach that responds to the fulfilment of the basic human right to safe and nutritious food. For IPs, this translates to the formal recognition of their rights to their lands, territories, resources and the practice of their culture, traditional knowledge and to determine their development, including food systems. The recognition of these rights is an indispensable instrument for evolving equitable and sustainable food systems.1709
The discussions were underpinned by Indigenous Peoples' right to food and food systems and revolved around elements such as production, processing, distribution and consumption and cross cutting issues like waste management and the roles and contributions of women, youth, elders, government, the private sector, NGOs/Indigenous Peoples’ Organizations (IPOs) and donors/financial institutions. It included status, risks, challenges and opportunities along the food systems and proposals to ensure protection and resilience.

Male-biased practices within the communities make it difficult for women to access decision-making, discussion and participation platforms on land management and administration, especially where collective ownership is concerned, as well as limiting women’s access to resources. Added to this is the ignorance and invisibility of the productive capacity of women, preference being given to the granting of resources, including land, to men. Structural changes are needed that can transform the patriarchal culture of the communities, without losing sight of the diversity of rural women. Given that many rural women have possession of land, although they lack ownership rights to it, recognition policies should be demanded, as well as redistribution policies: distributive policies with equity, with affirmative action, and legal ownership for rural women.

Access to land must be central. This implies advancing the titling and land registration processes, but also promoting agrarian reforms that plan structural and social changes, for an equitable distribution of land that benefits family farming, which will mean greater social efficiency in terms of food.

Solutions suggested through the dialogue - An integration of the entire food system from “Seed to Food” i.e., the entire process from seed to cultivation, production, distribution & consumption of food to be integrated to achieve the goals of good nutrition for the people, income for small holder farmers and sustainability of the food system. Capacity building and skill development of women farmers and laborers on farm planning, farm management, marketing and supply chain management. Resilience building of the smallholder farmers to absorb climate and market shocks through an agriculture resilience and recovery fund. Enabling women farmers to have the rights to the title of their land - Enabling women farmers to have a voice in decision-making & policy implementation in the Food System. Addressing the issue of women’s unpaid labor and skewed balance of work. Bringing about gender responsive agriculture & food system policies; bridging gender & technology gaps. Understanding the role of “uncultivated greens” and encouraging its cultivation as it forms a major part of the diet of poor, rural families along with being a powerful source of nutrition. Decentralizing and diversifying the food markets with a wide range of local products. Linking the produce of smallholder women farmers to the Public Distribution System which would help in food grains produced by the farmers being available for their consumption, consumption for their family members and the local villagers. Enabling the farmers to get assured markets and fair price of their produce to attain income security. Promoting local agro-processing industry to increase employment opportunities for youth in villages & reducing migration to urban areas. Organizing women to come together for collective marketing, bargaining & demand for better
services. Introducing progressive policies empowering women in food systems to reduce gender based violence.\textsuperscript{1713}

Stronger call for rights recognition of women and youth - Food systems have been developed against the disadvantaged. We should develop agriculture for women and young people so that agriculture systems could become beneficial to people. There is a need to organize the youth creatively for them to encourage the youth to engage in agriculture. A lot of youth are discouraged to go to the field to do agriculture. The goal is to also break the stigma in farming, because their mindset is that farming is boring or dirty and not profitable.\textsuperscript{1714}

Inform and influence continental partners, policy and regulatory actors on the needs and aspirations of women in agri-food enterprises.\textsuperscript{1715}

It was clear that in many African countries gender favourable policies have been put in place however they have not been operationalised, therefore there is need for operationalization of gender policies.\textsuperscript{1716}

Rather than trying to make women fit into current systems or practices, new systems that are women friendly need to be devised to include alternative collateral systems, gender responsive procurement to ensure women can engage in value chains.\textsuperscript{1717}

Establish women processing groups and improve processing technologies.\textsuperscript{1718}

Ensure that women and other vulnerable groups are included in aquatic food decision making and policy.\textsuperscript{1719}

Data: To create an equitable industry around seaweed, we have to make sure that it is done without exploiting the ecological balance. Both in terms of food security and climate solution, seaweed is considered a great solution. But 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.\textsuperscript{1720}

Prepare teachers to give good school and career advice to girls and have strong role models. Project-based learning with established women entrepreneurs as mentors. This influences motivation but also equips young women with better networks and services if they choose to venture in agriculture. Ensure participation quotas for women in learning opportunities (despite the larger numbers of male applicants) and empower young women champions as mentors and service providers to other youth.\textsuperscript{1721}
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.1722

The members proposed that there is need to break cultural barriers regarding land ownership, there is need to have proper documentation and laws regarding land ownership and succession, idle land should be made accessible to youth for farming purposes, and there is need to look into ways of managing human conflicts occasioned by population explosions.1723

Further, the youth and women are often left out of discussions affecting land distribution or matters touching on agriculture yet they are critical players.1724

Conversations need to build the bridge between nutrition science and regenerative agriculture. We must consider that many parts of the planet cannot ecologically produce foods suggested for sustainable healthy diets and plans need to be global for production to be equitable.1725

Need to ensure an equal transformation: The livelihoods of smallholder farmers should be at the center of these transformations. Policies promoting trade liberalization should ensure these benefit national trade balances and smallholder welfare. To ensure this, regulations to set standards are needed (e.g. preventing dumping).1726

To ensure equitable access to nutritious food and income benefits for all, a holistic approach to food systems is needed to ensure the availability of nutritious aquatic foods to all people and offer a sustainable source of income.1727

Access to land / legal security. Producers have guaranteed their access to land, with mechanisms and legal tools that give them security, avoiding disputes and violence in the field.1728

Change among smallholder farmers could be supported by ensuring that profits from the palm oil industry are more equitably divided along the supply chain and farmers (and especially smallholders) receive their fair share, as higher incomes would facilitate investment by farmers in more sustainable production approaches. A fairer distribution of profits specifically in certified sustainable palm oil chains, and therefore higher farmer incomes, could also become an incentive for farmers to switch to more sustainable production methods.1729

Gender-responsive agricultural research, development, and extension systems are crucial to ensuring innovations meet the needs of women and men in the community. In the same way, inclusive agricultural R&D&E systems address the needs of youth and other communities that may otherwise be marginalized.1730
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.\textsuperscript{1731}

Currently, there is an obstacle of lack of participation from marginalized groups due to exclusion according to age, race, gender, and ethnic belonging.\textsuperscript{1732}

Food is not a commodity, it is about commons, rights and ecosystem services—territorial governance can connect food systems with the land and the people that live in it. Territorialization is about empowering local actors to decide the future they want in the context they are in.\textsuperscript{1733}

Indigenous communities face many inequities in the Canadian food system. There are numerous Indigenous communities in Ontario and across Canada that still have boil water advisories and do not have reliable or easy access to safe drinking water.\textsuperscript{1734}

Equity and justice need to be at the forefront of a sustainable food system. Participants identified that there is an inequity of access to and availability of food across the world where some communities have an abundance and others do not have enough.\textsuperscript{1735}

Participants agreed that inclusivity and equity, based on a people-centered approach, is key to ensuring better food livelihoods in rural as well as urban areas for vulnerable groups including women, youth, non-majority communities and other communities with distinct livelihood systems.\textsuperscript{1736}

Equity is a key aspect of sustainability. As such, dietary guidelines and associated policies must be developed with a view to redressing food inequities, by focusing on access to nutritious, culturally-acceptable food and implementing a program of effective measuring and monitoring of how dietary patterns compare to recommended patterns among socio-economic and cultural groups.\textsuperscript{1737}

An important insight about the impact of increasing women’s participation in value chains is its impact on embedding nutrition as a key food value chain priority of agri-food systems—essentially scaling women’s nutrition-centred decision-making from the household to community. Improving community nutrition can help improve quality of life and productivity, leading to more opportunities for participation within the agri-food system.\textsuperscript{1738}

Creating and strengthening a local public market system improves health, reduces inequalities, improves livelihoods, and supports a more sustainable distribution of food throughout cities and regions.\textsuperscript{1739}
Decreasing violence and discrimination against women and increasing the number of women leaders.\textsuperscript{1740}

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.\textsuperscript{1741}

Agroecology is weakened if small farmers do not own the land they work. Therefore, Governments must do more to ensure that the land rights are in the hands of those who work and live on the land rather than the corporate sector. However, this contention is complicated by the fact that in countries that do not have property records, the Governments (mainly postcolonial Governments) are persuaded by TNCs to digitise land records. In the process they are denying indigenous practices where there isn’t one individual that owns a certain plot of land but rather a communal style of ownership. Therefore, capitalism is running against indigenous traditions to dispossess people of the land that they have lived and worked on for many centuries.\textsuperscript{1742}

Equity solutions

Promote legislative and parliamentary actions for gender parity and the incorporation of an intercultural perspective in decision-making.\textsuperscript{1743}

Participants also discussed challenges and opportunities for enabling entrepreneurship and addressing uneven access to resources.\textsuperscript{1744}

Enable flexible working: Flexible workplaces are an essential enabler for creating an inclusive working environment. Women are still more likely than men to care for children or elderly parents and therefore more likely to look for workplace flexibility when considering employment opportunities. Create working models that support those with family responsibilities: This is one of the most important actions that businesses can take to enable women to progress into leadership roles. Map out clear career pathways: In order for the meat industry to be considered an appealing career option and ultimately attract and retain a diverse workforce, it’s vital to create visible pathways for progression across a range of career options.\textsuperscript{1745}

Inform and push our work towards promoting women’s economic empowerment.\textsuperscript{1746}

Make sure the pay is reasonable, work hours are reasonable because you have to recognize that they are mothers, and condition of the workplace should be good.\textsuperscript{1747}

Additionally, a distribution mechanism is needed to ensure equitable value distribution all the way down to the farmers.\textsuperscript{1748}

To unlock sustainable finance, a distribution mechanism is needed to ensure equitable value distribution all the way down to the farmers. Working hand by hand with the
private, public sector and civil society, as well as the establishment of sound regulations 
and policies will create an enabling environment for money to grow into the region.\textsuperscript{1749}

Ensure equitable livelihoods for farmers, including smallholder farmers, women, youth, 
and underserved groups.\textsuperscript{1750}

Panelists agreed that inclusivity and equity, based on a people-centered approach, is 
key to ensuring better food livelihoods in rural areas for vulnerable groups including 
women, youth, indigenous peoples and other communities with distinct livelihood 
systems.\textsuperscript{1751}

Increased fairness and equity along the chain is required to succeed in transitioning 
towards sustainable food systems. A fair and transparent policy (open communication, 
fair prices, risk sharing) promoting more transparency along supply chains and better 
distribution of value is needed.\textsuperscript{1752}

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.\textsuperscript{1753}

There is a need to produce food that supports regenerative growth and holistic 
biodiversity support. Equitable food production includes equity for plant and animal 
kingdoms.\textsuperscript{1754}

Ensure inclusivity, equality and equity in all processes, decision-making and 
representation.\textsuperscript{1755}

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.\textsuperscript{1756}

The speaker emphasized that in achieving the vision of equitable livelihoods for small-

scale producers, rural connectivity has to be improved, the basics are in place, and 
effective partnership facilitation is ensured in implementing programs. Innovation is
needed in doing all these and that the benefits produced from bundling these innovations are shared equitably in the chain.\textsuperscript{1757}

Harness the potential of the youth, women, and persons with disability to participate in the food system equitably and gainfully.\textsuperscript{1758}

Harnessing the potential of the youth equitably and gainfully participate in AR4D.\textsuperscript{1759}

However, significant efforts are needed to ensure that safe, nutritious and affordable food produced in environmentally sustainable systems is available and enjoyed by all, rural livelihoods and areas are protected and value is distributed equitably.\textsuperscript{1760}

Real transformation in financial services will happen when gender becomes an integral part of the finance discussion rather than being a separate issue. There is need for governments, development partners and private financial institutions to rethink and rework their policies to propel equitable financing for women farmers.\textsuperscript{1761}

Nigel Brett, the Director of the Asia-Pacific Bureau of IFAD, noted that IFAD focused on promoting equitable livelihoods. He said that it was essential to consider smallholder farmers and other rural populations as the core of food system transformation and sustainable development goals.\textsuperscript{1762}

Equity in water is essential. Tailenders crops also have the right to adequate water to protect their welfare. Disseminating the data regarding the transition in dietary habits of households can have a significant impact on policymaking. The recent shift in households’ consumption pattern from an unhealthy diet to a more nutritious diet can be taken as a guide to shift from water thirsty crops to Water thrifty crops.\textsuperscript{1763}

Various strategies adopted at community levels can be scaled up to promote inclusivity and equitability in the WEF nexus. Some small-scale programs can be expanded to achieve the desired results.\textsuperscript{1764}

In conclusion, participants were charged that, we do not only need sustainable, resilient, or healthy Food Systems, we need just and equitable Food Systems. Inclusion and equity should be key questions in the conceptualization of Food Systems.\textsuperscript{1765}

This entails a need to increase the availability of safe and nutritious food, making food more affordable and reducing inequities in food access.\textsuperscript{1766}

To advance equitable livelihoods of youth and secure their inclusive interest in Agriculture, the dialogue noted that seemingly invisible barriers be lifted. For instance,
the Land Use Acts needs to be reviewed and allowed for access to land for agricultural purposes in addition to enable access to farm inputs and financing.\textsuperscript{1767}

Ensure an equitable share of costs and benefits.\textsuperscript{1768}

Emphasize value over volume – and clarify value to *whom*, with a focus on equity – in management goals.\textsuperscript{1769}

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.\textsuperscript{1770}

Provide equity in food security across race, ethnicity and income.\textsuperscript{1771}

Access to land regardless of age and gender is critical as this enables equal participation of all groups in cereal production.\textsuperscript{1772}

There should be equitable distribution of land to women and youth to enable maximized production and participation in the markets.\textsuperscript{1773}

Inequities in the food environment should be corrected to allow access to fair marketing, competition and capital investment for SMEs.\textsuperscript{1774}

This included access to capital: for example, venture capital to expand farms, or government capital and investment to establish markets. It is noteworthy here to pause and briefly emphasize that this was, again, not merely a complaint about desiring more wealth. Farming is uniquely multi-generational in terms of both ownership and geographic location: as such, past inequities and injustices in a given location and upon a given farm are inextricably linked to modern-day outcomes as previously stated. Inequitable access to capital in the past has left many Black farmers behind in terms of their success, to the point where their capacity to farm has not kept pace with overall societal trends. ... In this vein, a concerted and substantial transfer of capital--for instance, (recommendation 1) establishing a separate fund for Black farmers, run by Black farmers--seems to be a key solution for redressing their exclusion from the food systems.\textsuperscript{1775}

They also pointed to access to government resources. For example, Black farmers are often either rejected or dismissed at USDA offices, with some participants describing a "good ole boy" culture within these offices, where officers do not devote sufficient time and energy to communicate key information to these farmers. (Recommendation 2) Here, an affirmative attempt to institutionally include Black farmers (or allies) in
government offices, especially in tandem with expanding government infrastructure into marginalized areas, may help begin to redress these cultural issues.\textsuperscript{1776}

Equitable and inclusive partnerships have the potential of fostering inclusive governance and effective policy-making, which is key to generate transformative change, coupled with sustainable finance and capacity building. Underfunding emerged as a common key issue during the discussions. 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.\textsuperscript{1777}

Important to consider equity dimension of achieving food security goals and SDGs.\textsuperscript{1778}

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.\textsuperscript{1779}

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 (eg 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. Changing eating behaviours for the better, and at scale, based on a solid understanding of where people are starting from. Driving and supporting mindset and cultural shifts, including within specific target groups - recognising and working with the fact that this could take time.\textsuperscript{1780}

The shared vision of a food system needs to encompass health, equity and environmental sustainability.\textsuperscript{1781}

Approaches used need to be fit-for-purpose and enable the inclusion of sustainability messages and equity.\textsuperscript{1782}

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.\textsuperscript{1783}

Local governments are best placed to integrate economic, environmental and social dimensions, bring together public actors, private sector and civil society and mediate 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.\textsuperscript{1784}

Participatory and inclusive democracy is essential for good territorial governance to address power imbalances, leave no one behind (women, youth, Indigenous Peoples, migrants, displaced people) and avoid capture by local elites.\textsuperscript{1785}

Food is not a commodity, it is about commons, rights and eco-system services—territorial governance can connect food systems with the land and the people that live in it. Territorialization is about empowering local actors to decide the future they want in the context they are in.\textsuperscript{1786}

Integrate multi/cross-sector action: Silos challenge action including cross-sector communications. Limited knowledge and capacity raise questions about agricultural impact on water sources, biodiversity, conflicts behind land use or land tenure, and feedback with/to rural communities. Support is needed to facilitate/train for/develop capacity. Need to move landscapes/territorial planning from technocratic to rights-based.\textsuperscript{1787}

Governance refers to processes of negotiating needs, interests and perspectives of various stake-holders. To promote more inclusive food systems transformation, a central goal of territorial governance should be to increase the voice of marginalized groups and increase the accountability of the state. A pre-condition to this type of governance is a multi-sectorial government that is rights-based in its approach; this must be embedded into law for adequate follow through and not just theoretical value-signaling without action. Only through multi-actor governance can vulnerable people be heard.\textsuperscript{1788}

A just food system is one where everyone has access to healthy and culturally appropriate foods that are made using fair methods. Many Indigenous communities live in communities with boil water advisories and it is essential to improve their access to safe drinking water. In addition, it is important to create more opportunities for Indigenous food sovereignty. Moreover, there is room to improve the food charity methods we use aimed to address food insecurity, to ensure that individuals are aware of these programs and can access them with dignity. Furthermore, temporary foreign migrant workers face many discriminatory policies despite being essential to Canada’s food production system.\textsuperscript{1789}
Participants commented on seeing few people of colour, women and young people in the food system. In Canada, approximately 2% of the population are farmers and the typical image of farmers are “old white men”. The involvement of youth in agriculture could be increased if youth can “see themselves” in the food system. A fair and equal food system needs to represent the community that is participating in it.\textsuperscript{1790}

Power needs to be taken away from the pharmaceutical industry in controlling the approach to public health and be placed back into the hands of the individual. We need to move from disease care and to preventive health care universally but also to prevent children from damaging their microbiome through antibiotics at a young age. Access to good food is a right for everyone and there needs to be resources for new parents to learn not just about breastfeeding but also about nutrition for their children.\textsuperscript{1791}

One of the most effective things a country could do over the next 10 years would be to train teachers in their PGCE the importance of good, real, whole, nutritious food for children. In their training, teachers should be taught the physiological implications of poor diet and and the negative effect of obesity on IQ and cortex development as well as the link between food and behaviour/concentration in class. If children do not have access to their fundamental right to good food, - nutrient dense food and not just calories - they are also less likely to partake in academic learning so it is in the teachers interest to make sure children and youth are fed properly. If teachers were taught the importance of this in training, they would be less likely to accept unhealthy or cheap food in the schools they work in.\textsuperscript{1792}

Participation and Local ownership of farmers need to be at the centre of Food Systems Transformation In the spirit of “leave no one behind”, and localization, it is key to have local ownership of food system transformation.\textsuperscript{1793}

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.\textsuperscript{1794}

Both food producers and consumers carry the responsibility to create a more equitable food system in Kosovo and there is a need to better align the interests and drivers behind their decisions on food consumption and production, with the three components of the “livelihood-nutrition-environment”\textsuperscript{1795}

Polluter Pays’ principle should be deeply integrated in the policy framework covering inter-institutional policies. Any financial revenue deriving from the ‘Polluter Pays’
principle policies should be treated as a dedicated to fund programmes specifically promoting environmental protection and sustainable food system.¹⁷⁹⁶

Equity is a key aspect of sustainability. As such, dietary guidelines and associated policies must be developed with a view to redressing food inequities, by focusing on access to nutritious, culturally-acceptable food and implementing a program of effective measuring and monitoring of how dietary patterns compare to recommended patterns among socio-economic and cultural groups.¹⁷⁹⁷

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.¹⁷⁹⁸

Digitalisation is perceived to be a lever of transformation, but current gaps in implementation must be addressed in order to reap its expected benefits. Human intervention remains necessary for technology adoption, and extension and advisory services can complement digital tools in strengthening the right to information.¹⁷⁹⁹

Participants noted that focusing on scaling-up the circular economy plays an important role in helping the system catch up to the private sector's ambitions. Regenerative farming needs support so businesses can access healthier and more sustainable ingredients at scale. Making sure everyone has access to these foods can also ensure that there is an equitable and fair playing field for all companies developing these products.¹⁸⁰⁰

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.¹⁸⁰¹

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: 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. 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. 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. 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. 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.  

Young people are increasingly unwilling to take over what once termed the family business but are instead opting to migrate to larger cities in search of more prosperous job opportunities. That has largely been brought about by their parents being trapped in revolving cycles of debt by predatory loan management companies and the closure of local agricultural businesses. That in turn only makes it harder for young farmers to earn a reasonable standard of living. Therefore, more needs to be done by State Governments to level the playing field between small farmers and large agribusinesses. Especially, when it comes to small farmers access to resources such as local markets, trading houses, abattoirs and so on...  

Advance equitable livelihoods: The participants noted that small farmers’ lives, lands and livelihoods must be considered in balance with the demands of purchasers and consumers. In other words, a sustainable equilibrium must be the objective rather than an aggressive campaign to eradicate large businesses entirely from the agricultural sector. Only then will we see a positive shift towards a more sustainable future for our global food systems and for our planet.  

Finally, the Consumers group found that food equity is a challenge in eating and purchasing ethically and more options and choices would substantially increase healthy eating and sustainable practices.  

People have to be at the center of solutions around solving the climate and nature/biodiversity crises. Equality and equity must be front-and-center in policy development around food systems transformation and in ESG investing going forward.  

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 arrive at those, on the one hand it is necessary to build awareness among local stakeholders regarding agricultural best practices (awareness-building largely using modern communications channels, adoption of shock communications methods if necessary) and on the other hand to implement the means necessary to promote these sustainable and resilient production methods while preserving the food security of households. 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.\textsuperscript{1807}

Increased autonomy of production and consumer associations: as a complement to the political framework, and to its implementation, it is important that the main types of stakeholders involved be organized to ensure that norms are respected and to be able to exercise pressure when they are not. Producer groups and consumer associations exist but are not yet fully able to exercise this counterbalancing power to defend their interests.\textsuperscript{1808}

Develop technologies for AFCI in production/transformation, rescuing agroecological-organic ancestral knowledge. Implement 18 Sierra Productiva’s technologies through yachachiq; tested, budgeted and presented to the Government. Direct subsidies to AFCI’s production. Deliver the appropriate seeds for AFCI’s production according to their traditions. Special financing from public banks to AFCI, for production-processing-preservation, enabling the addition of local value, mainly for the implementation of Sierras Productiva’s modules. Contribute to the formation of transparent markets, with fair prices for each actor.\textsuperscript{1809}

Public policies must be promoted; the international market harms small farmers, the political struggle is difficult; recognition of the rights of farmers must be achieved, such as influencing local governments in the events to support and not oppose policies such as cutting the subsidy to agrochemicals, and support small farmers.\textsuperscript{1810}

There was a collective concern about limitations on access to water to maintain crops. Access to water is a constitutional guarantee as a human right, therefore the participating leaders request the state and competent bodies to guarantee the right of access to water, to sustain their own food systems.\textsuperscript{1811}

...the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform.\textsuperscript{1812}

We are in the midst of a pandemic causing a serious crisis to the system, so it’s time to turn the crisis into an opportunity for the peasant and agroecological production sectors to be at the center of the discussion. It must be made clear that there must be healthy, resilient food and healthy production to overcome the circumstances permeated by the pandemic. It is necessary to accomplish a good local presence in local, national and international spaces. Resilience is only possible if there is food sovereignty and agroecology.\textsuperscript{1813}
It was suggested to further promote the HRF and the participation of women, indigenous peoples and youth. Focus on the what and how, as well as tools for achieving HRF.\textsuperscript{1814}

Inclusion of farmers, women, and youth

Participants also highlighted the power of inclusive approaches - by agreeing that all production practices can be made more sustainable we allow all stakeholders to participate, rather than setting unrealistic extremes that exclude some communities entirely. It is also important to note that all industries have some level of environmental impact – not just agriculture. Food is foundational to our survival and health, and while animal agriculture should (and will) do all it can to address challenges of sustainability, other industries need to mitigate their impacts as well and conversations around sustainability should be inclusive and collaborative while encouraging everyone to do their part.\textsuperscript{1815}

Make links between city youth and rural youth. Youth need an enabling environment and there must be a strong education on sustainable food chains. Younger generations are the ones who will take on the new roles in society in the future.\textsuperscript{1816}

Adaptation on market management and a shift on consumption behavior (through education) among young people are equally vital.\textsuperscript{1817}

Education in schools should be a priority, with communication strategies that value positive messages, as research shows that negative messages have little effectiveness in changing habits. Edu Communicative practices were recommended, as they are based on dialogue, respect for human rights, a critical reading of the media and must be co-constructed between different actors.\textsuperscript{1818}

Youth need to see agriculture as an interesting job...\textsuperscript{1819}

Awareness generation among schools children and mothers for improved food habits and better diet.\textsuperscript{1820}

The need to debunk the idea that agriculture is not economically rewarding and unattractive to the youth but that it can be modernized, made more productive, and more economically rewarding.\textsuperscript{1821}

Make farming more attractive to young people to create greater prosperity in the agriculture sector. Youth have ideas and awareness of new technology, and they can be a key solution in protecting farmer rights and making society regard farmers as an important area of expertise for prosperity.\textsuperscript{1822}
Raise Students’ awareness of the true cost of food. Based on the existing nutrition and health perspective, expanding monitoring dimensions of the intelligent system to fully utilize its scientific, accurate and transparent information, can raise students’ awareness of the true cost of food and the benefits of healthy eating from all aspects. Thus, they can be nudged to better eating habits.

In terms of this increasingly difficult challenge, on the basis of the above discussion on building a localized food system, the participants in the discussion mainly contributed their experience from the perspective of how to systematically improve the nutritional level of chefs and carry out food education for students. For example, the development of online courses, while linking with local chef associations and cooking schools, combining online and offline to empower chef groups in a manner of from point to the area. “Food Rainbow Spell” uses gamification to establish the most direct connection between children’s minds, food, and nature, and at the same time provides an intuitive and easy reference for chefs to purchase diverse ingredients which are rich in multiple nutrients.

We are committed, and ask Member States and associated parties to join us, in educating the younger generations about our connection to the Earth through our food systems, teach how to sustain the holistic nature of Indigenous Peoples’ food practices and culture, and provide opportunities to learn and maintain the legacy of Indigenous Peoples’ food systems, land tenure and natural resource management. They are our best allies and central to the future of food systems.

Educate young minds on the importance of preservation of ingredients and acknowledging the entire products, for example through traditional culinary methods.

To gain the support needed to actually work, FSS approaches must be inclusive and flexible.

There is a distinct lack of ethnic diversity within the meat sector. People of colour and indigenous people are under-represented at middle and senior levels. More work needs to be done in this area to understand the specific barriers and enablers to creating a more ethnically diverse workforce.

It is important to encourage and ensure participation of the rural community in the planning process and execution of emerged plan for community led conservation of traditional high yielding seeds, soil water conservation measures.

Scientific and Technological Innovation Communication of technology to smallholder farmers calls for improved infrastructure. Application of science is the issue. Issues of language and communication, extension service, field experiments, funding and government support is needed. There needs to be inclusion, active engagement, collaboration, and empowering of the users including youth, women, and local
communities/beneficiaries. A need for a Platform that brings different stakeholders together and for broader interactions and transparency in implementing solutions.\textsuperscript{1829}

In order to advance data and digital systems innovation, there is a need first of all for user-centered innovation – innovation generated from the ordinary man’s needs and then developed by the technical person for the market. This means that at the interim stages of innovation development, the potential users must be involved directly so it is better placed to meet reality and offers a human-centered design. Such innovations must be adapted to the local user’s language, but end users must also have some capacity development to understand the technologies available.\textsuperscript{1830}

Moreover, the two changemakers highlighted the important responsibility everyone has to share positive, diverse and inclusive narratives, because it is thanks to the sharing and repetition of narratives, that the mantra eventually influences reality. In addition, these narratives should focus on what we gain through a change, instead of what we lose (share over shout), and they should lead to advocacy. Through social media, people are able to share the well-articulated narratives and advocate for concrete aligned actions. However, to do so and to be successful, the incentives on social media should change so that the true values, diversity and inclusion are part of our everyday feed.\textsuperscript{1831}

Counter power imbalances by participatory decision making.\textsuperscript{1832}

The EU’s and Ireland’s policy debate needs more input from individuals, farmers and consumers, but policy and its jargon make participation unattractive for effective engagement.\textsuperscript{1833}

An inclusive approach should be adopted that involves civil society, academia, technical societies, trade unions, technical committees, citizen advisory bodies, private sector, citizen assembly, local government, government members, opposition member and independent senators.\textsuperscript{1834}

We can ensure access to safe and nutritious food for all by involving manufacturers in the decision-making dialogues to ensure nutrition in food is maintained even while on the shelf.\textsuperscript{1835}

More specifically, the group highlighted the need to change the binary nature of plant-based diets, where eating meat is classified as being bad and unhealthy and eating plants is good and healthy. Indeed, the group suggested that narratives should be inclusive, in the sense that nobody is obliged to consume or give up on something, and that a plant-based diet could for instance be complementary to any person’s nutritional traditions, habits and culture. The idea is to open up the nutritional options and to improve accessibility of these kinds of diets.\textsuperscript{1836}
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.¹⁸³⁷

Inclusion of grassroots communities, women, and youth groups in policy planning and compilation of national data in strategic planning and implementation processes.¹⁸³⁸

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.¹⁸³⁹

...panelists stressed that countries must ensure more inclusive, transparent, resilient and environmentally friendly agricultural supply chains, both at global and local levels. Furthermore, one panelist noted that producers must cater to more diversified food demands by consumers.¹⁸⁴⁰

Panelists agreed that inclusivity and equity, based on a people-centered approach, is key to ensuring better food livelihoods in rural areas for vulnerable groups including women, youth, indigenous peoples and other communities with distinct livelihood systems.¹⁸⁴¹

Increasing the number of private sector players for similar dialogues is agreed by dialogue participants.¹⁸⁴²

The business sector has a powerful impact on health and food systems, and is a part of the problem - including it needs to be part of the solutions.¹⁸⁴³

Inclusion of healthy nutrition demands from any food program for children or insecure population.¹⁸⁴⁴

Village associations or cooperatives should be encouraged to ensure financial inclusion of activities related to food systems by 2030.¹⁸⁴⁵

For merchants, significant financial inclusion with access to credit will help them better conduct business.¹⁸⁴⁶

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing, reusing
agricultural waste for composting, producing biogas, and feeding animals, among others.\textsuperscript{1847}

Meanwhile, better recycling, green energy usage, and improved last mile logistics are also identified as critical points moving forward. In Asia, as there are many small farmers, there is a need to strengthen capacity building efforts to help them comply with better standards. In this context, digital tools and innovations is an option and should be financed not to leave anyone behind. It is important to evaluate the price of technologies applied across contexts and the accompanying need for good internet connection. If these tools are not accessible, it may exclude small scale traders and farmers, making food systems less inclusive. Blockchain can be adapted to large scale farming or crop farmers’ cooperatives, and innovations in food traceability can be achieved in a less demanding way (e.g. labeling of food and farmer’s commitment to refrain from dangerous chemicals). The former is not very well attended to in wholesale markets in Asia, despite being an integral part in Europe and North America, and reforms worldwide.\textsuperscript{1848}

Thirdly, a more inclusive process for policies to enhance sustainable and nature-positive food production is needed. All stakeholders, including small farmers, citizens, businesses, scientists, and legislators, must be included to ensure positive and equitable outcomes. In addition, consideration must be given to indigenous practices.\textsuperscript{1849}

The regional launch came about with the desire to achieve the SDG 2030 goals and generate inclusive development, without anyone being left behind. As the United Nations points out, progress on a shared vision is needed, in which the articulation of proposals between the public and private sectors is key.\textsuperscript{1850}

Incorporating religious/faith leaders into discussions: By including religious/faith leaders into discussions about how the faith is consistent with science that is currently catching up with data and research projects, you can reveal that there is no conflict between science and faith.\textsuperscript{1851}

Importance of transparency and inclusion in relation to SPIs, need to avoid polarisation of debate around technology (by taking into account also the role of social innovation), importance of two-way communication and citizen participation (as evidenced by the audience’s interest in Living Labs and Food Policy Councils emerged during the Slido exercise).\textsuperscript{1852}

Ensure inclusivity, equality and equity in all processes, decision-making and representation.\textsuperscript{1853}

Solutions must be tailored, policies must be inclusive and multi-stakeholder.\textsuperscript{1854}
Inclusion of consumers in the making of the policies, strategies, guidelines. Feedback loop. Street food vendors vs their enhancers who buy the foods.\textsuperscript{1855}

Inclusive food systems governance - participatory processes by as many stakeholders from the start to enhance ownership. Legitimising the role of platforms such as the Food Liaison Advisory Group (FLAG), which is a multi-stakeholder platform for food governance...\textsuperscript{1856}

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.\textsuperscript{1857}

Dr. Habito stressed the importance of inclusive value chains, wherein the relationship between small and big players in the agribusiness and food system are not in competition but in complementation.\textsuperscript{1858}

Collective and inclusive diversion efforts can help more food get to more food insecure individuals.\textsuperscript{1859}

...the food system must be inclusive. Smallholders, women, youth, and other disadvantaged groups must benefit from the food system.\textsuperscript{1860}

Harness the potential of the youth, women, and persons with disability to participate in the food system equitably and gainfully.\textsuperscript{1861}

All rural stakeholders should be involved, with farmers at the centre of solutions. Rural communities, research, education, extension providers and rural supports will need to be mobilised. Furthermore, ‘Our Rural Future’, the Irish government’s new policy for the post-COVID-19 recovery and development of rural Ireland should be implemented through an ‘all-of-government’ approach.\textsuperscript{1862}

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. It must also be recognised that there are many different ‘publics’ with different points of view and they should be involved in the co-creation of projects with societal impact. 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. Scientists should be consistent, truthful and open in their communication and be willing to acknowledge what they don’t know, as this promotes confidence among the public.\textsuperscript{1863}
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.\textsuperscript{1864}

There needs to be inclusion, active engagement, collaboration, and empowering of the users including youth, women, and local communities/beneficiaries.\textsuperscript{1865}

Greater inclusivity in agricultural modernization programs as well as dissemination of knowledge and practices that can increase yields for crops.\textsuperscript{1866}

Ensure community members participate in decisions of managing and utilizing WEF nexus resources.\textsuperscript{1867}

...invest inclusively to assure tenure rights and ownership protections for producers, especially family farmers and co-ops, so they have secure access to markets and value chains.\textsuperscript{1868}

They then offered suggestions to make the industry more inclusive. The discussion on women’s empowerment focused on the need for gender-specific training and protective gear. For example, women in Tanzania are pushed to farm seaweed in ever deeper waters due to ocean warming, leading to a number of unsafe conditions. In the Tanzanian context, women are not taught to swim so additional training and gear is needed to ensure their safety. Local governments and multilateral institutions must provide these resources to create a socially inclusive industry.\textsuperscript{1869}

Research on healthy diets need to be inclusive and useful to the communities. It is of critical importance to engage communities in meeting the gaps in data. Community assessments of needs in relation to availability of food and alternative ways of providing for nutritional needs of various age groups.\textsuperscript{1870}

We urgently need more efficient, inclusive, resilient, and sustainable food systems.\textsuperscript{1871}

Various strategies adopted at community levels can be scaled up to promote inclusivity and equitability in the WEF nexus. Some small-scale programs can be expanded to achieve the desired results.\textsuperscript{1872}

Increasing the participation of women and other minority groups in political bodies can increase their representation in decision-making processes and can ultimately include their perspectives in the WEF nexus. However, several challenges exist in increasing the participation of marginalized communities in decision-making roles. Reforms need to be introduced to eliminate structural and institutional barriers that prevent the participation of these groups in decision-making bodies. Moreover, awareness and
educational campaigns need to address the gender stereotypes that are deeply rooted in our societies.\textsuperscript{1873}

Create more awareness on women’s land right.\textsuperscript{1874}

The well-being and resilience of women is essential to the strength and resilience of their families, communities and the broader social and economic development of nations. Investing in women has multiplying effect on communities. "If you educate a woman you educate a whole nation" - improving women’s nutrition needs to be game-changing within the FSS. "Women need to be at the table and be heard."\textsuperscript{1875}

Trains women on money, mentor and market - capacity building. Finding opportunities for women in rural and agricultural rural development.\textsuperscript{1876}

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.\textsuperscript{1877}

The region should tackle the vulnerabilities of women in agriculture by engaging women in policy-making process and understanding the challenges that women face such as lack of access and opportunities.\textsuperscript{1878}

Equitable livelihood (i.e., women empowerment).\textsuperscript{1879}

It is essential for IP, youth, and women to have full and effective participation in the FSS processes, as they have a different but important lens to the food movement.\textsuperscript{1880}

Panelists believe that research must engage women, youth, Indigenous groups, and other communities that are most impacted by the food system in order for transformation to be possible.\textsuperscript{1881}

Agriculture needs to be made attractive to the Youth to enable them accustomed to the sector at a very tender age. The stereotyping of agriculture being portrayed as a burden to the African woman needs to be changed.\textsuperscript{1882}

Orientation and focusing more on the drivers and game changers including: value chain development, entrepreneurship development; and, digital transformation especially for Youth and Women both regional and in the African Context.\textsuperscript{1883}
Engaging women, youth, and vulnerable or marginalized communities and enhancing their access to finance, risk management, entrepreneurship, and other opportunities.  

Boosting engagement with women’s associations and ministries of gender/women where they exist.  

The well-being and resilience of women is essential to the strength and resilience of their families, communities and the broader social and economic development of nations. Investing in women has multiplying effect on communities. "If you educate a woman you educate a whole nation" - improving women’s nutrition needs to be game-changing within the FSS. "Women need to be at the table and be heard."

Fundamentally, there was consensus on the need to engage men and have male champions for women, especially in agribusiness.

Give women entrepreneurial role models and connect women.

Initiative to inform, inspire and include women.

Women’s Leadership and Empowerment Cluster.

Resilience and building women’s assets.

Increasing farm mechanization and engage youth, Engaging women labour especially in harvesting and vegetable production.

The next step in moving from awareness raising to behaviour change for healthier food choices is focusing on youth at schools and local women’s groups. By involving the next generation of change makers through dedicated school programs, and women as potential agents of change at the community level, it is possible to influence family decisions.

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Women empowerment.¹⁸⁹⁶

Provide spaces for women and young fishers to act.¹⁸⁹⁷

Empower and organize women and youth fishers.¹⁸⁹⁸

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Empowering farmers and making farming sexy again. We must harvest the talent of female, minority, and youth populations.¹⁹⁰⁰

Panelists agreed that inclusivity and equity is key to ensuring better food livelihoods in rural areas for vulnerable groups including women, youth, indigenous peoples and other communities.¹⁹⁰¹

The dialogues provided an opportunity for government and people to take account of the learnings of the covid disruption and think about the strategic options for moving towards a national transformation of the food systems. Sustainability and resilience will be at the heart of this and rebuilding will focus on sustainable food systems, ensuring that women and youth are more central. This seems to be a common pattern especially in the Pacific. Inclusivity is making challenges and gaps turning into actions and the dialogue process is showing its value and will continue beyond the Summit.¹⁹⁰²

National dialogues in the region emphasized the involvement and empowerment of all stakeholders, and especially youth and women. Regional cooperation and national transformation are the cross-cutting actions that can make this happen, and make communities and collections of stakeholders join national governments and local authorities to transform food systems and achieve the SDGs.¹⁹⁰³

Youth need to be included, women need to be included in the policy making process, the whole process, from the start.¹⁹⁰⁴

This call to action found that there is a need to create a narrative that is inclusive and allows for participation, especially of farmers, women, and indigenous peoples. There
are high levels of expertise in these dialogues, but all people should feel empowered to contribute, we are all “experts” when it comes to food.\textsuperscript{1905}

Recognize women and youth as purveyors of wild foods and continue to support them through capacity building - Multi-platform approach to engagement\textsuperscript{1906}

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.\textsuperscript{1907}

Enabling and supportive environment is required for women...\textsuperscript{1908}

Empowering women’s agency and leadership can greatly enhance the development of resilience solutions.\textsuperscript{1909}

Empower women and youth to be directly engaged with agriculture value chains and improve market access for both income generation and nutrition outcomes.\textsuperscript{1910}

Address challenges facing women farmers, such as lack of access to land, financing, markets, agricultural training and education, suitable working conditions, and equal treatment.\textsuperscript{1911}

The well-being and resilience of women is essential to the strength and resilience of their families, communities and the broader social and economic development of nations. Investing in women has multiplying effect on communities. "If you educate a woman you educate a whole nation" - improving women’s nutrition needs to be game-changing within the FSS. "Women need to be at the table and be heard.\textsuperscript{1912}

Change policies for banks and rural banks to include women.\textsuperscript{1913}

Enable policies that push for inclusion.\textsuperscript{1914}
Intentional support women by adapting farming and technology and ensure women are involved in the design.\textsuperscript{1915}

Food systems need to ensure access to diverse foods, complemented with interventions such as fortification, and women need adequate antenatal care to ensure maternal micronutrient interventions, such as MMS - anemia (which is an indicator of poor

Gender Integration in food systems... 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.\textsuperscript{1916}

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.\textsuperscript{1917}

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.\textsuperscript{1918}

2. Policies to encourage and promote management of commons (including but not limited to water, barren and wastelands, grass and forest lands) by local women’s collectives 3. Policies to promote decentralized food production systems, thereby promoting affordable and traditional methods and techniques such as local inputs, local seeds, bio-fertilizers and clean energy solutions.\textsuperscript{1919}

1. Explicit recognition of the rights of women who are structurally disadvantaged: mobilizing them, enabling their access and rights to land and finance, and other assets. 2. Policies that 1) treat family as a unit for entitlements and capacity building; 2) bring visibility and recognition to family farming and promote it as an economic activity; 3) create awareness and redistribution of labor across family members 3. Organize access to freedom of association and collective bargaining for women workers and women smallholder farmers; safeguarding the social protection mechanisms, including fair pay, safe and dignified space for women, cash transfers, etc.\textsuperscript{1920}

While organizing rural women workers and enabling access to financial services and market linkages was identified as a key game changing solution, other solutions such as promoting local decentralized value chains fully owned and managed by the women.
farmers / producers / workers themselves also came up across all five discussion groups.\textsuperscript{1921}

It is important that there is a dedicated space on the platform for women/ women’s groups/ female farmers.\textsuperscript{1922}

It is important to consider gender as a core part of social networks: by encouraging women and young people to form associations, by involving men to encourage and enable their wives to engage in production. The palm oil industry is an example of positive steps towards these consumer-producer changes. Another example is the chocolate industry where smaller firms establish partnerships with local producers.\textsuperscript{1923}

It is important that there is a dedicated space on the platform for women/ women’s groups/ female farmers.\textsuperscript{1924}

Recommendation 3: there is a need to reduce the gap between consumers and farmers and to shorten value chains.\textsuperscript{1925}

It is important that there is a dedicated space on the platform for women/ women’s groups/ female farmers.\textsuperscript{1926}

More women are required in farming; end subsidies on monoculture; we need stronger electoral accountability to ensure access to safe and nutritious food; introduce food knowledge (culture, nutrition, sustainability) into school curriculums; start to highlight people incl. farmers who are doing good deeds in agriculture; bring an end to globalization and concentrate on local markets.\textsuperscript{1927}

Social components are important for sustainable development of aquaculture, such as inclusion of female and the youth...\textsuperscript{1928}

All groups called for inclusivity, respect and dignity, recognizing the need to hear the voice and empower farmers, women, youth, indigenous peoples and minorities. Participants advocated for nonconventional partnerships and open dialogue that fosters creativity.\textsuperscript{1929}

...women are the farmers that must be empowered and have their own economic weight to pull in their communities...\textsuperscript{1930}

Organizing is the key to empower rural women workers and small holder women farmers and make the food systems equitable and just. Promoting their own member-
owned and managed supply chain will help building their collective strength, bargaining power and decision-making agencies.\textsuperscript{1931}

Additionally, organizing rural women workers and enabling access to financial services and market linkages came out as a cross-cutting solution across all groups.\textsuperscript{1932}

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Provide spaces for women and young fishers to act.\textsuperscript{1934}

Integration of non-economic goals, such as preserving cultures and traditional knowledge, inclusion or contribution to the general development of the territories, give coops certain needs and indicates the importance of being able to absorb the diversity of coops’ goals and identities in cooperative and associativity support programs. Even though this did not come up explicitly during the dialogue, moving toward a broader and more diverse idea of cooperatives and associativity, and establishing flexible support mechanisms adapted to their needs, realities and stages of growth and development, can make up an interesting strategy for the purpose of boosting the potential of associativity in order to contribute to sustainable, inclusive and resilient food systems.\textsuperscript{1935}

Table 2 discussed farmers and food producers as a crucial link in Tulancingo de Bravo’s food system and identified as a central problem the undervaluation of the role of local farmers in the value, production, and education chains. Another issue was the disorganization and fragmentation of producers, and their lack of access to financial and technological resources to increase their productivity.\textsuperscript{1936}

Low engagement of farmers in the development, implementation, and monitoring of agricultural policies...\textsuperscript{1937}

Limited involvement of rural women and young people on issues of interest concerning agriculture and poor access to land.\textsuperscript{1938}

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Group 2: A large number of producers are not aware of the digital solutions available. To make these solutions better known, we must launch an analysis of the various
contexts in which they are applied, as some technologies focus on specific contexts and are not applicable in others.\textsuperscript{1940}

I. The value of dialogue and power of inclusion to create change 1. Shift in dynamics: The speakers participated in the breakouts as equals rather than as beneficiaries, speaking with authority. We observed a different level of engagement when it is the changemaker representing themselves sharing their reality, their definition of success and their dream. Bringing resilience leaders and role models to the table is essential to shift the narrative and the power relations. 2. Shift in language: The vernacular changed from “they” to “we” when we bring the resiliencer and the community to the table to join the conversation...\textsuperscript{1941}

1. The power of the collective: we lift each other up by doing so we become stronger together 2. Giving chances, to everyone, especially for those who need the opportunity 3. Helping others reach their truest potential and empowering them to grow...\textsuperscript{1942}

1. Clear vision to give you purpose and priority; 2. Inclusion- businesses and entrepreneurs have a responsibility to include people in the conversion 3. Mindset and awareness- building an education network based on hope and open-mindedness...\textsuperscript{1943}

Consider youths, people living with disabilities, and women's empowerment...\textsuperscript{1944}

Farmers and food producers as a crucial link in Tulancingo de Bravo's food system.\textsuperscript{1945}

Group 1: Access to ICTs with respect to coverage and quality as a basic element for developing digital agriculture. Emphasis on working more with farmers in cooperatives and improving their technological knowledge. Knowledge developed through various organizations. Emphasis on international e-commerce, and the sale of waste products for processing. Digital agriculture to be made more accessible for rural families and excluded groups, such as indigenous communities. Rural territories that are more economically dynamic will be able to achieve greater digital development.\textsuperscript{1946}

Take into account gender issues in the development and implementation of agricultural projects / programs, and mobilize sustainable internal resources for the long-term support of projects intended for farmers, particularly young people and women.\textsuperscript{1947}

It takes greater humility to adapt to the reality of the new times to generate inclusive and sustainable Food Systems...\textsuperscript{1948}

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... 1949

Integrate indigenous and/or peasant knowledge and create a new paradigm that reflects the attributes of the native people’s coops with a circular economy and for common good. 1950

Take into account gender issues in the development and implementation of agricultural projects / programs, and mobilize sustainable internal resources for the long-term support of projects intended for farmers, particularly young people and women. 1951

Promote the inclusion of young people and women in agriculture. For agriculture in Central Africa to prosper, the involvement of young people and women in agricultural and food systems is crucial. Women are primarily the face of smallholder farmers, and a direct link to the nutrition and food security of African families and their sustainable livelihoods. Central Africa has the youngest population in the world, and the young workforce is keen to engage in innovative and rewarding entrepreneurship. The growth of the food system value chain creates promising opportunities for young people... 1952

Implement specific projects and programs for women and young people. 1953

Promote positive discrimination in funding for rural women. 1954

Ownership of land and assets that facilitate access to financing to develop an activity. In rural environments it is more atomized, so it is more convenient to sell or buy, women are the ones who have less access to land, and therefore, they have to migrate more to look for work in the cities. It is worth asking how young people come to have access to assets, such as seed capital. access to assets, such as seed capital or certain infrastructure? For better conditions in the future. 1955

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Implement specific projects and programs for women and young people.

Young people can be a hinge between links in agri-food chains, between generations and between rural and urban territories. In this way, they integrate "the new" (innovation, technology in production and marketing, use of ICTs, value added) with traditional production knowledge; and they connect the territories in a better way due to their personal trajectories and connectivity. In this sense, they play a fundamental role in generating cultural changes in consumption, awareness of the impact on nature and climate change, as well as in the implementation of sustainable, agroecological and profitable practices.

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It is necessary for the authorities to listen to rural youth in order to establish relevant measures, strengthen their capacities, and consider them in their motivations and needs.

Integrate indigenous and/or peasant knowledge and create a new paradigm that reflects the attributes of the native people’s coops with a circular economy and for common good.

Irish development organisations have a role to play in building back better. In particular there is a need to support resilient systems, emphasise local and collaborative approaches and ensure the voices of the marginalised are heard through inclusive and democratic processes.

There was consensus that we must ensure that digitalisation is inclusive of smallholders.
In conclusion, participants were charged that, we do not only need sustainable, resilient, or healthy Food Systems, we need just and equitable Food Systems. Inclusion and equity should be key questions in the conceptualization of Food Systems.\text{\textsuperscript{1966}}

The final issue related to the importance of promoting inclusivity in both regions, and to closer inequalities in food systems outcomes, and in control over the food systems. This is both between Africa and the EU, as well as within countries in each region.\text{\textsuperscript{1967}}

Ensure inclusivity and diversity in frameworks by considering the needs of women and vulnerable groups and establish approaches that meet the needs of all groups of people. This can be done by understanding the environment to develop policies that cover the different cultures of the people they will serve towards ensuring collective uptake of policies and participation of all actors.\text{\textsuperscript{1968}}

Ensure language used is inclusive, empowering and builds trust (tool kits, key areas to focus on, stakeholders who might be positive to change) - Inclusivity: Having policies and processes that are inclusive and participatory, which include actors who are not focused only on the food sector (holistic approach).\text{\textsuperscript{1969}}

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.\text{\textsuperscript{1970}}

It's impossible to have an inclusive outcome without an inclusive input - efforts need to be at every level and go beyond the summit.\text{\textsuperscript{1971}}

A vibrant seed sector is an inclusive sector. Smallholder farmers are critical to food and nutrition security and they play a key role in the farmer managed seeds system. In this regard, the participation and leadership of women needs to be ensured along with men and the youth.\text{\textsuperscript{1972}}

Power relations: Multi-stakeholder platforms have been criticized for failing to address asymmetries and unequal power relations. In particular, the treatment of diverse stakeholders as equals is seen as problematic as it does not recognize the differences in authority, legitimacy, interests, and power of different stakeholders. In this regard, participants indicated the importance of addressing power relations through standards and internal mechanisms and processes for inclusivity, transparency, and accountability.\text{\textsuperscript{1973}}

They came up with ideas such as empowering local authorities/reinforcing capacity building in food governance; tackling the lack of coordination among actors; fostering
collaboration with universities/experts; reinforcing/investing in food logistics and finally ensuring participatory and inclusive food system in Africa. 1974

This implies to make the system more participatory, inclusive by integrating small actors, who can share their experience but also by fostering collaboration with universities and experts. 1975

The integrated nature of our food system, as well as inclusiveness and collaboration between actors were common themes. Participants expressed a need for various actors to learn from each other and collaborate on solutions. We are stronger together. 1976

Seek to incorporate perspectives of marginalized racial, ethnic and gender groups, and recognize that the groups that are marginalized will be different in each context, and thus tailored approaches are necessary. 1977

The interlinkages and connections that exist within the global food systems should be leveraged to ensure social protection and inclusivity and environmental and economic sustainability for the entire society. 1978

In order to address this divide, we must utilize both culture and religion to identify those who feel disenfranchised by emergent cultural messaging on climate friendly diets, and work with policymakers to address their gaps and needs. 1979

It is critical to give control back to rural communities and involve them in decision-making, make SNAP available to ex-felons in state of Florida. 1980

Moreover, engaging and meaningfully involving different sectors and stakeholders, including the most vulnerable and marginalized… 1981

Greater diversity & inclusion in the sector is required, better movement of talent across the AKIS and we need to continue our efforts to create clear career pathways for all the professional levels. 1982

The traditional top down approach less successful. A range of perspectives should be embraced, including sceptics. 1983

Multiple sectors need to be included in this area since no one organization or institution can do this alone. 1984

There should be a responsible and inclusive leadership so that people at the grassroots are included in policy making and also educated on the existence of these policies. 1985
Inclusive leadership from government, media, civil society, and public health experts is needed. This should involve the community and the people at the grassroots levels from all sectors of the food system to enhance ownership and sustainability.\textsuperscript{1986}

The roles of civil society and the private sector need to be clearly defined and actors identified and involved.\textsuperscript{1987}

We should focus on inclusivity, doing things better in the future and rewarding outstanding sustainable practices to raise the bar for everyone.\textsuperscript{1988}

...the need for increased gender equality and inclusion within food systems...\textsuperscript{1989}

Inclusive approach for organizing the local institutions (farmer groups, cooperatives etc.) at grass roots level and campaigning must be initiated for increasing the level of awareness and sensitization of those institutions especially using digitization for accessing the all services across the board by ensuring “Leave No One Behind”.\textsuperscript{1990}

Future market systems should be more inclusive, sustainable and resilient, more functional and having more social value by mainstreaming gender and youth.\textsuperscript{1991}

E-agriculture is the future for improved sustainable agriculture and food security, information access to markets, better access to climate information and higher levels of inclusion in the agriculture and rural environments.\textsuperscript{1992}

The farmers and consumers need to be at the centre of decision making.\textsuperscript{1993}

Bring the voices of vulnerable communities to the center of international political debates.\textsuperscript{1994}

They also pointed to access to government resources. For example, Black farmers are often either rejected or dismissed at USDA offices, with some participants describing a "good ole boy" culture within these offices, where officers do not devote sufficient time and energy to communicate key information to these farmers. (Recommendation 2) Here, an affirmative attempt to institutionally include Black farmers (or allies) in government offices, especially in tandem with expanding government infrastructure into marginalized areas, may help begin to redress these cultural issues.\textsuperscript{1995}

The GESI perspective is important: Women are key actors in food systems, and ethnic cuisines are important pathways to address not just food and nutrition security, but also structural inequalities based on gender and social identities.\textsuperscript{1996}
All stakeholders in the agri-food system including smallholders have a role to play in shaping the pathways for resilience and sustainability.\textsuperscript{1997}

The group identified that it is paramount to bridge the social (and physical) gap between policy makers and aquaculture producers, so policy can be guided by the real needs and interests of producers. The inclusion of producers at the beginning (rather than retroactively) of the policy making process can help to build trust and understanding between those parties, while shaping the direction of legislation to be more practically and operationally considered.\textsuperscript{1998}

Ms. Annie Yang, founder of the House of I, said, “The House of I hopes to practice on various platforms in a holistic manner. We tend to be more open and inclusive, respecting the unique cultural traditions of each industry, making contributions to the social values of sustainable development in a larger ecological chain.”\textsuperscript{1999}

Equitable and inclusive partnerships have the potential of fostering inclusive governance and effective policy-making, which is key to generate transformative change, coupled with sustainable finance and capacity building. Underfunding emerged as a common key issue during the discussions. 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.\textsuperscript{2000}

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.\textsuperscript{2001}

Adequate and inclusive ocean management, using tools such as Marine Spatial Planning, is important to advance seafood in an increasingly busy marine environment.\textsuperscript{2002}

From the perspective of the value chain actors, profitability, demand creation and sustainability must be addressed in order to engender food systems transformation for people and planet. Sustainable crop production practices and market inclusiveness
must be encouraged, and an evidence base must be developed for an enabling policy environment.\textsuperscript{2003}

It was generally agreed that grassroots sectors should be prioritized in investments, but different entry points were identified for their inclusion. Streamlining existing mechanisms—making value chains more efficient, improving access to information, technology, and finance—can facilitate meaningful participation. However, it is important to note that participants working at or with local communities suggested the increased involvement of grassroots sectors in identifying their needs and planning, implementing, and scaling solutions, as well as in developing the evidence base that can be used to inform policy recommendation.\textsuperscript{2004}

Cater to more different individuals and communities and unmet needs. Successful innovations often leave people behind, who are considered too hard to reach, or are just less important or visible to those doing the innovating. For a just transition and equal access to good diets, innovation must cater to more parts of society and do more to address everyone’s unmet needs around healthy, sustainable eating.\textsuperscript{2005}

Breaking out of our “innovation bubbles” to develop better ideas more in line with what the world needs: more open innovation processes (eg bringing together young entrepreneurs, academia and civil society as well as business); more inclusive innovation to drive equality in who participates (eg less-heard voices and less catered-to communities).\textsuperscript{2006}

Increase visibility and employment of the vulnerable groups.\textsuperscript{2007}

India needs more inclusivity, more safety standards, more involvement from banks and governments, and more research.\textsuperscript{2008}

At last, an action plan needs to be more inclusive than the Dialogues held.\textsuperscript{2009}

Also the Dialogue saw the Church as the one closest to the people. It can move its communities and people so more consultations with the church-based groups is seen urgent so church leaders can also include healthy food values in their church and social teachings and programmes - and to move their members into healthy activities and taking healthy foods.\textsuperscript{2010}

Application of crop models, social-economic – transforming the knowledge into making good decisions; food systems involve everyone.\textsuperscript{2011}

...gender equality and social inclusion, particularly most vulnerable groups affected by shocks and stress...\textsuperscript{2012}
Involving national governments - By involving national governments of countries affected by protracted crises, or religious organizations (and bond/trust between these and government) where government is absent. Governments can build coalitions like DRA, which has promoted alignment. But also in Ethiopia, the government got ten donors to work together on the Social Safety Net programme, this clear desire for external partners to work together helped alignment.2013

Foster inclusion in food system debates and policies.2014

This may foster the inclusion of environmental sustainability in dietary guideline development.2015

Integrate inclusive, demand-driven, and adaptive agricultural research prioritization and technology development across all agricultural research and development efforts, including social sciences and policy research, ensuring R&D investments reflect choice and actively and meaningfully include smallholder farmers and innovators, women, and youth.2016

Additionally, emerging from conversations during the planning of this event and from comments shared by at least one panelist and one participant, there was discussion about the importance of inclusivity and ideas on creating space for all kinds of knowledge, both modern and traditional. Views were expressed that technical innovation should not be limited to lab-based science, but also incorporate indigenous technologies and knowledge. Recommendations were made for future discussion with invitation to a broader panel, including agroecologists, to speak to the places of collaboration and overlap to avoid foreclosing on views, disciplines, or stakeholder groups.2017

Foster inclusion: To address to achieve transformative territorial governance, power imbalances must be addressed and accountability made transparent. For example, in Africa, the Community of Portuguese Speaking Countries linked sustainable territorial food systems and healthy diets in two projects through a bottom-up process that engaged actors at the regional and national scales. The participatory, multi-scaled diagnostic approach identified local, national and regional policy recommendation.2018

Governance refers to processes of negotiating needs, interests and perspectives of various stakeholders. To promote more inclusive food systems transformation, a central goal of territorial governance should be to increase the voice of marginalized groups and increase the accountability of the state. A pre-condition to this type of governance is a multi-sectorial government that is rights-based in its approach; this must be embedded into law for adequate follow through and not just theoretical value-signaling without action. Only through multi-actor governance can vulnerable people be heard.2019

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2013 281:74 p 14 in 514_July_01_21_Bolling_Multi
2014 283:19 p 6 in 516_July-01_21_Anastasiou K
2015 283:39 p 8 in 516_July-01_21_Anastasiou K
2016 301:14 p 6 in 534_July_07_21_WBADB_ADI_Multi
2017 301:27 p 10 in 534_July_07_21_WBADB_ADI_Multi
2018 302:18 p 6 in 535_July_08_UNESCO Chair on Food
2019 302:79 p 13 in 535_July_09_UNESCO Chair on Food
Frames and strategies for institutional, policy and democratic innovation towards new multilevel model of food governance must be implemented. In the inclusion of indigenous voices and processes as well as other marginalized groups, there is a co-creation of knowledge that helps design more resilient and equitable methodologies of both food systems and land management; we reorient towards interculturality, a result of multiple ways of knowledge co-existing, in order to re-territorialize food systems and rebuild local knowledge.\textsuperscript{2020}

Public participation: Implement country-wide participatory guarantee systems to enable the recognition of sustainable production and consumption for those who cannot afford certification.\textsuperscript{2021}

Responses from the political sector and civil society emphasized the immediate response to the immediate effects of the pandemic such as providing access to food to alleviate the impact on populations (social protection). In most instances these social protection responses need to be expanded to reach the most vulnerable – including women, youth, people with disabilities, displaced persons, and informal sector actors – but there is evidence across contexts that rapid large scale universally targeted social protection policies can reduce the impacts of shocks.\textsuperscript{2022}

Diversity in people working within the food system calls for their appreciation, namely towards farmers and temporary foreign migrant workers. The voices of such food system workers, especially marginalized and racialized workers, must be prioritized and listened to for the food system to be just. Participants stated that this can be achieved through a democratic system where workers have a platform for their voices, concerns, and suggestions for improvement. Their voices should be considered when decisions are made regarding the food system and policy, instead of prioritizing the voices of those not directly affected by the food system.\textsuperscript{2023}

Promote nutrient-dense, whole-food diets underpinned by diversified food production adapted to different microclimates and sociocultural contexts. Create positive food environments that provide equitable access, healthy dietary guidance, controls on food advertising and marketing especially to children, a precautionary approach to new products, and special consideration for vulnerable groups and women’s role as agents of change.\textsuperscript{2024}

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.\textsuperscript{2025}
Furthermore, participants highlighted how the combination of economic, social and environmental principles are key to addressing both inclusivity and affordability issues around the topic of access to healthy, nutritious and safe food in Kosovo.\textsuperscript{2026}

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.\textsuperscript{2027}

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.\textsuperscript{2028}

In the last revision to Australia’s guidelines, a discussion on sustainability was relegated to an appendix after industry pushback. Therefore it is crucial that the NHMRC upholds its commitment to independence, transparency and management of conflicts of interest by resisting industry influence; in parallel, the public health and consumer communities have a key role in calling for the inclusion of sustainability considerations within the revised recommendations.\textsuperscript{2029}

Communication and messaging has a crucial role in supporting dietary guidelines implementation. Among key ideas, participants emphasised: … Social marketing is a key opportunity and increasingly important to help popularise evidence-based messaging in the face of media noise and efforts by vested interests to sow confusion and unscientific messaging. Micro-influencers, celebrities, chefs and athletes can help change social norms and ‘speak to’ diverse audiences.\textsuperscript{2030}

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 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. All stakeholders across South Asia must have a say on where time, money, resources are invested to maximize impact.\textsuperscript{2031}
Behaviour change and communication programs are critical in enabling the participation of women and youth in the value chain. Increasing job creation in the agricultural sector can minimize the economic and social impact of male out migration. Digital tools for market linkages, advisory services and weather data can help in creating accessible pathways for underserved sectors. Aggregating farmers through formal organisations such as farmer producer companies (FPCs) can help develop linkages between farmers and other value chain/industry actors, including academia, for knowledge exchange and capacity building. 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.

This interconnected nature should also be reflected within each food business model. Participants identified the need to move from a single stakeholder to multi-stakeholder approach to business, in which leaders value the planet, community, workers, and natural resources in the decision-making process. Leaders can further push the dial by building people-centered businesses that focus on advocacy.

Participants also spoke about the need to invest in women-led, Asian-led, and BIPOC-led businesses and organizations that are working towards sustainable solutions. Those that are closest to the issues facing our food systems must receive support to build culturally and locally appropriate solutions. Participants recognized that many food systems, particularly commodity-based, are legacy systems built around colonialism and deep-rooted unfairness, and that it’s important to bring historically invisible and forgotten members of the value chain into decision-making.

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 conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.

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. Engage in atypical capacity building, farmer-to-farmer knowledge sharing. Develop effective tools to help farmers to become empowered.
Ensure enabling elements such as supportive policies. Advance a mindset of democratisation of knowledge production with capacity for global scaling.

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.

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: 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. 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. 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. 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. 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.

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.

Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider: Training farmers on how to innovate and be competitive on the market. Training on how to link agricultural production to food and...
nutritional requirements. Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. In this respect, the active engagement of leaders in the rural communities is crucial. Not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge (e.g. Traditional crops vs GMO; certification of local seeds, allowing and promoting locally-adapted, cheap and good quality seeds).

Behavior change communications for people in hard-to-reach areas with increased awareness of nutrition for health outcomes and nutritious foods.

Honorable Victor Dideoluwa Olojede, Special Assistant to the Oyo State Governor on Student Affairs was also a part of the event and a guest speaker during the dialogue sessions. In his presentation titled “Transforming the Food System for Students; Plans and Progress of the Oyo State Government”, he approached the food systems dialogue from a governmental perspective, highlighting the Oyo State Government’s perspective and disposition towards the transformation of the food system as it relates to the Nigerian and Oyo State child. He described the government’s approach as one which aims to establish a structured system where agriculture can be practiced with ease and precision in order to change the traditional narrative of agriculture as a non-lucrative venture and as such, draw more youth interest and involvement in the agribusiness sector. As a way of facilitating inclusiveness, the government plans to establish a leadership structure so that every faction of the society can engage in the practice of agriculture irrespective of their profession.

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.

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.

Recognizing that the best alternative to in-person school meals is delivering food parcels to all students' families (thus guaranteeing the principle of universality of free school meals), which also include fresh/natural foods that come from family farms or traditional communities, to incentivize and ensure the continuation of local food production.
Commitment to ensure that meals quickly reach students and their families, in particular through delivery of food parcels to students from the cities, with careful identification of the most vulnerable groups to ensure that meals arrive fast. The case studies were very similar, regardless of the size of the city; however, large cities had greater difficulty in obtaining fresh produce directly from family farms.

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.

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. 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. This implies support for countries to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.

Initially, how to devise food systems was discussed. It was agreed that these should be healthy, sustainable and inclusive. Food systems must move away from the principles of resource exploitation that are driven by large agro-industrial companies, which are the primary cause of water and soil pollution. They want to talk about feeding the world, but the rights of the people are left out. Therefore, the big challenge of fighting the government of transnationals was made a priority.

Public purchases from FA associations, cash payment, prioritizing care for the vulnerable.

Considerations regarding vulnerable populations and nutrition: maintaining all visions (economic, environmental and social) is vital for those involved in the donation process, but it is also extremely important to consider the sensitivity of the nutritional aspects of the process. For example, one of the organizations stated that, under a certain protocol, they accept almost all types of food products and ensure that the beneficiary receiving the product is not primarily made up of a population vulnerable to a certain nutritional factor associated with the donated product.

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), 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.\textsuperscript{2052}

Farmers and ranchers must be central to the work and to decision-making; currently where decisions are made is very distant from where change actually happens. It is not feasible for the necessary gains to be achieved without the active involvement of and engagement with conventional agriculture stakeholders who are already leading the way in this area.\textsuperscript{2053}

A global representative body such as MBW is required in order to accelerate change.\textsuperscript{2054}

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.\textsuperscript{2055}

Farmers and landowners have a vital role here, especially those already following these practices. Large landowners can encourage their tenants to implement certain practices such as carbon sequestration and carbon neutral / positive actions. Those already involved should act as exemplars for other farmers and landowners, demonstrating what is possible in food production through new effective, economically viable, ecological and enjoyable farming models. Farmers are also encouraged to participate in the ongoing debate over what works and what needs to change. Younger farmers are urged to talk to other young people and children about where food comes from and support teachers with the provision of appropriate resources / information.\textsuperscript{2056}

Implement digital solutions such as e-commerce platforms, digital payments and simple digital technologies to enable smallholders to access data and knowledge to make timely and informed decisions and to connect them directly with markets and finance. 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.\textsuperscript{2057}
If farmers have a voice themselves: where are they in the FSS dialogues? We hardly hear their voice.\textsuperscript{2058}

**Co-creation of technologies and innovations with farmers.**\textsuperscript{2059}

Nigel Brett, the Director of the Asia-Pacific Bureau of IFAD, noted that IFAD focused on promoting equitable livelihoods. He said that it was essential to consider smallholder farmers and other rural populations as the core of food system transformation and sustainable development goals.\textsuperscript{2060}

There is a strong potential for digital solutions due to government digitization efforts and the provision of more services in a digital form, especially as COVID-19 pushed everyone, even farmers, to change toward digitalization. When we are speaking of digital agriculture and including farmers in value chains, efforts towards digital agriculture literacy need to be applied at both ends of the value chain. Enhancing internet coverage and providing affordable smartphones are essential for digital inclusion amongst rural communities and farmers.\textsuperscript{2061}

**Representation and inclusiveness:** These are fundamental key pillars to build the trust necessary for legitimacy. Recommendations raised during the independent dialogue in this regard include (1) making sure from the beginning that all stakeholders affected by the given issue are included and equally represented in the MSP; (2) giving special attention to including minority groups and “unusual suspects” (such as street food vendors, women cooking in markets and other settings).\textsuperscript{2062}

...expanding economic opportunities for rural economies through the transformation of agriculture, expanding support to smallholder farmers, especially women and youth...\textsuperscript{2063}

Strengthening agriculture through the inclusion of multi-, inter-, and transdisciplinary perspectives and approaches in the curriculum so that the students can learn from other disciplines and innovations in ICT and the environment.\textsuperscript{2064}

Promoting greater understanding and competence along with robust policies and institutions through RDE. RDE agenda and food systems must be inclusive of farmers.\textsuperscript{2065}

We should always have the farmer in the middle and always focus the farmer to the private sector and investment and R4D, government.\textsuperscript{2066}

It explicated what is required to mobilize farmers, women and the youth all along the process.\textsuperscript{2067}
Avoid demonizing producers and instead bring them in to be part of solution development.\textsuperscript{2068}

Recognize the contribution small-scale producers make to nutrition, food security, and climate adaptation and abatement, not just production.\textsuperscript{2069}

Give more visibility to mental health and well-being as components of the need for food security, nutrition, and access. The ecosystem of advocacy on this topic should also include mental health professional’s voices.\textsuperscript{2070}

In order to address the issue of unfair pricing, farmers should be represented in State-Owned Marketing Boards and decision-making platforms that affect pricing.\textsuperscript{2071}

Mechanization and Farm Machinery. The group was unanimous in their realization that as long as mechanization and tractor hire services are operated by state-owned entities, their contribution to the food system will remain ineffective. They recommended that farmers be the ones who run the tractor hire service because they know the issues and can address them better.\textsuperscript{2072}

The group proposed that Government must provide and invest in about 100 to 200 ha farms for the youth to establish a whole value chain agribusiness enterprise that encompasses the whole agriculture value chain in this farm. This strategy must include primary producers of crops and livestock; processors, value addition enterprises, packaging, and distributions all in this farm.\textsuperscript{2073}

Rural communities need to be considered as equal players in the agriculture field - they carry solutions, and tremendous knowledge that should be amplified.\textsuperscript{2074}

Young people and young farmers feel the responsibility and burden of the climate crisis.\textsuperscript{2075}

During the Independent Dialogue, the importance of highlighting NCFFs’ experiences of exploring farmers’ needs and placing them on the political agenda was clearly shown. The NCFFs are diverse and their richness and specificity should be preserved. They should participate in the debate on food systems as key actors.\textsuperscript{2076}

...representation of farmers/fishers in policy making bodies...\textsuperscript{2077}

Expansion of spaces for popular participation and community gathering, especially at the local/municipal level, so that the different voices of food systems can be heard, especially from farmers, fishers and family gatherers, and traditional/indigenous communities – the true producers of safe/nutritious foods...\textsuperscript{2078}
Greater multilateral controls in the verification of business agendas to ensure they are not structured exclusively according to the demands of the market, but can also support proposals for access to marketing channels for small producers.  

Both small/medium and large farmers should be part of this (Payment for environmental services) solution (broader landscape approach).

Include larger scale farms at the discussion given their relative higher landscape impact and contribution to the maintenance of ecosystem services.

Ensure that finance programmes include women, youth and small-scale producers.

Having the farmers be involved in it is also important.

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.

Further, farmers need to be put at the center of the food systems, by listening to their needs, supporting them with proper advisory systems that would come from independent bodies.

Integrate inclusive, demand-driven, and adaptive agricultural research prioritization and technology development across all agricultural research and development efforts, including social sciences and policy research, ensuring R&D investments reflect choice and actively and meaningfully include smallholder farmers and innovators, women, and youth.

Panelists also discussed barriers to farmer access and farmer choice. Inclusion in policy making and technology development should be at the center of agriculture R&D work and will be important as we look forward to the future of technology advances.

The need to bring family farmers and territorial governance together requires UN agencies, with their different sectoral mandates, to collaborate and ask how to expand public services in a rights-based context to advance food systems. Guiding practices developed by lead agencies for their own purposes with their own institutional mandates are now converging — these frameworks need to be adapted as a foundation for co-governance by urban and rural actors supported by the appropriate levels of government.

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

It is particularly imperative to create programs and mentoring opportunities for BIPOC youth to get involved so that the food systems workforce reflects the diverse make-up of Canada. Combatting whiteness in the food system and greenwashing is critical to ensure we honour all cultures and ways of growing food.

Participants identified that it is important for migrant workers to receive “landed status” upon arrival in Canada and for workers to have access to the same rights that any Canadian employee would have. Legislative changes are needed to create equity among the people who work in the production and agriculture sector of our food system.

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.

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.

Participation and Local ownership of farmers need to be at the centre of Food Systems Transformation In the spirit of “leave no one behind”, and localization, it is key to have local ownership of food system transformation.

Building resilience to these hazards also entailed interventions such as changing cropping systems, adopting productivity-enhancing technologies and infrastructure—which require financial investments that vulnerable smallholder farmers were unable to afford. 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.

Convergence and organization of key stakeholders at multiple levels were proposed as solutions. These include institutional mechanisms, such as merging government development schemes with agricultural plans, and expanding disaster risk, reduction and recovery plans to cover smallholder farmers. Organizing and clustering farmers is
needed to improve their access to inputs, capacity building, and formal financial services. Mechanization and its associated increased productivity were also seen as pathways for increased participation of women and youth. Crop insurance and other safety nets can help smallholder farmers bounce back from climatic shocks.

During the dialogue, all stakeholders stressed the importance of, and are commitment to, disseminating game-changing solutions centered around reducing food loss and waste; pioneering actions to facilitate the transformation of food system and enhance food security; increasing sustainability through the food value chains; and promoting the efficiency, inclusiveness and resilience of food systems within the context of SDGs.

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.

Participants noted that focusing on scaling-up the circular economy plays an important role in helping the system catch up to the private sector’s ambitions. Regenerative farming needs support so businesses can access healthier and more sustainable ingredients at scale. Making sure everyone has access to these foods can also ensure that there is an equitable and fair playing field for all companies developing these products.

Participants also note the opportunity for food business to involve more producers in key decisions, integrating them into the entire product development process. Well-intentioned initiatives and community projects, often based on public dialogue or the competition’s projects, aren’t always the best solution for farmers.

Farmers are unable to adopt accessible technology due to financial limitations. A subsidy approach if taken by the Government, can help.

Small farming should become a protected category within international instruments and international policy.

Build resilience to vulnerabilities, shocks and stress: The participants noted that the COVID-19 pandemic has had a significant impact upon our global food systems and/or that the COVID-19 pandemic has highlighted the extreme vulnerabilities within our global food supply chains. Therefore, more needs to be done by all relevant stakeholders to ensure that small farmers can access markets and production products during these extremely difficult times. Nevertheless, one practical solution to this issue it was noted, may be to ensure that small farmers have access to information across
the supply chain. That would not only enable them to anticipate and plan for bottlenecks but also lulls in the market for certain produce.\textsuperscript{2103}

In this respect, access to formal and informal education for farmers in remote areas needs to be enhanced. In some contexts, informal education and innovative ways of raising awareness among farmers towards innovation can be more important and effective than formal education. In addition, improving access of women to education must be taken into consideration, also in light of the importance of enhancing and valorising gender crops (such as Fonio) in Sustainable Intensification strategies in order to ensure women’s social and economic empowerment.\textsuperscript{2104}

Involving farmers in the development, testing and adoption of technologies and practices and promoting capacity building, training and sharing of good practices is also important. A key role in this sense will be performed by the Farmers Field Research Units within the EWA-BELT Horizon2020 Project.\textsuperscript{2105}

The need for farmers to have a voice at the policy table, particularly in fine-tuning the decisions and actions taken within sustainable pathways, and ensuring farmers are supported to produce sustainable products, through consumer demand, and through public and private institutional initiatives, as well as supported in the implementation of policies.\textsuperscript{2106}

Focus on small producers. Throughout the Dialogue, much emphasis was placed on the centrality of small producers, who are key agents in the agri-food system but the most vulnerable link in the chain. Consequently, they emphasized both the public and private perspectives, including the third sector, on the importance of regenerating and articulating the rural milieu, reinforcing precisely the actors that structure this milieu, i.e., small- and medium-scale family farming. The sustainability of agri-food systems is intrinsically linked to the empowerment and improvement of the conditions of small producers, and this objective must be a priority for both governments and companies.\textsuperscript{2107}

Contracts between stakeholders: The relationships of the stakeholders and the facilitation of contracts between them is an approach that can facilitate the go to market strategy of farmers’ products, in particular those of the most poor: contractual agriculture is a possible example of agreements between producers and buyers. It is nonetheless important within this context to support small producers in their understanding and implementation of contracts in order for them to gain the best profit possible.\textsuperscript{2108}

Recognizing that the best alternative to in-person school meals is delivering food parcels to all students’ families (thus guaranteeing the principle of universality of free school meals), which also include fresh/natural foods that come from family farms or
traditional communities, to incentivize and ensure the continuation of local food production.\textsuperscript{2109}

Maintain priority for purchases from smallholdings, traditional peoples and communities; broaden the variety of produce; advance the intersectoriality of the Program and in institutional purchases from family farms.\textsuperscript{2110}

It is necessary for FFs to obtain economic resources to strengthen their collective processes, and thus reach commercial stages at different levels, not only short distribution channels, thus more effectively reaching central markets, so as not to be left out of the global production-commercialization system.\textsuperscript{2111}

It is understood that if FFs manage to successfully establish short distribution channel marketing, this would generate a reduction in waste. However, it is suggested that short distribution channels are not the only alternative for all FFs; it depends on where they live and the possibilities of placing all their produce on the local market. This is why it is necessary to support FFs in reaching more global marketing levels.\textsuperscript{2112}

Demand: Carry out public procurement in favor of AFCI, and vulnerable populations, in particular [hospitalized] children, and nursing homes, optimizing the use of public resources to improve the food system with agroecological-organic products. Improve the operation of local markets by directly connecting AFCI-consumers (short distribution channels, electronic purchases, direct points of sail). Develop advertising campaigns and events to inform consumers about the advantages of consuming AFCI quality products, differentiated by origin and/or originating from sustainable production systems, in order to have a more balanced and healthy diet. Retailers should incorporate AFCI products certified by origin and/or sustainable production systems, therefore avoiding importing products that AFCI can supply.\textsuperscript{2113}

Ensure access to healthy and nutritious food for all (making healthy food available to everyone). In addition to the prioritization of relevant proposals to governments regarding the lines of public policy needed to improve the Food System, as indicated in point B) Main findings, the group identified other relevant issues that were not included in the matrix presented for the discussion, which are noted below: Limit the importation of products that form the basis of the country’s AFCI supply. Consider the participation of AFCIOs in the governance of policies to contribute to territorial development. Provide incentives to local governments and retailers from the national government when they promote local food supply. Incorporate the AFCI agenda in school through to tertiary level education.\textsuperscript{2114}

Public policies must be promoted; the international market harms small farmers, the political struggle is difficult; recognition of the rights of farmers must be achieved, such as influencing local governments in the events to support and not oppose policies such as cutting the subsidy to agrochemicals, and support small farmers.\textsuperscript{2115}
Juna Manuel: Some organizations propose not to participate in the event, the Summit, but that is also leaving "the field free", not joining the battle, not leaving the terrain free, because the transformations will not come from above; the proposals come from below; there must be a sum of forces from small nuclei. The National Law on organic agriculture in Argentina, organic regions with local governments.\textsuperscript{2116}

Prioritize access to natural resources and territories by Family, Peasant and Indigenous Agriculture, Shepherds and Fishermen.\textsuperscript{2117}

Encourage specific policies such as development policies, not welfare, based on the enormous potential of Family, Peasant and Indigenous Agriculture, Shepherds and Fishermen.\textsuperscript{2118}

Support to farmers to develop healthy products in a healthy manner, to expand the variety and diversity of fruits and vegetables that can contribute to the nutritional value of the basic food basket. Provide adequate nutrition guidance for farmers and give them participation in decision-making on food sovereignty. Encourage collective and individual gardens. Inclusion in local commerce by zones.\textsuperscript{2119}

Design a Global Action Plan for the Reactivation of Food Production, which contains the guidelines based on the conditions of each region, with the support of international organizations related to food and agriculture, including (among others) master lines aimed at strengthening family agriculture, the largest segment of food production for the supply of families and for the global market.\textsuperscript{2120}

Promote public purchases from small-scale producers and family farms.\textsuperscript{2121}

Strengthen and make affordable technology programs for clean and competitive production, especially for small and medium-scale producers.\textsuperscript{2122}

The discussion around this topic considered proposals made in the first wave concerning localized support to women who process/market underutilized nutritious crops, a global innovation hub for small entrepreneurs, and a commitment by at least 50 countries to gender-transformative programmes in food systems. These were viewed positively, but participants recommended: ... Being more explicit about the need for women’s empowerment across different areas, given that obstacles to entrepreneurship can stem from different factors of inequality and different constraints not directly related to women’s business activities. Being more explicit about how each proposal can/will facilitate women’s access to markets. Avoiding an overly generic focus and prioritizing value chains where women are most directly involved or likely to become involved as entrepreneurs.\textsuperscript{2123}

...gender inclusive rather than women-only in focus...\textsuperscript{2124}
Address gender gap.

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.

Have both women and men have access.

Bridging the Gender Gap that Exists in the Nigeria Food Systems chain.

The gender gap that exists in several areas of the society also prevails in the agricultural sector. And although, women and children are most impacted by the devastating effects of an ineffective food system, they are also most marginalized when it comes to participation. There is a growing need to bring on board all the hands we can get and especially, to benefit from the pool of diversity that we have at our disposal. There is a standing hypothesis that since women are natural caregivers, they may be in a better position to drive the production of nourishing foods for their wards. For instance, in the competitive market of accessing loans for starting an agricultural outlet or to scale-up an existing field, women are not so favored as their male counterparts. This is in addition to other challenges that make it difficult for the food system to thrive e.g., access to quality seeds or machinery.

The UNFSS draft game changing solutions has some major gender gaps which should be addressed urgently. The process will benefit from the inclusion of women as special ambassadors in the action tracks to strengthen the gender elements in the game changers.

Real transformation in financial services will happen when gender becomes an integral part of the finance discussion rather than being a separate issue. There is need for governments, development partners and private financial institutions to relook and rework their policies to propel equitable financing for women farmers.

Policies must be gender-sensitive policies and allow women to have access and control of resources.

Policy responses to COVID-19 must also be gender sensitive if we are to ‘build back better’.

Increase capacity to a gender-inclusive private sector engagement.

Policy programmes and agricultural development strategies must include and prioritize gender-specific needs of men and women.
Across countries, mainly agriculture, forestry, natural resource management, climate change, trade policies, and investment do not always include or provide for gender equality and women’s empowerment. In many cases, efforts for women’s empowerment has been limited to initiatives that sometimes fall outside of the policy framework.2136

Women are typically visible in production, processing and trading sectors, however their visibility diminishes as we move up the value chain. This is problematic as there is a notable connection between gender equality, food systems, food security and nutrition. As our speaker Dr. Jemimah Njuki noted, “the countries with the highest gender inequalities also tend to be the hungriest”.2137

Seek to incorporate perspectives of marginalized racial, ethnic and gender groups, and recognize that the groups that are marginalized will be different in each context, and thus tailored approaches are necessary.2138

Policies must account for the gendered components in food environments.2139

Participants identified increased gender equality and inclusion as key aspects of resilient food systems.2140

Recommendations on this issue included ensuring investment processes have a strong gender focus; for example, reviewing gender aspects when smallholder and producer organizations are offered access to funding.2141

Future market systems should be more inclusive, sustainable and resilient, more functional and having more social value by mainstreaming gender and youth.2142

Gender gaps must be considered when designing communication systems that are effective (ie during radio programs designate time to address needs of women, or on IVR systems include call-in lines for women).2143

The gender gap is a key consideration when it comes to designing programs and not enough projects and programs are adequately addressing this.2144

Bringing about gender responsive agriculture & food system policies; bridging gender & technology gaps.2145

...gender equality and social inclusion, particularly most vulnerable groups affected by shocks and stress...2146
There is also need to mainstream gender issues into agricultural discussions so that women’s role in agricultural processes can be recognised and rewarded.\textsuperscript{2147}

Multi-sectorial collaboration: building a gender discourse on responsible production between industry, the Innovation Authority, and academia.\textsuperscript{2148}

Gender-responsive agricultural research, development, and extension systems are crucial to ensuring innovations meet the needs of women and men in the community.\textsuperscript{2149}

When we talk about education and food security, gender issues cannot be ignored. Some insights concerned: Access of women to education. Considering the importance of enhancing and valorizing gender crops (such as Fonio) in Sustainable Agricultural Intensification strategies in order to ensure women's social and economic empowerment.\textsuperscript{2150}

Perception change of cooking and household chores as a woman’s duty vs providing nutritious meals in partnership with spouse for the improved health of the whole family.\textsuperscript{2151}

Involve men at household and community level to understand the importance of nutrition, of the woman’s role in providing nutritious food for children and family, and the value of nutrition for health outcomes.\textsuperscript{2152}

Enable men to be perception change agents given their more frequent/present role in policy decision-making spaces.\textsuperscript{2153}

Strengthen specific institutions such as women’s ministries and policies for the promotion of production for women.\textsuperscript{2154}

Incorporate the gender approach in sustainable agricultural policies and make it possible through action plans and the articulation of participatory and multisectoral platforms.\textsuperscript{2155}

Introduce clear measures so that women have better access to financing, technology, information, and training.\textsuperscript{2156}

Promote the recognition of rural women leaders, as well as grassroots organizations and movements of indigenous and Afro-descendant women.\textsuperscript{2157}

There’s a need to invite women in: The meat industry workforce is made up of 36% women. Women are heavily represented in the most junior roles in the sector and
under-represented at every level above junior level, with women holding just 14% of board-level director roles and 5% of chief executive roles (MBW Research 2020). Increase the number of women in the food system workplace, especially in leadership roles. Invest in women: when she wins, her family wins, her broader community wins, all of us wins.

Balance of quantity and quality in opportunities for women in agriculture. Put targets in the Magna Carta (ex: increasing the number of women in leadership roles). We also have to take into consideration the quality – how they are engaged, how do they benefit? How can women use and access the opportunities and platforms?

Adjust land tenure practices to address access issues for women and young people.

Investing in women results in investments in the community. Women play an important role in agriculture and aquaculture. They also make sure that healthy food is on the table. They share information about opportunities and resources that people can access to grow food, making them valuable educators within the community. It is important to mobilize resources to support initiatives for women empowerment and engagement in food systems.

Promote entrepreneurship and innovation for youth and women to improve job creation, increase income and improving livelihood in rural areas.

...challenges should be faced together and everyone should contribute. Engage women in agriculture and food production.

Give equal right to women and men in accessing resources, stop child forced labor and promote youth lead economic empowerment programs to reduce high unemployment rate.

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.

For gender-transformative implementation, the facility should also model full participation of women in leadership and in decision-making at different levels - both in the facility itself and in the recipient financial intermediaries - given evidence that women are more likely to finance women, and also support efforts in collateral-free product design and delivery.
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.2168

Mentorship and coaching. b) A community ecosystem accelerator including that would be accessible to women and youth with capacity to develop start-up business solutions to needs at the community level, enhancing local self-sufficiency and self-reliance from a food system perspective. This would address a number of key needs including: Training programs for women on basic financial education. Access to finance to start business. Bringing markets to SMEs, develop the mechanism to bring produce to markets.2169

Participants emphasized that women—including women of color—must have equal access to vital resources including financial capital, technology, and land tenure. That women need educational opportunities. That women must have a voice in decision-making.2170

Ensure inclusion of women and youth specifically by addressing the problem of capacity building, especially for youth and startup 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.2171

Advocacy: Field practitioners should carry out massive awareness campaigns to understand the gap of women and youth exclusion in the food system. Practitioners, government and private sector stakeholders should provide information to women and youth to build their knowledge and capacity to enable them to better engage in the food system. This should be with the aim of changing mindsets and equipping them with knowledge and skills to effectively participate in the food system.2172

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.2173
These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing), reusing agricultural waste for composting, producing biogas, and feeding animals, among others.2174

There was also an acknowledgement that in a patriarchal society, in a world where women and girls are primarily the people growing and harvesting the food eaten by the majority of the world’s population, as well as the people who are hungry, stakeholders should embrace the divine feminine, providing more opportunities to women and girls as well as indigenous cultures.2175

Policies, technologies and innovations in agriculture have largely been designed for men and lowlands. They need to be tailored to mountain environments and people, including women and youth. The narrative, representation, visibility (i.e. through data) and role of women is essential for their agency and access to resources.2176

...the food system must be inclusive. Smallholders, women, youth, and other disadvantaged groups must benefit from the food system.2177

Generational renewal will need to be reinforced, providing support for young people including women and new entrants.2178

Greater diversification opportunities for livestock farmers will be critical, including enterprise change, innovation and adaption, as well as value-added farm processing and direct selling. Market development support is needed for the latter to be realised. Greater support for vulnerable farm families has to be provided, and more support for women in agriculture (access to land/capital, more options for retirement/partnership).2179

There needs to be inclusion, active engagement, collaboration, and empowering of the users including youth, women, and local communities/beneficiaries.2180

...focus on women, indigenous people, and youth; and set up training and knowledge hubs.2181

Leadership and Women’s Voices: There is need to continue creating more opportunities and spaces for women to be represented in leadership positions. Current initiatives must be scaled and encouraged and to bring more women on board. There is need to promote the implementation of existing laws and conventions, such as the Convention on the Elimination of all forms of Discrimination Against Women, UN Commitment to end child marriage by 2030. Institutions need to commit to setting gender-based
targets, including quotas in boardrooms and organizational hierarchy and in hiring of personnel.\textsuperscript{2182}

Women’s movements must be all encompassing ensuring women from all walks of life actively participate, from the small-scale farmer to the CEO. There is need to create a collective agenda that integrates smaller movements and unites them into larger ones. More spaces to demonstrate the importance of women roles need to be created.\textsuperscript{2183}

Increasing the participation of women and other minority groups in political bodies can increase their representation in decision-making processes and can ultimately include their perspectives in the WEF nexus. However, several challenges exist in increasing the participation of marginalized communities in decision-making roles. Reforms need to be introduced to eliminate structural and institutional barriers that prevent the participation of these groups in decision-making bodies. Moreover, awareness and educational campaigns need to address the gender stereotypes that are deeply rooted in our societies.\textsuperscript{2184}

There is a need to design an approach that encompasses all the groups and meet the need of all the people including the youth, vulnerable groups, and women. Also, there is a need to operate intelligently on the uneven field, making it even and bring onboard women and the vulnerable group to have a part in this uneven environment where the policymakers and private sectors tend to dominate and exclude the women.\textsuperscript{2185}

A vibrant seed sector is an inclusive sector. Smallholder farmers are critical to food and nutrition security and they play a key role in the farmer managed seeds system. In this regard, the participation and leadership of women needs to be ensured along with men and the youth.\textsuperscript{2186}

Food systems are mainly run by women yet they are deeply disempowered. We must shift social norms and worker regulations to protect and empower women in the workforce.\textsuperscript{2187}

In pastoral communities, women are key agents of change, meeting with other women, at markets, sharing expertise, seeds, and insights. Community models must include women in positions of power and expertise to create lasting and rippling waves of change.\textsuperscript{2188}

...expanding economic opportunities for rural economies through the transformation of agriculture, expanding support to smallholder farmers, especially women and youth...\textsuperscript{2189}

It explicated what is required to mobilize farmers, women and the youth all along the process.\textsuperscript{2190}
We need to think about these issues in a more intersectional way to include everyone (Women, Youth, Minorities).

Land should be given to youth and women who are willing to venture in agricultural activities.

Farmers envisaged active involvement of women and youth in equal numbers as men, competing in production of good quality wool and mohair. They foresee the industry re-engaging, attracting and maintaining youth particularly to be involved in wool and mohair processing.

...increasing the role of women and youth within agri-food systems...

Policy reformation focusing to encourage and involve women and youth in agriculture.

Focus on the groups whose livelihoods (women, youth, indigenous peoples, the disabled, seasonal laborer’s, etc.) are most limited by current food systems practices, and the discriminatory practices and norms that limit equitable livelihoods.

Including women and more minorities in the food chain...

Huge inequalities leading to exclusion of poor fish farmers, especially women who have restricted opportunities to participate in aquatic food systems. There is urgent need to increase access of poor farmers including women, to public water bodies. Additionally, financial opportunities should be developed and accessible to small-scale fishers to enable their participation in the profitable aquatic food systems' value chain.

Most poor fish farmers and fishers sell fish at very low prices and are often unable to even recover production cost. Due to social barriers, female farmers especially, have less access to supply chain. Women farmer cooperatives should be established and more collection points or more women friendly fish markets should be created to enable women farmer participation and access to better markets.

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 value chain activities to ensure women participation and to increase their adaptive capacity to adequately respond to climate change challenges.
Gender: prioritizing Food Security actions with a gender focus by (a) recognizing the central role of women in household food management and ensuring their food security; and (b) promoting education and training for income generation to ensure autonomy and access to healthful food.2201

The dialogue established that in order to enable real progress for the smallholder women farmers and landless laborers, there is a need for a comprehensive and inclusive approach that integrates women producers into mainstream agriculture and food system activities, provides them long-term, sustainable support and creates for them better access to financial services and markets.2202

Enabling women farmers to have a voice in decision-making & policy implementation in the Food System. Addressing the issue of women’s unpaid labor and skewed balance of work.2203

Elevating the role and visibility of underrepresented sectors like women, youth and indigenous peoples throughout the research, development and deployment process would help contextualize global agendas into local solutions.2204

It was clear that in many African countries gender favourable policies have been put in place however they have not been operationalised, therefore there is need for operationalization of gender policies. The dialogue findings affirmed the need for addressing legal dualism by formulating policies that address cultural interference in policy implementation. Capacity limitation for women entrepreneurs emerged as the key constraint hindering their equal participation in food systems, therefore a recommendation was made to develop the capacity of women entrepreneurs in technical, business and soft skills.2205

There was a call for a fundamental change in how ‘value’ is perceived by companies and at the broader society as present systems undervalue women’s contributions, especially in the area of unpaid care work. It was agreed that developing gender responsive systems will require making fundamental changes to meeting women’s needs. Rather than trying to make women fit into current systems or practices, new systems that are women friendly need to be devised to include alternative collateral systems, gender responsive procurement to ensure women can engage in value chains.2206

Ensure that finance programmes include women, youth and small-scale producers.2207

Target women-based value chains or segments of the value chains.2208

Ensure that women and other vulnerable groups are included in aquatic food decision making and policy.2209
It is important to ensure to transform Africa’s rural economies to provide more and better jobs for rural youth and particularly young women.2210

We should also be aware of local power structures that stand in the way of co-creation and give a chance for an agenda set by locals, especially inclusion of women and youth.2211

Involve women, youth in food system related programming.2212

Access to services to enable engagement to establish shared vision(s), action plans, participation from women/youth, conflict resolutions, technology integration, etc. 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.2213

Land-tenure rights and land concession policy reform can provide common good benefits for natural resources and help ensure common good is established as the goal not a simplistic productivity focus by private landholders and private sector. For the longer term, need to develop cross-generational territorial visions that integrate community needs developed through a bottom-up process including women and youth to manage pressures on natural resources while balancing livelihood needs. This requires resources to support the planning, design and implementation of landscape-wide visions and action.2214

Governments must invest in gender-sensitive agricultural research (including scientific, technological capacity building and leadership for women and young agricultural researchers) and provide research grants to help develop technologies that respond to the needs of women, men, and disadvantaged populations.2215

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.2216

Promote nutrient-dense, whole-food diets underpinned by diversified food production adapted to different microclimates and sociocultural contexts. Create positive food environments that provide equitable access, healthy dietary guidance, controls on food advertising and marketing especially to children, a precautionary approach to new products, and special consideration for vulnerable groups and women’s role as agents of change.2217
Strengthening the role of women not just in processing food but in managing food processing companies.\textsuperscript{2218}

Promote value chain development involving food production linked to tourism, beekeeping, local products (ex. peppers and aromatic herbs) — inter alia for rural women's economic empowerment.\textsuperscript{2219}

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.\textsuperscript{2220}

An important insight about the impact of increasing women’s participation in value chains is its impact on embedding nutrition as a key food value chain priority of agri-food systems—essentially scaling women’s nutrition-centred decision-making from the household to community. Improving community nutrition can help improve quality of life and productivity, leading to more opportunities for participation within the agri-food system.\textsuperscript{2221}

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 conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.\textsuperscript{2222}

Women centric development programs: Women produce around 60-80% of food. It is important to acknowledge the feminization of agriculture. Women’s roles are diversified and inclusive in every step of the dryland food chain. We need to reduce women farmers’ dependency on governments, and empower them to have entrepreneurial mindset and develop management capabilities within themselves.\textsuperscript{2223}

In addition, improving access of women to education must be taken into consideration, also in light of the importance of enhancing and valorising gender crops (such as Fonio) in Sustainable Intensification strategies in order to ensure women's social and economic empowerment.\textsuperscript{2224}

When we talk about education and food security, gender issues cannot be ignored. Some insights concerned: Access of women to education. Considering the importance of enhancing and valorizing gender crops (such as Fonio) in Sustainable Agricultural
Intensification strategies in order to ensure women’s social and economic empowerment.\textsuperscript{2225}

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.\textsuperscript{2226}

Need to reduce domestic household burden on women and increase their economic empowerment.\textsuperscript{2227}

Increased land access, titles/rights for women.\textsuperscript{2228}

Women’s involvement in household decision-making beyond domestic chores (eg. financial decisions).\textsuperscript{2229}

Supply: Develop technologies for FFs through co-innovation, beyond production, involving consumers and addressing organizational aspects. Subsidize healthy FF production (prioritizing youth and women). Discourage unhealthy food production through control of inputs, taxation, or other means. Finance the transition to agroecological systems.\textsuperscript{2230}

Facilitate access to land, water and seeds for FFs (prioritizing youth and women).\textsuperscript{2231}

Likewise, we women have insisted that our own economic systems be strengthened and these are firmly linked to the territory and the land. International and national entities must adapt their technical assistance within the expectations and needs of women in each of the territories, listening to their experiences and making possible a work of inclusive participation of women in each and every one of its phases.\textsuperscript{2232}

Women indicate that it is necessary to take urgent measures in view of the current situation of limited access to food for economic reasons or due to lack of supply in local markets. These problems have been the product of a neo-colonization process in which women were leaving their jobs to switch to other modes of production because they seemed innovative. In this sense, women express that a balance with nature must be maintained, taking into account the coexistence between the woman and the family, revitalizing their own collective education.\textsuperscript{2233}

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. 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. This implies support for countries to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.2234

Strengthen/make visible the role of women in the production and commercialization of food with specific policies.2235

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). 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.2236

Priority must be given to the most vulnerable women through mechanisms for accessing land and seeds for production, and to improve their livelihoods.2237

It was suggested to further promote the HRF and the participation of women, indigenous peoples and youth. Focus on the what and how, as well as tools for achieving HRF.2238

Women farmers not as producers but also as processors. Open women to opportunities that can help them climb up the ladder of the value chain.2239

The voice of the young people needs to be taken more seriously on both the industry and policy level. Young people wants to understand the complexities of the food systems, and we have to make science-based knowledge easy to find.2240

Adjust land tenure practices to address access issues for women and young people.2241

Youth are central to innovation and more programs are needs for students and to inspire youth globally to work in food systems.2242

Regarding the role of the youth, Gilbert Houngbo considered that young people should not only be part of decision-making processes, but should even be at the center of change: youths in low-income countries should engage at the beginning of the production chain to determine working conditions, they should be end-consumers to help determine demand for food, they should start the transformation by minimizing
loss and waste, and they should engage in partnerships allowing them to play in the
tield with big corporations.\textsuperscript{2243}

He stressed the importance of acknowledging a transformative process for the people
and the environment allowing to recognize the work behind food without wasting and
losing it. When it came to the youths, Giorgio Marrapodi highlighted the centrality of
young people in the transformative process. At the same time, he stressed the
importance of not giving away the responsibility of the older generations to change the
system.\textsuperscript{2244}

Young people will be most affected and will be most relevant in driving future progress
across food systems.\textsuperscript{2245}

Promote entrepreneurship and innovation for youth and women to improve job
creation, increase income and improving livelihood in rural areas.\textsuperscript{2246}

Give equal right to women and men in accessing resources, stop child forced labor and
promote youth lead economic empowerment programs to reduce high unemployment
rate.\textsuperscript{2247}

Provision of financing mechanisms. Focus specializations in universities based on
qualifications and available resources. Create youth leadership positions.\textsuperscript{2248}

The need to integrate young and local leadership, emphasizing the need for education
for the younger generation and future decision-makers in landscapes which was not
explicitly stated, for knowledge transfer of landscape wisdom.\textsuperscript{2249}

Mentorship and coaching. b) A community ecosystem accelerator including that would
be accessible to women and youth with capacity to develop start-up business solutions
to needs at the community level, enhancing local self-sufficiency and self-reliance from
a food system perspective. This would address a number of key needs including:
Training programs for women on basic financial education. Access to finance to start
business. Bringing markets to SMEs, develop the mechanism to bring produce to
markets.\textsuperscript{2250}

To ensure the future vision of food systems, a generational change of producers is
needed by empowering and including youth and women; ensuring equal payment and
raising awareness is essential.\textsuperscript{2251}

Ensure inclusion of women and youth specifically by addressing the problem of capacity
building, especially for youth and startup 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.\textsuperscript{2252}

Ensure inclusion of women and youth specifically around financing and access to finance. Support for financial inclusion also requires a systematic approach to impact measurement, including indicators for inclusivity, as well as information on financial and agricultural performance, and that calculate the true value of food.\textsuperscript{2253}

Adaptive approaches and youth inclusion. The factors affecting food sustainability are ever-available so, adaptive measures to respond to their incidence must be adopted. Climate Smart Agriculture, incorporation of Geographic Information System and other technologies into the Food System etc have been said to be adaptive.\textsuperscript{2254}

Youth inclusion and intervention in the food systems will bring about a change in the trajectory because of their creativity. Collections and implementation of individual solutions from the youths will help meet our food sufficiency and sustainability needs.Youths were implored to connect and engage with Agriculture Movements to explore the possibilities of adaptive Food Systems in Nigeria.\textsuperscript{2255}

The concept of Food Systems needs to be made more accessible to young people and integrated at a sooner stage into the school curricula. Young people need to understand the complexities and trade-offs involved in shaping food systems. By making the language more accessible to young people, they can be included in this dialogue.\textsuperscript{2256}

Advocacy: Field practitioners should carry out massive awareness campaigns to understand the gap of women and youth exclusion in the food system. Practitioners, government and private sector stakeholders should provide information to women and youth to build their knowledge and capacity to enable them to better engage in the food system. This should be with the aim of changing mindsets and equipping them with knowledge and skills to effectively participate in the food system.\textsuperscript{2257}

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.\textsuperscript{2258}

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing), reusing...
agricultural waste for composting, producing biogas, and feeding animals, among others.\textsuperscript{2259}

One key message that the participants want to share is that young people are the leaders of change and through Food Banks’ involvement young people can really be protagonist of the future of our countries, of Europe and the world.\textsuperscript{2260}

In terms of governance, the participants indicated the important role of governments in market management, pricing vs affordability management, implementing quality standards, advertising aquatic food (e.g. health and economic benefits), integrating aquatic food into the current food and nutrient policies, especially in the global food system dialogue, providing support (e.g. investment and other public resources) and equal opportunity for fishermen, particularly those in the small-scale fisheries, improving the rights of fishermen, including younger generations in relevant dialogues and practices.\textsuperscript{2261}

Schools can also enhance food systems education. Nutrition education is imperative when seeking to improve children’s diets, while life skills and applied science and technology (e.g., STEM) should be incorporated as well. School gardens, farm tours and farmer visits can raise awareness of fresh and local foods among children and families. Participants saw a disconnect between these educational opportunities and current policy. The U.S. does not require nutrition education in schools and school meals are considered separate from the educational portion of the school day. These policy barriers, combined with lacking resource support, pose barriers to overcome.\textsuperscript{2262}

Participants recognized how dairy can support this vision. For example, children consume most of their dairy intake in schools, helping to achieve three daily servings of non-fat or low-fat dairy per day as recommended in the United States Dietary Guidelines for Americans. Participants also observed that children’s diets often include overconsumption of foods that are nutrient poor and supplant nutrient-rich options like dairy foods, fruits and vegetables. Additionally, they observed that bulk milk dispensers in the cafeteria have been proven to help reduce food waste. Lastly, dairy farmers have a long history of hosting farm tours and serving as “farm ambassadors” to generations of school children. They can continue to serve in this capacity to bridge the gap between farm to school.\textsuperscript{2263}

Policies, technologies and innovations in agriculture have largely been designed for men and lowlands. They need to be tailored to mountain environments and people, including women and youth. The narrative, representation, visibility (i.e. through data) and role of women is essential for their agency and access to resources.\textsuperscript{2264}

We need to more prominently include startups and next-generation innovators in food systems transformation. Innovation comes faster than regulation, and the next-generation has the tools and skillset to enable this shift towards more sustainable food systems for all. As digital natives, the next-generation inherently understands the
importance of digitalization and data-driven decision-making. The next-generation also embodies the key attitudes needed to facilitate this food systems change - openness, willingness to adopt alternative business models (circular economy, cradle to cradle), and nimbleness to adapt quickly to changes and navigate through ambiguity (especially in the times of COVID-19). Young entrepreneurs embody all of these behaviors to create innovative and new products and services using (and even re-using) existing resources with a greater focus on sustainability. The regulatory framework (transparent, science-based, pragmatic) needs to allow innovations into the market.\textsuperscript{2265}

...the food system must be inclusive. Smallholders, women, youth, and other disadvantaged groups must benefit from the food system.\textsuperscript{2266}

The discussion on the need to harness the potential of the youth to participate in AR4D recommended the shared responsibility and the need to invest in capacity development and business incubation for the youth in agriculture and food. 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.\textsuperscript{2267}

Generational renewal will need to be reinforced, providing support for young people including women and new entrants.\textsuperscript{2268}

Finally, generational renewal needs to be reinforced through access to land for younger people and succession support.\textsuperscript{2269}

There needs to be inclusion, active engagement, collaboration, and empowering of the users including youth, women, and local communities/beneficiaries.\textsuperscript{2270}

...focus on women, indigenous people, and youth; and set up training and knowledge hubs.\textsuperscript{2271}

School meals and school nutrition programs can be powerful for children to gain early knowledge on nutrition and health, knowledge that also trickles down to families.\textsuperscript{2272}

To advance equitable livelihoods of youth and secure their inclusive interest in Agriculture, the dialogue noted that seemingly invisible barriers be lifted. For instance, the Land Use Acts needs to be reviewed and allowed for access to land for agricultural purposes in addition to enable access to farm inputs and financing.\textsuperscript{2273}

Younger generations should be involved in village banking so they can save money / begin farming practices.\textsuperscript{2274}
...recognizing the role of cooperatives in building resilience and ensuring youth are included in these cooperatives Specific examples of cooperatives and collective action were brought in from India.2275

...expanding economic opportunities for rural economies through the transformation of agriculture, expanding support to smallholder farmers, especially women and youth...2276

It explicated what is required to mobilize farmers, women and the youth all along the process.2277

We need to think about these issues in a more intersectional way to include everyone (Women, Youth, Minorities).2278

Attract young people to farmers, cultivating and incentivizing youth to work in the rural environment...2279

Participants also noted the importance of working with youth across the gender spectrum, different geographic settings, socioeconomic statuses and experiences.2280

Farmers envision 60% of women and youth participating in beekeeping as this industry does not require weighty manpower, women and youth would do well.2281

Land should be given to youth and women who are willing to venture in agricultural activities.2282

Farmers envisaged active involvement of women and youth in equal numbers as men, competing in production of good quality wool and mohair. They foresee the industry re-engaging, attracting and maintaining youth particularly to be involved in wool and mohair processing.2283

Farmers envisage a future where women and youth have landholding rights and simplified means of renting or buying land for production.2284

Associations are needed for youth and women, to provide a platform where motivation will be drawn from each other, and this makes them easily reachable for trainings and other forms of capacitation.2285

Include youth voice in platforms where decisions that affect engagement in food systems initiatives are made. Ensure those voices are translated into action (beyond tokenism).2286
Youth representation in Parliament: The Group proposed that the purposeful appointment of youth representatives is important if youth-friendly policies can be guaranteed in parliament.\textsuperscript{2287}

...increasing the role of women and youth within agri-food systems...\textsuperscript{2288}

A recurring theme was the need for youth involvement and advocacy within food systems. Participants identified that it is necessary to promote actions that link youth to value chains, and youth involvement was listed as a practical next step for increasing the resilience of smallholders.\textsuperscript{2289}

Policy reformation focusing to encourage and involve women and youth in agriculture.\textsuperscript{2290}

Focus on the groups whose livelihoods (women, youth, indigenous peoples, the disabled, seasonal laborer’s, etc.) are most limited by current food systems practices, and the discriminatory practices and norms that limit equitable livelihoods.\textsuperscript{2291}

To get the governments, organizations and private sector partners to put young people first in Agriculture sector.\textsuperscript{2292}

...realize the involvement of young people in agriculture as a means of increasing youth employment and scaling of climate smart agriculture initiatives...\textsuperscript{2293}

The place of youth in the food systems is in; technological innovation, socio-economic transformation, and political participation.\textsuperscript{2294}

Empowering youth is part of a strong part of empowering communities. Three key approaches ought to be considered; Bottom-up approach, Empowerment of youth approach and Inclusivity.\textsuperscript{2295}

Youth are a strong part of society and their empowerment and full participation in productive processes and sectors of the economy are critical.\textsuperscript{2296}

Future market systems should be more inclusive, sustainable and resilient, more functional and having more social value by mainstreaming gender and youth.\textsuperscript{2297}

Strengthening the capacity of all implementers of the Home-Grown School Feeding Programme to ensure that they can use the school meal planner to develop and prepare nutritionally adequate meals and generate predictable demand for commodities from farmer groups.\textsuperscript{2298}
Generational renewal must be the centre of public policy to preserve food resources.\textsuperscript{2299}

By connecting farmers with youth entrepreneurs we can empower farmers in ways that we haven’t done yet. By doing so, we simultaneously help the aging population of farmers who are often heavily impacted by the digital divide and we are engaging youth in agriculture and innovation.\textsuperscript{2300}

Bringing value to the farm. Until the farmer only provides ingredients, we will never get out of this broken system. However, youth can engage in intelligent commercial relations and partnerships with farmers to disrupt the system.\textsuperscript{2301}

General findings of the dialogue shows that there is a big need for just inclusion of young people in the conversation on sustainable food. There is a fear of "youth-washing", that young are being invited in general, but not listened to. Tokenism was also mentioned, and that there is a real need to actually act on what youth bring to the table. A general signal from the dialogue to the food systems summit is that political stakeholders and corporates such as retail and large food corporations need to listen better and engage in order to achieve a food system within planetary boundaries. The stakeholders in the dialogue were interested in continued dialogue, and the convenors are prepared to act on this.\textsuperscript{2302}

There was also a lengthy discussion on how young people can be involved in the food system as farmers and entrepreneurs. There is a great need for more youth in the production system, and this will also help bridge over to consumers.\textsuperscript{2303}

The young generation should be encouraged to take part in revitalizing ethnic cuisine and conserving agro diversity and associated traditional knowledge.\textsuperscript{2304}

Rural youth can contribute to the transformation of the current food systems.\textsuperscript{2305}

There is a need to identify the links in the agri-food chain in which young people can apply their technical management skills. 3) The younger sector can contribute to the raw materials transformation process and give it added value without losing the history and identity of the product, and they can dynamically promote alternative marketing channels. ... 4) Youth can contribute to rural development by working on protecting biodiversity and cultural management, revaluing and strengthening the territory and its heritage at grassroots level. 5) The tendency of youth to associate should be harnessed, leveraging their predisposition towards networking. 6) Due to the pandemic, many young people have returned to the countryside and are available for engagement in agro-ecological production, provided that they are supported with innovative and techno-oriented strategies. 7) The State is duty-bound to safeguard the security and human rights of young leaders in rural areas where armed conflict persists. 8) The rural areas need to be repopulated with young families empowered with agro-ecological principles, and their roots and identity need to be boosted. 9) Generate policies in favor of rural youth: Establish financial mechanisms to encourage
their return to the countryside, promote policies and laws for early land inheritance, and transform the food systems on an agro-ecological basis.\textsuperscript{2306}

IFI\textdprime;s 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.\textsuperscript{2307}

Elevating the role and visibility of underrepresented sectors like women, youth and indigenous peoples throughout the research, development and deployment process would help contextualize global agendas into local solutions.\textsuperscript{2308}

Education is needed to bring consumers closer to sustainable food production at a younger age. School curriculums need to create experiences for early learners to experience where their food is from. For low-resource regions, providing school meals could be an incentive for education.\textsuperscript{2309}

Need to actively involve the youth in agriculture.\textsuperscript{2310}

Governments should more proactively support the development and use of new technologies, including ICTs and biotechnology. There is the need to promote ICT to take advantage of the youth bulge in Africa that portends for a more technology-induced food systems transformation.\textsuperscript{2311}

Ensure that finance programmes include women, youth and small-scale producers.\textsuperscript{2312}

Mainstream and include young people in all decision making platforms right from the community level to the national and regional levels.\textsuperscript{2313}

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.\textsuperscript{2314}

It is important to ensure to transform Africa’s rural economies to provide more and better jobs for rural youth and particularly young women.\textsuperscript{2315}

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
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.\textsuperscript{2316}

We should also be aware of local power structures that stand in the way of co-creation and give a chance for an agenda set by locals, especially inclusion of women and youth.\textsuperscript{2317}

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 for the governments to prioritise youth inclusion in policy making and implementation.\textsuperscript{2318}

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.\textsuperscript{2319}

It was suggested that, in order to overcome such challenges, there is need to include youth in policy making.\textsuperscript{2320}

Access to services to enable engagement to establish shared vision(s), action plans, participation from women/youth, conflict resolutions, technology integration, etc. 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.\textsuperscript{2321}

Land-tenure rights and land concession policy reform can provide common good benefits for natural resources and help ensure common good is established as the goal not a simplistic productivity focus by private landholders and private sector. For the longer term, need to develop cross-generational territorial visions that integrate community needs developed through a bottom-up process including women and youth to manage pressures on natural resources while balancing livelihood needs. This requires resources to support the planning, design and implementation of landscape-wide visions and action.\textsuperscript{2322}

Only technologies that are resilient to climate change, gender sensitive (labor-saving) and nutritious (biofortification), will foster resilient and inclusive food systems especially in context of vulnerability aggravated by shocks such as pandemics. Digitization of agriculture is important but often women are the ones who do not have access to phones so it’s important to ensure women are included in solutions. Digital tools can help the implementation of agricultural insurance systems. Cell phones can help formal and informal small-scale producers document their practices and show that crop losses are due to due to climate extremes or infestation, therefore supporting...
farmers claims and reassuring insurers that claims are valid (could we do the same for pandemics?).

Participants commented on seeing few people of colour, women and young people in the food system. In Canada, approximately 2% of the population are farmers and the typical image of farmers are “old white men”. The involvement of youth in agriculture could be increased if youth can “see themselves” in the food system. A fair and equal food system needs to represent the community that is participating in it.

It is imperative that youth are compensated fairly for their hard work so that they are able to take part in the food system.

Chefs in particular can play a major role in this food education especially when chefs are incorporated into the school ecosystem - giving cooking lessons and engaging the children in what they eat. School cooks have a huge opportunity to influence children’s diet. Chefs need to be paid a living wage to do this. The wider Chef community are an important voice for communicating what good and whole food is, can explain to people how to eat the rainbow and its benefits. There also needs to be much more interaction between chefs and those who are providing school meals.

The origins of the health crisis we are currently facing in the west and certainly in the UK of obesity and overweight, has its origins in the education of children, youth and parents which should be prioritised and given financial support by the government. Nutrition needs to be prioritised for the first 21 years of life as non-communicable and chronic disease has its origins in the cells of our young people. We need to see the investment in the learner ages 0-21 as investments in the future to prevent illness and lifestyle diseases.

It is important to listen to the voice of children, empower them with the knowledge to recognise healthy and nutritious food, how they identify with it culturally and understand how the food they eat affects them. Children intuitively know what is good for them when we connect them to nature.

Indigenous and heritage varieties of food should be prioritised for subsidies by governments when they are more nutritious than rice and wheat. Indigenous food should also be included in school feeding program meals and communities should have a say in what food is used for these meals & be able to shorten supply chains using locally grown food giving children nutrient dense food and not empty calories just to fill their bellies. Providing school meals and school feeding programs is good, but the food also has to be nutritious as this has a direct impact on learning & concentration.

As well as driving food supplies to do the right thing for children, supply chains should be shortened wherever possible - the closer children are to food growing or growing it
themselves either in school or community garden the more likely they are to be interested in and appreciate it.\textsuperscript{2330}

Central level institutions should intertwine policies in order to promote agriculture among youth and discourage migration.\textsuperscript{2331}

Strengthening vocational and educational trainings /curricula through targeted programs to educate younger generations on the need to understand the status and challenges of the system.\textsuperscript{2332}

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.\textsuperscript{2333}

Convergence and organization of key stakeholders at multiple levels were proposed as solutions. These include institutional mechanisms, such as merging government development schemes with agricultural plans, and expanding disaster risk, reduction and recovery plans to cover smallholder farmers. Organizing and clustering farmers is needed to improve their access to inputs, capacity building, and formal financial services. Mechanization and its associated increased productivity were also seen as pathways for increased participation of women and youth. Crop insurance and other safety nets can help smallholder farmers bounce back from climatic shocks.\textsuperscript{2334}

Behaviour change and communication programs are critical in enabling the participation of women and youth in the value chain. Increasing job creation in the agricultural sector can minimize the economic and social impact of male out migration.\textsuperscript{2335}

Traditional communities (Quilombos) are empowered individuals and not victims. There is much knowledge and artistic talent in these communities that can contribute to disrupt unsustainable food practices. People from these communities commit to take concrete steps to continue and revive their traditional agricultural systems and transfer their cultural traditions, knowledge and practices to the next generation and to the society at large. This is possible via: Continued process of revalorization of local culture and empowerment and taking pride in traditional values that prioritize a respectful relation with nature, especially with the land. Strengthening of collaborations with external actors, in particular with government officials and researchers. Dissemination of sustainable agricultural practices. Responsible tourism in their communities that values nature and respects their culture. Creation of role models derived from their own tradition rather than from the outside so that children no longer feel ashamed of their
skin color or love for farming. Develop other books and education materials to ensure better food practices are uphold within their communities as well as in other cities.2336

...young people are increasingly unwilling to take over what once termed the family business but are instead opting to migrate to larger cities in search of more prosperous job opportunities. That has largely been brought about by their parents being trapped in revolving cycles of debt by predatory loan management companies and the closure of local agricultural businesses. That in turn only makes it harder for young farmers to earn a reasonable standard of living. Therefore, more needs to be done by State Governments to level the playing field between small famers and large agribusinesses. Especially, when it comes to small farmers access to resources such as local markets, trading houses, abattoirs and so on...2337

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.2338

Recognizing that the best alternative to in-person school meals is delivering food parcels to all students' families (thus guaranteeing the principle of universality of free school meals), which also include fresh/natural foods that come from family farms or traditional communities, to incentivize and ensure the continuation of local food production.2339

Create mechanisms that can guarantee the supply of fresh and seasonal foods, especially those coming from closed circuits that prioritize produce from traditional communities in the region, such as, for example, the use of Farinha do Babaçu (Babassu Flour) in school meals, which allowed communities to remain on their land, generating income and ensuring food security.2340

Need to bring together different actors in the school meals system for joint work of mobilization, to plan the return to schools. These are organized in working groups or committees that tackle the topic of school meals and food security in tandem with other themes, with the message that food security at school is just as important as the pedagogical process.2341

Supply: Develop technologies for FFs through co-innovation, beyond production, involving consumers and addressing organizational aspects. Subsidize healthy FF production (prioritizing youth and women). Discourage unhealthy food production through control of inputs, taxation, or other means. Finance the transition to agroecological systems.2342
Demand: Special loans and financing for FF production, specifically aimed at youths and women. Regulate decentralized public procurement in favor of FFs, in order to meet the needs of vulnerable populations, optimizing the use of public resources and improving the system. Improve market operation, directly connecting FF-consumers (short distribution channels, electronic purchases, direct points of sale). Develop advertising campaigns and provide formal education about the advantages of quality (healthy) consumption of FF products, differentiated by origin and/or originating from sustainable systems. On the part of consumers, value FF products, opting for them as long as they meet their quality and availability requirements.  

Therefore, we need to talk about food sovereignty, which is defined as people’s right not simply to food, but to also ensure that what is consumed is nutritious and culturally appropriate, accessible, produced sustainably and ecologically, and that they exercise their right to decide on their own food and productive system. Employing this logic, young people play a leading role in transforming the way people think about the country and the practices developed there in the search to claim and guarantee these rights; that pursuing this will return it to a livable space, reducing multidimensional inequalities by creating space with decent living conditions and for producing, which in turn establishes food systems that are healthier and fairer.  

Strengthen generational turnover (rural succession) with the adoption of specific policies.  

Food education needs to be implemented from educational facilities. Standardize nutritional education, at the basic, industrial and social level. Learning to eat healthy is only achieved with education, schools should have in their school curriculum the teaching of healthy eating from primary and basic levels; they should teach about healthy, unprocessed foods, organic foods, without pesticides, without additives, preservatives and with high nutritional value. This education must be applied with a language that the population can understand. The implementation of culinary education for better cooking practices is part of this education that is to be instilled; it is important to provide cooking techniques and methods that allow healthy food preparation for the entire population.  

Through specialized food institutions and/or government programs, accompany young athletes in their diet.  

It was suggested to further promote the HRF and the participation of women, indigenous peoples and youth. Focus on the what and how, as well as tools for achieving HRF.  

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2344 347:5 p 6 in 410a_June_18_21_CLOC_Eng
2345 350:27 p 9 a 421a_June_21_COPROFAM_CLOC_Eng
2346 352:8 p 7 a 423a_June_25_21_PROLIDER_Eng
2347 352:10 p 7 a 423a_June_28_21_PROLIDER_Eng
2348 354:18 p 7 a 552a_July_15_21_Frente Parlamentario_Eng
Inclusion of indigenous peoples

Incorporate the gender approach in regulations, policies, and productive and food security programs.\textsuperscript{2349}

Promote the recognition of rural women leaders, as well as grassroots organizations and movements of indigenous and Afro-descendant women.\textsuperscript{2350}

Indigenous groups have knowledge on food systems that can result in equity, food security, sustainability and environmental protection. Indigenous farmers need to have access to resources and opportunities to increase their cultural prominence. Traditions should be revived but can have a modern twist.\textsuperscript{2351}

Resilience and sustainability were two important keywords that anchored this discussion. The challenges of ensuring both resilience and sustainability, especially for marginalized and indigenous people, were discussed.\textsuperscript{2352}

We need to place greater value on the intergenerational and indigenous knowledge of biodiversity. This knowledge needs to be categorized and recorded to maintain its full potency. Legislation needs to be put in place to enhance the value of our biodiversity and provide guidelines and parameters for conservation efforts. It needs to be determined which species are endangered and thus put rules in place to protect both plant and animal species. Effort should be made to explore permaculture design; using biogas to generate energy is necessary to move away from embrace in the concept of a monoculture which was an approach legitimized by slavery, and look into the ways in which varieties of plants and animals can provide sustenance and value. More research and development into the wealth of the Caribbean’s biodiversity needs to be done. It is crucial to focus on protecting the intellectual property of the region regarding any products created with our flora and fauna, and seeking to patent any processes that are indigenous. The enzymes produced by local micro-organisms may possess the cures to illnesses, this knowledge should be seen as viable. There must be corresponding legislative development to enhance the protection of this intellectual property. We must maximize on indigenous knowledge. There is need to mainstream indigenous knowledge into the standards and regulatory regimes being developed.\textsuperscript{2353}

Increase cultural sensitivity of WIC/SNAP approved foods to promote inclusivity and reduce diet related diseases.\textsuperscript{2354}

Leverage the power of community to increase support of local farm direct produce in institutions, incorporate food into the curriculum, and increase connection to traditional food knowledge specific to a location by embedding local indigenous leaders into institutional food program planning and procurement (ie The Intertribal Agricultural Council in the USA; rural community leaders in Indonesia).\textsuperscript{2355}
In terms of governance, the participants indicated the important role of governments in market management, pricing vs affordability management, implementing quality standards, advertising aquatic food (e.g. health and economic benefits), integrating aquatic food into the current food and nutrient policies, especially in the global food system dialogue, providing support (e.g. investment and other public resources) and equal opportunity for fishermen, particularly those in the small-scale fisheries, improving the rights of fishermen, including younger generations in relevant dialogues and practices.2356

There was also an acknowledgement that in a patriarchal society, in a world where women and girls are primarily the people growing and harvesting the food eaten by the majority of the world’s population, as well as the people who are hungry, stakeholders should embrace the divine feminine, providing more opportunities to women and girls as well as indigenous cultures.2357

Indigenous peoples are leading the way in food policy yet do not feel they have a seat at most decision making tables regarding food systems.2358

Indigenous communities were the first communities on our lands and have traditions that respect the land and environment while maintaining healthy lives. These voices need to be raised in order to meaningfully improve our food systems.2359

Promote the leadership of local people as a strategy to restore degraded ecosystems by integrating them in policy-making processes and promoting cooperative work to achieve better results and negotiation prices and increased resilience.2360

Add a Track 6 on transforming corporate food systems. Corporate food systems are the elephant in the room. Our silence actually affirms their role and their ability to advance. In the South, it is very difficult to get the needed accountability. Radical partnerships looking after food-water-energy nexus are needed. The indigenous peoples know the best water sources in the mountains; they can be empowered to sustain those.2361

Increasing research and innovations and delivering it in the indigenous languages.2362

Focus on women, indigenous people, and youth; and set up training and knowledge hubs.2363

Another participant expressed concern that the voices of Indigenous cultures and traditional producers are not well-represented in this burgeoning industry, making it more difficult for aquatic foods to get the prominence they need in spaces such as the Food Systems Summit. The participants concluded with a discussion about how to get these important voices heard and elevate the growth of the seaweed industry.2364
Preserve and transmit indigenous and ancestral knowledge and practice in food production by including this in the school curriculum and make it a requirement for graduation. Food production can be an effective way to teach science and culture in a practical way.\textsuperscript{2365}

Localize training and knowledge products adopting relevant indigenous knowledge systems. Multi-stakeholder partnerships for continued capacity building for self-reliance of indigenous peoples and upland farming.\textsuperscript{2366}

Stakeholders whose interests should be prioritized: Indigenous Peoples of North America, and in all 7 Socio-Cultural regions of the world are Rights Holders who should be, and must be prioritized. Indigenous Peoples are key allies in achieving the outcomes of the Summit and all the Sustainable Development Goals.\textsuperscript{2367}

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.\textsuperscript{2368}

Two groups explored this topic. Their vision for creating a community-led food system included implementing policies that are inclusive towards indigenous communities.\textsuperscript{2369}

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.\textsuperscript{2370}

A Guatemala recovered, energized and strengthened from childhood, youth, women and adults, having access to food and quality education, inclusivity of opportunities especially indigenous communities, poverty rates would be low, and education would be a key tool to reduce malnutrition.\textsuperscript{2371}

It is critical to empower voices of leadership in the food system that have been at the head of the movements for generations (indigenous, minorities).\textsuperscript{2372}

Recognise indigenous community lands and their customary lands systems as part of building sustainable food systems. Recognize Indigenous Peoples as agents to allow
their self-determined food generation and production systems and practices in finding solutions.  

...accessibility of indigenous knowledge on pests and droughts passed from generation to generation...  

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 firm legality for their existence and living space areas to minimize cases of expropriation of customary law communities’ territories by companies and the state.  

Focus on the groups whose livelihoods (women, youth, indigenous peoples, the disabled, seasonal laborer’s, etc.) are most limited by current food systems practices, and the discriminatory practices and norms that limit equitable livelihoods.  

By combining enduring knowledge from indigenous peoples with space assets, artificial intelligence, blockchain, citizen science, and other solutions, we maximize the prospects of delivering smart, more efficient, and sustainable agricultural practices for all.  

It is of crucial importance to open dialogues about the transmission of knowledge among young peoples of indigenous communities. There is a key role of carrying out the analysis work from their ancestral knowledge but at the same time under the lens of the recovery of this knowledge by the indigenous peoples themselves, especially from the oldest wise peoples to the youth, under their praxis and their own cosmovision.  

It advocated the use of innovations to integrate indigenous knowledge and wisdom for better diet diversity, farming systems and planetary health, and use of Earth Observation and frontier technologies to investigate and integrate Indigenous knowledge for food and nutritional security.  

Expansion of spaces for popular participation and community gathering, especially at the local/municipal level, so that the different voices of food systems can be heard, especially from farmers, fishers and family gatherers, and traditional/indigenous communities – the true producers of safe/nutritious foods.  

We must work to reduce the distance between the rural and urban world. We are witnessing an important generational change and many sectors of the population do not know how to work in the agricultural and livestock sector, which can generate rejection of livestock activity. It is essential to effectively communicate the work of the livestock-meat sector and its contribution to society.
Elevating the role and visibility of underrepresented sectors like women, youth and indigenous peoples throughout the research, development and deployment process would help contextualize global agendas into local solutions.\textsuperscript{2382}

Developing sustainability frameworks also requires the collaboration and experience of different groups like Indigenous people and smallholder farmers. Data collection must then be feasible and affordable for these groups that may lack the time, resources and tools to do so.\textsuperscript{2383}

Indigenous communities and plant-based diet advocates Although it is a valid concern, it can sometimes be overblown - Indigeneity and Aboriginal rights can be respected AND can improve animal protection. The tensions can be overblown and used as an excuse to shut down discussion about the harms of factory farming, trapping, commercial fur farming (with seal hunting perhaps one exception) Vegan indigenous movements are happening currently in Canada.\textsuperscript{2384}

Include the voices and knowledge of indigenous people to form sustainable solutions for aquatic resource management.\textsuperscript{2385}

Strengthening capacities and resources of farmers, indigenous groups, women, youth, and micro-small, medium enterprises (MSMEs) to effectively engage along with the agri-food production systems.\textsuperscript{2386}

Science solutions for growth: 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. Science solutions must make sense to indigenous people and have the capacity to increase the ‘bottom line’ for small holder farmers. Harnessing competitive advantage, improving markets and eliminating trade and non-trade barriers have potential to support agri-food systems on the continent.\textsuperscript{2387}

Transformation in the food system is also political and social. Thus, food system transformation requires strong engagement from all sectors, including civil society and respectful inclusion of Indigenous knowledges. Similarly, nutrition science is multidisciplinary and in order to make change, nutrition scientists need to incorporate all of these elements.\textsuperscript{2388}

Co-create and re-design agricultural extension services: Extension services must integrate local and indigenous knowledge. Institutionalizing these services with cross-ministerial collaboration can ensure incentive and expenditure efficiencies.\textsuperscript{2389}

It is important to identify and support local actors, recognize the wisdom of the people that are there (first and foremost Indigenous Peoples) and prioritize transformative innovation (e.g., agroecology), building on local knowledge with science to create jobs.
and build resilient food systems. Local private sector actors are key players in working together to build a better system. Academic institutions should join local actors in documenting and reviewing relevant experience, providing technical assistance and linking with national or global research institutions. 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.

In order to create a just food system we need to reform our food system to address the inequities that Indigenous communities face. Participants also expressed the need to involve and listen to the voices of Indigenous people in the food system.

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.

There was also the suggestion that current approaches to evidence reflect a limited philosophy, and that the interrelationships between dietary patterns, human nutrition and planetary health need to be reconceptualised, with evolutionary theory and ecology playing a much more central role. This echoed the introductory talks that highlighted the importance of new mental models that learn from Indigenous wisdom. Our second keynote speaker, Prof Boyd Swinburn, outlined the nascent Mana Kai policy in Aotearoa New Zealand that draws on Māori concepts around the social and environmental aspects of food, and how these are interrelated. The third keynote speaker, Dr Sandro Demaio, also pointed to Aboriginal Australians as being the original founders of the concept of planetary health.

The imposition of foreign food programs has encouraged the substitution of own community farming practices. To counteract its effect, they propose the preparation of recipe books for traditional dishes for the recovery of techniques for the conservation of native seeds such as chigo, kupe, guapo, healthy food and traditional gastronomy, taking advantage of the communities’ existing collective memory. Apply ancestral knowledge and own technology to generate greater production and benefit of food.

Women advocate the creation of policies that respect the food autonomy of indigenous peoples, based on the production, consumption, distribution and bartering of the items produced by indigenous communities, as a strategy for food sustainability in emergency situations, innovating exchange and commercialization.
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. The indigenous women present at the Dialogues believe that the role that they play in their communities of transmitting knowledge must be strengthened in the face of the onslaught of the pandemic and the political and economic situation in Venezuela. Women consider themselves and call themselves guardians and guarantors of knowledge about the conservation of native seeds and are aware that the use of these seeds guarantees life and their own food systems.

Likewise, we women have insisted that our own economic systems be strengthened and these are firmly linked to the territory and the land. International and national entities must adapt their technical assistance within the expectations and needs of women in each of the territories, listening to their experiences and making possible a work of inclusive participation of women in each and every one of its phases.

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. 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. This implies support for countries to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.

It’s the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform.

Restoring forest landscapes, conserving and increasing forest cover, including urban reforestation, agroforestry and sylvopastoral systems, with consideration for indigenous people and Afro-descendants.

It was suggested to further promote the HRF and the participation of women, indigenous peoples and youth. Focus on the what and how, as well as tools for achieving HRF.
Indigenous nations, their land rights, land ownership, and traditions, must be considered when making decisions about LUC and agriculture in the north.\(^{2404}\)

To promote the full and effective participation of indigenous peoples in decision-making, related to the food, welfare and future development of indigenous peoples and their territories and actively involve and incorporate indigenous perspectives in regional development strategies, planning, policy decisions and actions which affect them, including the development of health policies. To empower indigenous communities by strengthening their economic governance capacities and enhancing income opportunities.\(^{2405}\)

To create incentives (financial and nonfinancial) and encourage the development of indigenous community-based food practices.\(^{2406}\)

Target robust solutions which are scalable and demand driven - consider for example indigenous foods and the scientific solutions must make sense to the indigenous people.\(^{2407}\)

That more Indigenous people’s voices are heard.\(^{2408}\)

- Include civil society and marginalized groups such as Indigenous people within the Food Systems Summit.\(^{2409}\)

Key messages from the expert seminar include: 1. Indigenous Peoples and their knowledge systems are key for all five action tracks of the UNFSS.\(^{2410}\)

From Action 5 - As more Indigenous Peoples’ food systems are being disrupted by climate change, the COVID-19 pandemic, and increasing external pressures for extraction - it was agreed that Indigenous Peoples need to be at the decision making table in all aspects and crisis management.\(^{2411}\)

This call to action found that there is a need to create a narrative that is inclusive and allows for participation, especially of farmers, women, and indigenous peoples. There are high levels of expertise in these dialogues, but all people should feel empowered to contribute, we are all “experts” when it comes to food.\(^{2412}\)

African governments need to stat funding their own institutions as this will enable Africans to set their own priorities including revisiting/valuing own indigenous knowledge and practices (sustainable practices).\(^{2413}\)
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.\textsuperscript{2414}

A call to provide space to local communities and indigenous knowledge in food systems transformation processes.\textsuperscript{2415}

We [Indigenous Peoples of North America] are dedicated to maintaining our traditional ways of life, prioritizing our youth, teaching the next generations, and taking care of our resources to ensure viability for future generations. There is a growing recognition and request for consultation about our longstanding ability to sustainably live in our environments through our own management systems. Not only do Indigenous Peoples need to be consulted with the Free, Prior, and Informed Consent (FPIC) principles, we must also be an active part of the entire processes – not solely “knowledge sharing”. Indigenous Peoples’ food systems are a game changing solution, but only with Indigenous leadership and control over our own systems.\textsuperscript{2416}

To this end, fundamental to ensuring access to safe and nutritious food for all is the protection, respect and actualization of Indigenous Peoples’ rights – at all levels. In no case should a people be deprived of their traditional subsistence. States are obligated to protect these rights. We ask for protections to land and water rights, rights to practice our traditional food systems including the freedom to hunt and fish by our own systems, and protection of our seeds and intellectual property rights.

Indigenous youth must be prioritized in the creation of opportunities and programs. It is important to use Indigenous curriculum and learning models that support Indigenous health, wellness, and advancement.\textsuperscript{2417}

3. Preserving, promoting and practicing indigenous practices through technological inclusion.\textsuperscript{2418}

Recommendation 3: integrate Indigenous Peoples’ visions of land tenure (specific to Spanish-language dialogue) Who: governments, civil society, and international organizations How: national land policies need to take into account biodiverse communal lands considered by the indigenous populations as ancestral/community lands and ensure their integrity and protection via legislation.\textsuperscript{2419}

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Group members flagged contributions and pledges related to building and further developing the current knowledge base by sharing lessons and examples of current practices. They also noted the need to consider and take into account the work of the private sector, as well as to support research that is inclusive, that builds on local and indigenous knowledge, and that promotes local innovation.2421

Inclusion and empowerment: Organic agriculture has been shown to improve rural and local economies by offering a profitable farming option and by creating more farming community jobs. The hotspots study by the Organic Trade Association shows that organic agriculture boosts household incomes and reduces poverty levels. Being an organic hotspot increases median household income by over $2,000, and lowers a county’s poverty rate by as much as 1.35%. It offers a way for farmers to work in safe conditions and be paid a living wage. But the opportunity of organic farming is still out of reach for many farmers, especially marginalized farmers, and too often people of color and marginalized communities are left out of the conversation entirely. It is important to include support of organizations that represent people of color, and support the growth and development of underrepresented communities. Farmers, farmworkers, indigenous cultures, and non-white people are missing from these conversations, and need to be included to identify viable solutions.2422

6. Increasing the decision making processes such that they invite greater representation of FFPOs and Indigenous People’s territories in national and international decision-making and action on food systems, and in global climate negotiations, finance, and implementation modalities represents a huge opportunity for upscaling climate change adaptation, mitigation and resilience.2423

All groups called for inclusivity, respect and dignity, recognizing the need to hear the voice and empower farmers, women, youth, indigenous peoples and minorities. Participants advocated for nonconventional partnerships and open dialogue that fosters creativity.2424

We can integrate indigenous people into academy, master classes, where they can support reconnection with nature. Education is the key of future generations; building bridges between indigenous knowledge and sciences may lead to a mindset reboot.2425

The empowerment and the voice of local, indigenous farmers and their networks is key.2426

Our status, rights, and role have been recognized and affirmed in national law and policy as well as in diverse international human rights instruments and within regional institutions, including the Arctic Council, the United Nations, the ILO, and the Organization of American States. Therefore, we reject the use of the terms “local communities” and “peasants” in the context of our legal status, our distinct human
rights, and our role as distinct peoples within diverse national and international political arenas and other intergovernmental fora.\textsuperscript{2427}

We insist upon the recognition of and respect for our own definition and characterization of our food systems within a rights-based framework, including our rights to our lands, territories, and resources as well as free, prior, and informed consent, and the rejection of the false dichotomy between the developed and developing world in the context of Indigenous Peoples.\textsuperscript{2428}