OFFICIAL FEEDBACK FORM

DIALOGUE DATE	Monday, 19 April 2021 13:00 GMT +02:00
DIALOGUE TITLE	The Role of Water Security for Food Systems Transformation
CONVENED BY	Claudia Ringler and Yumna Kassim, International Food Policy Research Institute (IFPRI)
DIALOGUE EVENT PAGE	https://summitdialogues.org/dialogue/10923/
DIALOGUE TYPE	Independent
GEOGRAPHICAL FOCUS	Egypt

The outcomes from a Food Systems Summit Dialogue will be of use in developing the pathway to sustainable food systems within the locality in which they take place. They will be a valuable contribution to the national pathways and also of interest to the different workstreams preparing for the Summit: the Action Tracks, Scientific Groups and Champions as well as for other Dialogues.

1. PARTICIPATION

TOTAL NUMBER OF PARTICIPANTS 91

PARTICIPATION BY AGE RANGE

0	0-18	19	19-30	49	31-50	14	51-65	8	66-80	1	80+

PARTICIPATION BY GENDER

51	Male	40	Female	0	Prefer not to say or Other

NUMBER OF PARTICIPANTS IN EACH SECTOR

15	Agriculture/crops	11	Education	0	Health care
2	Fish and aquaculture	2	Communication	0	Nutrition
0	Livestock	0	Food processing	2	National or local government
1	Agro-forestry	0	Food retail, markets	0	Utilities
12	Environment and ecology	0	Food industry	0	Industrial
0	Trade and commerce	1	Financial Services	45	Other

NUMBER OF PARTICIPANTS FROM EACH STAKEHOLDER GROUP

0	Small/medium enterprise/artisan	0	Workers and trade union
0	Large national business	0	Member of Parliament
1	Multi-national corporation	0	Local authority
7	Small-scale farmer	9	Government and national institution
2	Medium-scale farmer	2	Regional economic community
0	Large-scale farmer	5	United Nations
2	Local Non-Governmental Organization	1	International financial institution
25	International Non-Governmental Organization	2	Private Foundation / Partnership / Alliance
0	Indigenous People	0	Consumer group
23	Science and academia	12	Other

2. PRINCIPLES OF ENGAGEMENT

HOW DID YOU ORGANIZE THE DIALOGUE SO THAT THE PRINCIPLES WERE INCORPORATED, REINFORCED AND ENHANCED?

The Dialogue was organized according to the UNFSS' Principles of Engagement. Participants were introduced to the summit vision, objectives and action tracks. The links to the Principles of engagement themselves were shared in an email to event registrants prior to the online event, briefly reviewed by the curator and then also pasted in the chat box during the event.

HOW DID YOUR DIALOGUE REFLECT SPECIFIC ASPECTS OF THE PRINCIPLES?

The Dialogue was organized with a focus on developing contributions to the FSS and elaborating pathways toward food systems transformation contributing to the 2030 Agenda for Sustainable Development. The choice of focus on water security for food systems transformation very much addressed the lack of the direct attention to water within the UNFSS structure. The participation of multiple stakeholders was encouraged by bringing together a diverse group of actors in addition to those that typically engage in the area of water, food security, and nutrition. The Dialogue invitation was sent across actors in research and academia, international financial institutions, farmers at various scales, private sector, etc. Interpretation (English-Arabic) was available during plenary sessions, while breakout room discussion facilitators were encouraged to hear from all participants in both English and Arabic. The Feedback from the breakout discussion opened the floor to questions or comments from participants. Participants were twice engaged in live polls (via Slido) during the dialogue, with the second poll utilizing response options put forward from each breakout room discussion. Breakout room discussion topics covered varying areas and topics within water security for food systems transformation, including both more technical and more policy-oriented topics.

DO YOU HAVE ADVICE FOR OTHER DIALOGUE CONVENORS ABOUT APPRECIATING THE PRINCIPLES OF ENGAGEMENT?

It is recommended to set the stage early on regarding the 'purpose' of the Dialogue by explaining the UNFSS' objectives and vision and action tracks, particularly for the benefit of participants who may be unfamiliar. This event was an Independent Dialogue with a national focus, thus providing interpretation (English-Arabic) definitely opened the door for contributions and engagement where language may have been a barrier. Engaging participants' active audio-visual interventions by way of live polls and encouraging chat box discussions, actions or comments and questions, etc, increased participants' involvement.

3. METHOD

The outcomes of a Dialogue are influenced by the method that is used.

DID YOU USE THE SAME METHOD AS RECOMMENDED BY THE CONVENORS REFERENCE MANUAL?

	Yes
✓	**No**

Owing to COVID-19 restrictions, the dialogue was organized as an online 150-minute meeting via Zoom Meetings. Two sets of Opening Remarks were followed by three Introductory Presentations on System-level solutions, New water solutions and Water and food systems transformations in Egypt. This was followed by six parallel breakout room discussions then occurred, with participants pre-assigned to a room based on the first or second choice they selected during Registration. Interpretation (English-Arabic) was available during plenary sessions, while breakout room discussion facilitators were encouraged to hear from all participants in both English and Arabic. During the Feedback from Breakout Discussions session, Facilitators and Notetakers presented a summary from each room before addressing questions coming in through the chat box. This was followed by a Panel Discussion that involved representatives from various perspectives, including a ministry advisor, international financial institution, private sector, and a farmer. Closing remarks then offered a summary closing statement and key takeaways. A poll at the beginning of the event, using Slido, had participants share the province/governorate/state/subnational region they were joining the event from. A number of participants, but not all, took part in the poll. Results show a number of participants from within Egypt, the MENA region, as well as international participants. Another poll came at the end of the Feedback from Breakout Discussions had participants vote on the Top actions to improve water security in Egypt. Response options for this poll came directly from each breakout room providing two actions. More participants took part in this poll than in the first one.

4. DIALOGUE FOCUS & OUTCOMES

MAJOR FOCUS

Water scarcity remains a key challenge for agricultural development in the MENA region, including Egypt. Scarcity is rapidly growing as a result of climate change and rapid increases in water demand for non-irrigation other uses. Considering that Egypt's agri-food system provided critical cushioning for economic growth, jobs, and household income negatively impacted by the COVID-19 pandemic, it is paramount that more consideration is given to the important role of water security for Egypt's food systems. With agriculture utilizing over 80% of Egypt's water resources, meeting these challenges will require bold actions and new mindsets directed at water and food systems transformations to achieve the Sustainable Development Goals.

The Independent Dialogue was convened in partnership between the International Food Policy Research Institute (IFPRI), the International Water Management Institute (IWMI) and the International Center for Agricultural Research in the Dry Areas (ICARDA) to discuss the role of Water Security for Food Systems Transformation in Egypt. Insights emerging from this multi-stakeholder dialogue will be presented to contribute to the United Nations Food System Summit (UNFSS) in September 2021. Transforming #foodsystems is among the most powerful ways to make progress towards all 17 #SDGS.

The dialogue discussed the importance of water security for all aspects of Egypt's food systems, with a focus on equity, inclusion, capacity, innovation and sustainability, including insights on how food systems need to change to improve water security (SDG 6), help eliminate hunger (SGD2), support energy security (SDG 7), improve climate adaptation and mitigation (SDG 13) and help retain all Life on land (SDG 15).

This pre-UNFSS2021 session therefore sought to unpack the question: What is the role of water in transforming Egypt's food systems for improved water and food security and environmental sustainability? Speakers and panelists from Egypt and beyond engaged in interactive group discussions, collective brainstorming, and agenda-setting. As Egypt and the MENA region map out the road to UNFSS 2021, the dialogue discussed key messages that need to be heard at UNFSS 2021.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
✓	Action Track 3: Boost nature-positive production
✓	Action Track 4: Advance equitable livelihoods
✓	Action Track 5: Build resilience to vulnerabilities, shocks and stress

KEYWORDS

✓	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
	Human rights	✓	Governance
✓	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate

MAIN FINDINGS

Egypt is a perfect case for the interconnectedness of water and food systems, not only because the country has one of the world's oldest civilizations built on irrigation, but also because water and food security are the largest development challenges the country is facing. Moreover, Egypt has multiple good practices, success stories and bright spots of using water for food system transformations. At the same time, Egypt is directly affected by climate change with hotter temperatures, and increased crop water demand, as well as heat stress affecting farmers, agricultural workers as well as livestock.

One of the largest challenges that the participants noted is that while both water and food security are on top of Egypt's agenda water security and food security are two sectors in silos. A key recommendation noted by participants is to bring the two sectors together and to put farmers and their communities at the heart of any reform. Several private-sector firms are engaged in optimizing Egypt's irrigation water use; this includes irrigation in the New Lands that use high-end center-pivot systems. Given growing water shortages in the country—using water more sustainably and further optimizing irrigation water use were recommendations that permeated all breakout room sessions. While the private sector is active in Egypt's water and food sectors, it was noted that regulations and incentive structures affecting the private sector would benefit from further review.

Given Egypt's diverse agricultural ecologies, including the Nile Delta, the New Lands, the old lands, upstream and downstream areas, more targeted agricultural water use investments were recommended. Based on more targeted interventions, these can be scaled up and further promoted, such as the value chain approach used in Nubaria's new lands which has been sustained for more than 10 year. The participants agreed that more effort is needed to invest in water-saving technologies and support farmers in the application of such technologies. The example of farmers in Indonesia shifting from flood to drip irrigation was mentioned. Use of digital tools—to improve irrigation scheduling—and support to extension services by connecting them to the research community to ensure a more steady flow of innovation from research to farmers and from farmers to researchers was also recommended. It was noted that additional incentives might be required, including smart subsidies, to support farmers in adopting new technologies that would support both water and food security outcomes. The potential of land consolidation, of running canals like utilities, and of paying farmers for using less irrigation water were all discussed and it was agreed that more studies and pilots are needed in this area.

In addition to the suggestion to investing in improved seeds, there were also discussions if Egypt should possibly reduce production of rice and sugarcane, which are both water intensive. Finally, there is a need for improved policy coherence and institutional decentralization in addition to making more services available to farmers in terms of finance, digital tools, direct support to farmers.

Other issues that need to be considered for achieving increased water security while transforming food systems include improved access to energy for food processing and storage. This can also improve nutritional outcomes. Participants suggested that reducing both water and food losses for key food value chains could save one third of total resources currently used to produce food commodities and could thus strengthen food and security in Egypt. This would require innovation in access to finance and insurance for farmers with only small plots of land or those who do not own any land, as well as access to technology and investment in bringing the technology to farmers.

Finally, participants also noted that consumers need to understand the value of water and how climate change may jeopardize water security. Raising awareness of consumers of the water embedded in the food they consume may encourage shifts in consumer behavior and mentality toward more sustainable food consumption patterns. Policy makers should highlight and incorporate the importance of this issue across the educational system to encourage all age-groups and generations to consider the role of food consumption for water security.

ACTION TRACKS

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KEYWORDS

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		✓	Environment and Climate

OUTCOMES FOR EACH DISCUSSION TOPIC - 1/6

Breakout Room 1: Food and Water Systems in a Changing Climate

What actions in the next 3 years will have greatest impact on the Discussion Topic?
• Consumer Behavior: Consumers need to understand the value of water and how climate change may jeopardize water security. Raising awareness may encourage shifts in consumer behavior and mentality toward more sustainable food consumption patterns. Policy makers should highlight and incorporate this issue across the educational system to encourage all age-groups and generations to consider food consumption's role for water security.
• Diversifying Water Sources: Egypt should proactively diversify its sources of irrigation water (e.g. wastewater and desert aquifers) while shifting to smart water-use solutions.
• Evidence-Based Decision-Making: Better linking decision makers and academic efforts to encourage strategic changes towards more sustainability-minded initiatives and innovative technologies (e.g. neo-greenhouses incorporating aquaculture and integrated farming).
• Water markets may incentivize lower water use amongst users and distinguish between water prices for irrigation use versus household use. Employing incentive mechanisms embedded in water markets can encourage sustainable investor and consumer behavior leading to reallocation of water sources across different sectors (e.g. agriculture, manufacturing, and public water supply). Also, strengthening regulations to reduce wasteful water use and to boost water-saving technologies.
• Irrigation patterns play a crucial role, with some crops requiring more water like rice, mangoes and avocadoes. Changing the existing crop mix could lower water-use.
• Trade of Agricultural Products: Importing water intensive products and exporting less water intensive commodities could be one solution to reduce local water use.

What contributions will you or your organization make and why does this matter?
• Academic Institutions may introduce curriculum modules focusing on sustainable development, organic agriculture, water-use efficiency and sustainability in engineering and social sciences as well as methodologies and case studies more relevant to Egypt with suitable practices and technologies.
• 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.
• Education and raising awareness on the individual and community levels and mainstreaming elements to be applied on a day to day basis. For example, introducing urban gardening through hydroponic rooftop kits.
• Promoting funding for climate and environmentally friendly projects and proposing such projects to ministries and governments to start applying these interventions.
• Agriculture institutions working on soil and water management can promote farmers' adoption of new technological methodologies (e.g. use of saline water and recycling wastewater for irrigation) to avoid soil erosion and reduce freshwater consumption. This can be accelerated through using extension systems via NGOs and the private sector.
• Each individual is also responsible to change their own behavior to avoid food waste, because consumption patterns at the individual level affect the aggregate level.
• Water saving interventions are needed to help promote social norms around water conservation at both the household and public levels.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
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KEYWORDS

	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
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		✓	Environment and Climate

OUTCOMES FOR EACH DISCUSSION TOPIC - 2/6

Breakout Room 2: Policy Coherence and Institutional Coordination Across Water and Food Security in Egypt

What actions in next 3 years will have greatest impact on the Discussion Topic?
Discussants came up with various solutions and strategies to support water security in Egypt over the next three years. It was suggested that better coordination within and increased authority of existing inter-ministerial committees would be more efficient than building new structures from scratch. A discussant mentioned that in some cases committees had a very well-established development plan that was affected by the lack of coordination between ministries and agencies. More financial autonomy and stronger empowerment of these committees would help strengthen joint progress of water security and food systems transformation.

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. Strengthened bottom-up planning can also support existing top-down planning efforts. Participants also noted that there were strong mutual linkages between water and food security goals in joint projects on the ground, but that these joint goals could not be maintained at higher levels of authority.

Discussants also shared some pilot ideas such as 1) managing canal systems as public utilities, 2) supporting land consolidation for increased resource use efficiencies; and 3) awareness raising on growing water scarcities; 4) better targeting of water (and food security) interventions based on agro-ecological conditions (i.e. agroecological zoning); 5) communication of success stories on water and food security in Egypt—given that Egypt has achieved the highest crop yields across all African countries. Such success stories could help guide and inspire other countries in the region.

Moreover, most of the discussants agreed on the following:
• Institutions need a more efficient coordination to optimize water and food security goals.
• 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.
• Capacity building for ministerial committees is an essential aspect that was highlighted by discussants from various backgrounds.

What contributions will you or your organisation make and why does this matter?
• Collaboration with the Ministry of Water Resources and Irrigation and the Ministry of Agriculture on joint dialogues, building technical capacity and negotiation skills for engineers in these agencies. Improved communication and negotiation skills are considered critical for improved water and food security.
• Collecting more data that describe how water and food security interact at farm level in Egypt
• A participating journal editor suggested further publishing Egypt's success stories and welcomes submissions.
• International Financial Institutions offered to provide significant support to generate evidence on successful water sector reforms in Egypt.
• PhD students participating in the session noted the importance and willingness to develop more actionable science on joint water and food security.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
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KEYWORDS

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OUTCOMES FOR EACH DISCUSSION TOPIC - 3/6

Breakout Room 3: Equity Consideration in Access to Affordable Water and Food

What actions in next 3 years will have greatest impact on the Discussion Topic?
• More focus should be given to social and economic actions as compared to a technical action-focus. Participants noted that it was important for decisionmakers to work more closely with society to feed into decisions, recognizing social actors' voices and participation in solution design and decision-making.
• Encouraging cross-sectorial policy and decision-making processes that involve the water-food nexus approach.
• Targeting research to understand the needs of the community and collect data on the most important actions and interventions including co-designed-and informed decision tools.
• Employing a water systems approaches for food transformation including water governance analysis to support demand management.
• Defining vulnerable groups, including women, through vulnerability assessments and offering financial support and access to investment as well as information.
• Developing case-specific solutions and incentives for farmers to encourage implementation of climate-oriented action.
• Gather on-the-ground data and information related to water scarcity and develop relevant tools.
• Increasing community awareness about the impact of climate change and their contribution to mitigation.
• Implementing small scale projects on-the-ground to represent success stories which can be mainstreamed on a larger scale.
• Applying cost-benefit analysis and feasibility studies to ensure profitability for stakeholders that are directly affiliated with the projects to be implemented.
• Increasing water availability through decreasing waste along the process of the crop production.
• Increasing research on crops that require less water or that are heat tolerant.
• Encouraging collective operation of fragmented lands through farmer joint ventures for sustainable use of available resources.
• Building the capacity of farmers in the old lands for crop selection, utilization of user-friendly technologies and land management.
• Raising farmers' awareness of the effect of their water consumption on neighboring farms.
• Connecting communities with decision makers to ensure their involvement in the policy making processes.
• Considering altering policies to guarantee and protect land ownership for farmers

What contributions will you or your organisation make and why does this matter?
• Raising awareness of rural communities on the impact of the climate change. Applying financing solutions such as 50/50 loans.
• Raising awareness of farmers on the effect of water consumption on their neighboring land.
• 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
• Creating new food safety agency with a new food safety index for Africa
• Raising awareness of the famers on water saving technologies and using ICT solutions on-farm, such as the IRWI application which informs farmers how much water is needed and when based on crop, soil and irrigation types, water pumping, energy, planting time, etc.
• Scaling up innovation for Water and Energy for Food (WE4F) through the MENA Regional Innovation Hub to produce more nutritious food with less water and energy
• Building and strengthening the capacity of governmental and non-governmental organisations on water governance in the MENA region, including Egypt.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
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KEYWORDS

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OUTCOMES FOR EACH DISCUSSION TOPIC - 4/6

Breakout Room 4: Climate Smart Interventions for Agri-food Transformation in Egypt

What actions in next 3 years will have greatest impact on the Discussion Topic?
It is evident that climate smart interventions in Egypt will set a benchmark, regionally, for achieving climate smartness in water productivity within the agriculture sector. It was unanimously accepted that the changing climate has drastically perturbed the sustainability of Egypt's agricultural production capacities through unsustainable water use and offshoot problems such as land degradation and salinity.

Mentioned key priority actions for achieving water security and agri-food transformations in the next three years included:
• Promoting organic practices as sustainable food production practices and a route to reduced land degradation, and climate resilience.
• Shifting consumer preferences towards climate-smart foods and transforming crop cultivating ways (e.g. creating awareness about climate smartness to end-users thereby creating an economic context for farmers to produce climate smart crops/livestock).
• Using low-cost technologies in climate smart irrigation and on-farm water management practices.
• Reducing dependence on high water consuming crops systems like rice, potato, sugarcane, etc. and transforming the cropping system according to local conditions.
• Engaging communities and civil society in implementing climate smart interventions at all scales (farmstead to policy development).
• Inclusion of agroecological zoning in large scale projects and masterplans of water and land use structures to identify location specific package of practices and suitable cropping patterns.
• Use of climate smart crops (heat, water and salinity tolerant crop varieties) and scaling up using an efficient seed system.

While extension services in Egypt are not very powerful, digital extension services should be promoted to help farmers in systems transformation. Farmers have benefited from longstanding energy and fertilizer subsidies for production making transformation a challenge for farmers. Digital tools, civil society involvement, new policies on infrastructure and capacity development could be impactful in Egypt in the next few years.

What contributions will you or your organisation make and why does this matter?
Organizations are mainly working towards agri-food system sustainability through:
• Implementing large location-specific climate smart infrastructure development projects with an agroecological zoning perspective.
• Enhancing climate resilience for small farmers through distribution of drought tolerant seeds and crop varieties.
• Counselling and creating awareness on transforming diesel related energy sources into solar energy technologies.
• Investing in precise estimations of crop evapotranspiration and developing algorithms to recommend regional irrigation needs.
• Providing agroecological zoning for suitable cropping system water-land use resource plans
• Working on land reclamation projects through organic farming
• Use of agronomic technologies like mechanized seeds and Climate Smart-Solar technologies are key interventions, which should be considered in future.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
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KEYWORDS

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OUTCOMES FOR EACH DISCUSSION TOPIC - 5/6

Breakout Room 5: Digital Solutions for Agri-Food Transformation in Egypt

What actions in next 3 years will have greatest impact on the Discussion Topic?
• 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.
• Work more closely with financial institutions for a closer link between various financial structures and agriculture.
• Avoiding working in silos and creating synergies between and across the many initiatives already underway by various organizations, and across disciplines and platforms while maintaining individuality and personality. Tools and applications for agriculture are available, many with similar targets.
• Fill the data gap between research and technology.
• Distributing the benefits of new technologies across to smallholder farmers in Egypt. Much like in India, there is land fragmentation and small land holding sizes in Egypt. This affects farmers who may not have enough capital to invest in their farms and use new technologies.
• Empower farmers, as the end-users, and provide them with the knowledge for making their own decisions.

What contributions will you or your organisation make and why does this matter?
• Developing agricultural applications for extension services linkages to provide online marketing facilities and business matchmaking.
• Working on developing tools and applications, as a one-stop shop for farmers and companies to access more information and build trust, and willingness to work together.
• Land fragmentation and small land-holding size make it difficult to use optical satellite images with coarse grid resolution for crop mapping, using machine learning algorithms. Instead, crop type mapping using SAR radar technology will be a game changer in identifying cropping areas and non-cropping areas.
• Developing an innovation platform related to water and food ecosystems, which offers a two-way medium of communication between farmers and scientists.

ACTION TRACKS

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KEYWORDS

✓	Finance		Policy
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OUTCOMES FOR EACH DISCUSSION TOPIC - 6/6

Breakout Room 6: Food Systems Changes for Improved Water Security

What actions in next 3 years will have greatest impact on the Discussion Topic?
• Water conservation and reduced water use in agriculture will be essential while minimizing water waste via flood irrigation methods.
• 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
• Developing farmer capacity to use improved irrigation systems, mobile applications and digitizing of the sector.
• Providing incentives for farmers and Water Users Associations to conserve water.
• Improving extension services in both water and agricultural sector.
• Increasing involvement of the private sector in the agricultural system.
• Empowering women in the agricultural system.
• Crop changes with economic water productivity in mind especially for farmers.
• Planting large agricultural lands with the same crop to conserve agricultural inputs

What contributions will you or your organisation make and why does this matter?
• Inserting sensors in the soil to monitor crop health and soil moisture and provide irrigation scheduling to reduce irrigation water.
• Gated irrigation as a replacement for drip irrigation, which may be too expensive for small farmers, assist them to switch from sugarcane to horticultural crops (herbs and spices).
• Developing an action plan from the Arab Water Strategy promoting IWRM and water governance.
• Capacity building of farmers and water professionals
• Investing in post harvesting infrastructure- multi-system water (fishing – agriculture).
• Promoting water energy food nexus integration through pilot projects.
• Assessing how water security and food self-sufficiency are connected.
• Irrigation, by farmers, at night to reduce evaporation losses.
• Promoting and supporting water-energy-food nexus innovators by scaling up and out their solutions to produce more food with less water and energy through the MENA Regional Innovation Hub.
• Promoting and introducing irrigation technologies to farmers to achieving water saving and account for that through water accounting and governance.

ACTION TRACKS

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KEYWORDS

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	Women & Youth Empowerment		Trade-offs
		✓	Environment and Climate

AREAS OF DIVERGENCE

Breakout Room 1:
There were no substantial differences in participants' perspectives on the provided solutions. However, each participant provided his/her insight from his/her background. Participants working in academic institutions provided research-based solutions, while the approach by private sector participants sought to contribute to water security via encouraging sustainable development projects. Participants working in agriculture related institutions felt that the role of NGOs and private sector companies should be more dynamic as they have different exposure and approaches than the government, thus increasing the potential for outreach of these projects.

Breakout Room 2:
While there was overall agreement on the potential of institutional coordination and policy coherence to jointly improve water and food security; there was a small debate on the sidelines regarding the possibility to use economic instruments, such as informal or formal trading of water use rights in Egypt, and on the possibility of paying farmers for using less water; with the idea possibly related to trading savings, i.e. water allocated but not needed within a season or sub-season, within a permit.

There were also questions regarding the water-intensive crops that are currently irrigated in Egypt, including rice in the Delta and sugarcane. Should these crops be continued, noting an entire industry is connected to that? Can agronomic practices and yet more advanced seed technologies reduce water use of these crops? Or should they be stopped to push back against growing water scarcity and accelerate a stronger nutrition focus of national crop production?

Breakout Room 3:
Participants felt that considering social aspects of water solutions would make them more effective than solutions that only consider technological solutions. This would involve improving social cohesion and recognizing the importance of community and cross-sectoral participation in policymaking and decision-making processes. Some participants also highlighted the importance of actions at the farmer-level and case-specific solutions in addition to technological innovations to create small-scale successful cases that can then be streamlined. All participants recognized the inequity in access to information and finance at the farm level. Some participants also argued that rural communities are already very cohesive and make decisions collectively, with capacity building enhancing better collaboration.

The majority of the participants agreed that both an enhanced connection between government bodies and decision-makers as well as joint ventures could contribute to better land management and by extension, water security and productivity. This could also decrease food waste along the crop production system.

A slight area of divergence was also apparent among participants in identifying challenges to implementing solutions, with some of the opinion that funding is the main challenges while others – particularly the private sector – highlighted farmers' lack of land ownership guarantees as a key challenge to advancement.

Breakout Room 4:
Climate-smart interventions are a broad topic and not much divergence was observed among participants. In general, the participants supported resilient farming solutions and discussed water productivity issues exacerbated by subsidies and divergence from the real cost to farmers under climate change. Participants also agreed that technology is not always the ultimate solution, with transformation of cultivation practices and organic agriculture also being important. While different solutions exist for similar challenges, a sole focus on technologies may cause problems in other areas. Incorporating agroecological zoning in resource planning for suitable cropping specific to soil and climate in the agricultural land was also put forward as important to incorporate.

Breakout Room 5:
Participants generally agreed on the following:
• The need for capacity building in digital agriculture literacy amongst users of digital solutions.
• Identifying end-users' needs and the necessary data to improve their practices and decision-making support.

Breakout Room 6:
There was a discussion between participants about changing crop pattern regarding switching from water intensive crops like Sugarcane to others less intensive like Horticulture. Participant noted that a large industry (more than 20 firms) was connected to sugarcane production, suggesting the crop has a high economic value even though it uses a lot of water. Replacing sugarcane would require further studying and detailed analysis of its social and economic impacts.

ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
✓	Action Track 3: Boost nature-positive production
✓	Action Track 4: Advance equitable livelihoods
✓	Action Track 5: Build resilience to vulnerabilities, shocks and stress

KEYWORDS

✓	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
	Human rights	✓	Governance
	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate

ATTACHMENTS AND RELEVANT LINKS

ATTACHMENTS

- **Poll 1 Results: What province/governorate/state/subnational region are you joining us from?**
  https://summitdialogues.org/wp-content/uploads/2021/04/Poll-1.png
- **Poll 2 Results: Top actions to improve water security for food systems in Egypt**
  https://summitdialogues.org/wp-content/uploads/2021/04/Poll-2.png

RELEVANT LINKS

- **IFPRI Egypt: UNFSS INDEPENDENT DIALOGUE IN EGYPT: "THE ROLE OF WATER SECURITY FOR FOOD SYSTEMS TRANSFORMATION"**
  https://egyptssp.ifpri.info/2021/04/05/unfss-independent-dialogue-in-egypt-the-role-of-water-security-for-food-systems-transformation-19-apr-2021/
- **IFPRI and UN Food Systems Summit 2021**
  https://www.ifpri.org/ifpri-unfss-2021
- **CGIAR WLE: UNFSS Independent Dialogue in Egypt**
  https://wle.cgiar.org/event/unfss-independent-dialogue-egypt