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REPORT

REGIONAL MEETING ON PROMOTING FOOD AND WATER SECURITY IN THE ARAB REGION

AMMAN, JORDAN, 27-28 NOVEMBER 2019

Summary

The United Nations Economic and Social Commission for Western Asia (ESCWA) organized the Regional Meeting on Promoting Food and Water Security in the Arab Region, in Amman during 27-28 November 2019 in collaboration with the Swedish International Development Cooperation Agency (Sida) and in partnership with the Regional Office for the Near East and North Africa (RNE) of the Food and Agriculture Organization of the United Nations (FAO), the Arab Organization for Agriculture Development (AOAD) and the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD) and the Ministry of Agriculture in Jordan. The meeting brought together about 78 representatives of Arab States, senior staff from relevant regional and national organizations, and civil society organizations engaged in food and water related issues affecting Arab States.

Since 2015, ESCWA has been implementing an initiative on promoting food and water security in the Arab region in partnership with regional partners. The meeting highlighted the milestones achieved throughout the implementation of the initiative including the Arab Regional Food Security Monitoring Framework to identify gaps and hotspots in the four dimensions of food security (Availability/ Accessibility/ Utilization /Stability), the assessment of impacts of changing water availability on agriculture production at the level of the locality, using RICCAR climate modelling projections, supporting Good Agriculture Practices (GAP), with pilot cases in Lebanon and Jordan and the establishment of the Joint Regional Coordination Mechanism for Ministries of Agriculture and Water, under the patronage of AOAD and LAS.

The meeting also provided an opportunity to discuss interlinkages between water and agriculture within climate change context and to identify priority issues of concern related to food and water security in order to assist Arab countries in addressing these challenges in the coming years including topics related to food waste and loss and restoring food systems in a post-conflict context.

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INTRODUCTION

1. The United Nations Economic and Social Commission for Western Asia (ESCWA) organized the Regional Meeting on Promoting Food and Water Security in the Arab Region, at the Kempinski Hotel in Amman during 27-28 November 2019 in collaboration with the Swedish International Development Cooperation Agency (Sida) and in partnership with FAO-RNE, the League of Arab States and related specialized institutions, the Arab Organization for Agriculture Development (AOAD) and the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD) and under the patronage of the Ministry of Agriculture in Jordan.
2. Since 2015, ESCWA has been implementing an initiative on promoting food and water security in the Arab region in partnership with regional partners. The initiative aimed to enable policy makers to address challenges related to food security and climate change within the framework of 2030 Agenda for Sustainable Development and related Arab strategies and initiatives. The initiative examined food and water security through an integrated lens within a regional context that considers the needs of the population within a natural resource scarce environment
3. The meeting highlighted the key achievements of the initiative that included: the availability of a diverse and rich knowledge outcomes to inform policy makers, enhancement of technical capacity to assess climate change impacts on strategic agricultural crops, adoption and use of a common regional framework to monitor the status of food security, promotion, application and adoption of good agricultural practices at national level, and improved coordination of policies and programmes across water and agricultural ministries through regional and national institutional mechanisms. The meeting also provided an opportunity for discussing further regional gaps and priority issues of concern related to food and water security to assist ESCWA in shaping the way forward for the coming years including topics related to food waste and loss and restoring food systems in a post-conflict context.
4. The participants, representing a diversified variety of stakeholders, reviewed achieved milestones and formulated key issues for the way forward to promote food and water security, as summarized in section I of this report. Section II provides a summary of presentations, case studies and discussions over the two-day meeting, whereas section III provides organizational information.

I. CONCLUSIONS AND WAY FORWARD

5. There was a consensus among participants on the importance of developing appropriate tools and promoting their application to support policy making for enhancing food and water security in a region that already suffers from food security challenges, water scarcity and mounting adverse impacts of climate change. Participants acknowledged that the Arab countries need greater regional and national cooperation and coordination amongst the agriculture and water sectors and range of stakeholders given the expected impact of climate change on their livelihood. They also agreed that the initiative should address in its forward outlook its relevance to local communities and particularly young people.
6. Steps forward as well as issues that were recurrently raised during the discussions, and which are further elaborated in section II of the report, include the following:
 - A. A mechanism to ensure that decision makers are aware and using the generated knowledge.

- B. Need to advance national regulatory frameworks and enhance awareness raising on nutritional aspects.
- C. Data complementarity and coordination between concerned institutions and harmonized statistical capacities.
- D. Clearly delineate the institution responsible for food security in countries of the region as the situation varies from a country to the other, and its relationship with other related sectors
- E. Diversifying capacity provided to include both decision makers and farmers, and open further opportunities for participations in future projects, which in turn would require further resource mobilization,
- F. Further support for research (in academia and research centres) to address agriculture, water and climate change issues
- G. Improve communication between researchers, negotiators and policymakers by linking research studies to the specific knowledge needed for targeted policies
- H. Raise awareness and build capacity of stakeholders on the climate negotiation issues and work undertaken on the related agriculture issues
- I. Building capacity to increase resilience to climate change through improved knowledge of impact on various sources of water and effect on crop production and productivity
- J. More initiatives and learning from existing ones to reduce food waste and loss.
- K. Actions for climate change need to be at all levels: regional, national and local
- L. Promote investments in efficient production of food
- M. Development and addition of a core class on SDGs in Arabic that stressed on SDG 2 on ending hunger will strengthen the involvement of universities in addressing food security.

II. SUMMARY OF DISCUSSIONS

A. OPENING SESSION

7. The opening session featured interventions by the Director of the Environment, Housing, Water Resources and Sustainable Development Department at the League of Arab States, *Mr. Djameldinne Djaballah*; the Head of the Regional Development Cooperation at the Embassy of Sweden in Amman, *Mr. Peter Lundberg*; the Representative of the Ministry of Agriculture in Jordan, *Mr. Izzat Al Ajaleen*; the Representative of AOAD Executive Director, *Mr. Ahmed Abdulwali Ali Al-Samawi*; the Representative of ACSAD Director General, *Mr. Ihab Jnad*; and the FAO-RNE Deputy Regional Representative, *Mr. Serge Nakouzi*.

8. *Ms. Roula Majdalani*, Director of the ESCWA Sustainable Development Policies Division, emphasized in her opening remark on the continuous challenges faced to ensure food security for the growing Arab population, that it requires enough food made available, accessible and utilized by all and that the food system should become resilient to physical, financial, socio-political and natural shocks.

9. *Ms. Julie Abouarab*, Project coordinator, provided an overview of the initiative objectives, main components and milestones achieved under each of the four main project components. She highlighted the followed methodology for each of the component to reach the set objectives. Indeed, activities in 2015, and early 2016 aimed at building solid partnerships with the many regional and national organizations on the implementation modality and pooling of resources and expertise. Years 2016 and 2017 included many consultation and coordination meetings with member states, partners and experts for the exchange of information, brainstorming and

development of various policy tools, training material and collaboration platform design to enhance the scientific knowledge of Arab Member Countries and promote anchoring the science policy interface approach in policy development. The years 2018, and 2019 revolved around building capacity to increase awareness on tools developed and backstopping of the development of national good agriculture practices and coordination mechanisms to ensure greater policy coherence.

10. This increased capacity enabled member countries 1) prepare national assessment reports on impact level of water variability due to climate change on agricultural productivity 2) adopt joint visions and strategies for greater water/food policy coherence at regional and national levels 3) application and institutionalization of GAP schemes in two member countries 4) develop country reports with pertinent information to analyse current status and challenges of Food security at national level.

B. TOOLS FOR INFORMED DECISION MAKING: ARAB MONITORING FRAMEWORK FOR FOOD SECURITY

11. The session was moderated by *Mr. Waleed Zubari*, Professor of Water Resources, Water Resources Management Program, Arabian Gulf University (AGU). Mr. Zubari opened the session by thanking the experts for participating in such an important agenda. He reiterated the importance of collaboration and cooperation towards moving forward towards a food and water secure region.

12. *Mr. Rami Zurayk*, Chairperson and Professor, Landscape Design and Ecosystem Management Department, American University of Beirut (AUB) presented the rationale behind developing the Arab Food Security Monitoring Framework, the methodology and process followed for the selection of its main indicators, and visualization selected to inform policy makers of development in each of the indicators selected to reflect current status of the each of the four food security pillars (availability, access, utilization and stability) and core indicators.

13. *Mr. Ali Eissa*, Supervisor of Agricultural Integration & Food Security Department, AOAD, highlighted the mandated role of AOAD in monitoring since 1992 Arab food security which included information and analysis on production and trade of agriculture products. He went through the joint efforts undertaken with ESCWA and experts leading to the development of the Arab monitoring framework covering more diverse aspects of food security and later on its adoption by the Executive Council of AOAD on 28 March 2019, after review and consultation with member countries. He also informed participants of the capacity building workshops to enable country experts to gather needed data and prepare national country profiles for informing policy makers of national food security situation.

14. In turn, *Mr. Hedi Saidi*, Director-General, Arab Institute for Training and Statistical Research (AITRS), presented the support provided by AITRS to Arab Statistics Bureaus, on statistics in general and most recently on the use of the Arab Food security Monitoring Framework. He also talked about the role of AITRS in advancing the efficiency of the Arab statistical work system by developing and supporting the capabilities of its employees through training programs, research and consultations in order to respond to the needs of data users, in accordance with international standards and the basic principles of official statistics and relevant best practices.

15. The application of the Arab Monitoring Framework at the Regional and Sub Regional levels was presented by *Ms. Reem Nejdawi*, Chief, Food and Environment Policies Section at ESCWA. She presented the main findings when applying the framework at the Arab level, the

main indicators values and trend since 2010, the tabular and doughnut visualization in a snapshot. She also went through the main findings when applying the framework and their visualization at sub-regional levels, namely the GCC sub-regional profile, the LDCs sub-regional profile, the Maghreb sub-regional profile and the Mashreq sub-regional profile. She highlighted the common challenges of all subregions and the challenges unique to each to each as well.

16. *Mr. Kamil Hamati*, PhD Researcher, University of Geneva, continued by presenting the when applying the Arab Monitoring Framework at the National Level. His presentation included information on the data collection process, method to use and input the data into the spreadsheets prepared for the framework that include automated calculations and normalization of data according to set rules. The results of data input are then shown in tabular and donut formats. In those formats progress is measured against 2010 for the same country, scores are given over global minimum and maximum. The overall food security situation is then explained, and dimensions are dissected to provide outlook on the general situation of the country and allow policy development for Hot spot areas.

17. The discussions raised issues related to the centrality of food availability at the regional level. Participants also discussed reasons for the decreased wheat self-sufficiency along with issues related to crop productivity at a country level.

C. TOOLS FOR INFORMED DECISION MAKING: ASSESSING IMPACT OF CLIMATE ON CROP PRODUCTIVITY

18. *Mr. Louis Lahoud*, Director General, Ministry of Agriculture in Lebanon moderated this session. He thanked the organizers on behalf of the Ministry of Agriculture in Lebanon, for undertaking and implementing this initiative that addresses food security and its relation with water security in addition to organizing the meeting He then went through the main activities undertaken with the Lebanese Ministry and the support received from international organization in areas of relation to pest control, and agriculture standards applied to export good quality food products. He also touched upon the tight agricultural cooperation between Jordan and Lebanon.

19. *Mr. Ihab Jnad*, Head, Water Resources Department, ACSAD, presented findings of the capacity building program undertaken by FAO, ACSAD and ESCWA within the initiative to assess the impacts of climate change on food security in the Arab region and enhance climate resilience using modelling tools. He indicated that national case studies were prepared to assess the impact of climate change on water availability and crop production in several Arab countries. The modeling tool benefited from: (i) RICCAR projections of climate variables; (ii) AquaCrop modeling approach to estimate the yield of selected crops when the climate variables projected by RICCAR are used as inputs. The reports showed throughout that rainfed crops will be more sensitive to climate change than irrigated crops. Yields are expected to decline affecting food production significantly as crop growth cycle will decrease, leading to negative impacts on grain yield in terms of quantities and quality. There will also be a rise in the need for water for irrigated crops by 7-12 per cent.

20. *Mr. Nadim Farajalla*, Program Director, Issam Fares Institute for Public Policy and International Affairs, American University of Beirut, discussed the causes of climate change, the short term effect as it is anticipated that temperatures will be increasing, and precipitations rates will be decreasing in the Arab region leading to an increase in the occurrence and frequency of natural disasters over time. He noted that the region is adapting poorly to climate change with the

LDCs having a very low adaptation power. He highlighted that the short-term effects on agriculture include spoilage and damage in crops and infrastructure leading to interruptions in market accessibility and increase in harmful diseases and pests. Long term effects include a decrease in food security due to soil damage leading to a decrease in production capacity. He also provided some examples from Lebanon on effects of extreme events and associated costs on agriculture.

21. *Mr. Pasquale Steduto*, Senior Expert on Water and Climate Change issues, proposed in his presentation ways where capacity development can scale down/reach the communities and farmers. He mentioned that they are in the process of developing an Arab Network of AquaCrop practitioners to reach a broader base of ‘practitioners, provide an adequate ‘training carrying capacity’, ensure a continuous flow of ‘feedbacks from the field’ and provide a systematic ‘update’ of the model over time. He explained that the network will be able to safeguard the long-term sustainability of AquaCrop use for projecting crop production. Mr. Steduto then laid out a road map for AquaCrop sustainability that include a FAO strategy for a medium- and long-term support to AquaCrop, and the organization of a Regional Workshop to report on the outcomes of the reports and discuss the configuration, governance, responsibility, financial implications and Terms of References of an Arab Regional Network.

22. The intervention of *Mr. Hammou Laamrani*, Advisor, Environment, Housing and Water Resources Department, League of Arab States, revolved around moving from the tool results to policy recommendations thus scaling up the outcomes of this process as evidences gathered do not only imply that climate change will occur in the region, but that it also has severe implications on crop production and productivity. Policy briefs are currently being prepared to bridge between the science and policy and are analyzing the economic costs in the event of no action in that respect. He concluded that due to the recurrence and increased frequency of climate extreme events in the region there is a need to bring this type of information with proposed solutions to inform regional level to national level and maybe even local, because action should be undertaken at local level for it to work.

23. In the discussion that followed with participants the issue of developing a comprehensive approach for disseminating the capacity building component at regional and national levels was raised in addition to the need to further develop and use regional specific applications of AquaCrop that could provide solutions to enhance resilience of Arab region,

D. FOOD SECURITY THROUGH THE LENS OF ARAB YOUTH

24. A panel comprised of seven students from universities in Jordan and Lebanon were invited to discuss food security and sustainability issues at the regional and national levels. The moderator Ms. Reem Nejdawi, thanked Mr. Dheaya Alrousan, Assistant Professor, Faculty of Natural Resources and Environment, the Hashemite University for his assistance in organizing this special session. Then, the moderator invited the young panellists to address one or more of the three below questions:

- How can the Arab universities redirect you, as youth, towards a more sustainable world as critical agents of change?
- After discussing some of the tools to assess food security during the meeting, how can they be improved to adapt to your future needs and when would you refer to them?
- If you were a policy or decision-maker, what policies would you suggest ensuring achieving food security to benefit your generation in the Arab region?

25. The young panellists stated the importance of involving youth in sustainability discussions and actions, to bring fresh and updated/innovative knowledge and capacities. They indicated that the younger generation see their role as future change makers. Many panellists chose to address simultaneously all three questions in their interventions. The discussions were mainly around the following issues and ideas:

- Development and addition of a core class on SDGs in Arabic that stressed on SDG 2 on ending hunger will strengthen the involvement of universities in addressing food security. The youth discussed several options related to the core class including societal activities and voluntary/internship work in NGOs and CBOs.
- If a core class could not be added to the curriculum, inclusion of SDGs and SDG 2 issues within the studied courses to trigger students' interest in finding solutions to related issues and push them to take the sustainability path as a career choice.
- Universities could also encourage students to plant trees as part of their curriculum requirement, set up annual sustainability prizes.
- Food loss and waste should be thoroughly addressed in universities.
- Promotion of the tools discussed during the regional meeting to help mitigate water scarcity, and impact of climate change on the agricultural sector.
- Discussions for policy makers touched on issues related to water harvesting, control of land use to protect ecosystems, biodiversity, limit cities' expansion on agricultural lands and food loss and waste. Promoting organic fertilizers, green technologies and the involvement of women in the food and water security sectors were also pointed out.

26. University professors intervened in the discussion that followed to complete the discussion on university roles in redirecting students towards sustainable development, and what is expected of youth when entering the job market. The discussion with the audience at large touched upon ensuring students are well aware of the multidimensional issue of food security to inspire their ambitious personal goals. It was also mentioned that installing and endorsing sustainable practices and actions (such as setting the Green Generation Society in Jordan) within the university premises will play a huge part in the societal cultural shift towards sustainability and food security.

E. SCIENCE-POLICY INTERFACE FOR SUSTAINABLE FOOD SECURITY WITHIN THE CONTEXT OF CLIMATE CHANGE

27. *Ms. Nisreen Ellahham*, Regional Advisor, WEF Nexus Programme in the Mena Region, GIZ moderated the session. She introduced the topic of the session with remarks on its pertinence to food insecurity in the Arab region and then presented interveners.

28. *Mr. Fidele Byiringiro*, Economic Affairs Officer at ESCWA reviewed the takeaway messages of the Arab Horizon 2030 Report as they relate to current food security status, namely findings on how food insecurity is affecting many in the Arab region, the divergence between production & consumption, the growing reliance on world markets and the dwindling natural resources in the face of climate change. He also provided an overview of the objectives of the upcoming report on Food Security and Trade under Climate Change Challenges in the Arab region that will be reviewing and highlighting the likely pathways of climate change impact on food security, the projections to 2030 and related simulations and the responses needed to adapting to climate change for food security.

29. *Ms. Tamara Nanitashvili, Nutrition and Food Systems Officer, FAO/RNE*, provided a regional perspective on food insecurity, hunger and malnutrition prevalence and trends in the Arab States according to the latest report issued from FAO. She briefed participants on the implications of climate change on food security and stressed on the vulnerability of the Arab region to climate-related hazards noting that extreme climate events adversely impact food security as they pose critical challenges to agriculture and food production, affect food prices, labour productivity, water supplies and livelihoods. Furthermore, she stated that climate variability and extremes also affect human health and nutrition directly through natural hazards, as well as indirectly through greater exposure to diseases, food safety risks, diminished quality of diets, poorer childcare and feeding practices, particularly among vulnerable farming households

30. Early results reviewing the state of food security and trade under Climate Change impacts in the Arab Region were provided by *Mr. Mahmut Tekce*, Professor, Department of Economics at Marmara University. The analysis is being undertaken to evaluate climate change-related threats to food security, food production and food trade in the Arab countries in light of the challenges of the current development model. After review of the current figures related to the high dependency of the region on food import and forecasted impact of climate change on production and food trade, Mr. Tekce overviewed some possible responses to alleviate the impact and build the resilience of the region to climate change.

31. *Mr. Rene Araujo Enciso*, Economist, Trade and Markets Division, FAO/Rome, went through the main results of the exercise undertaken to simulate the effects of price and trade on food security under climate change impacts. He highlighted that the medium-term trends for food demand, supply and trade in the region will generally follow past patterns, with dependency on world markets increasing. Climate change in combination with policies to promote healthier eating habits could affect negatively the food import bill in the region. There is a need to provide incentives to the agricultural sector in order to make the necessary investments to produce food efficiently. He also stressed on the fact that conflicts have drastically affected food security and caused hunger to rise.

32. *Mr. Mohammed Ramadan*, Director of Trade and Environment Department, Central WTO Department, Ministry of Trade and Industry, Egypt briefed participants about the current state of the climate negotiations, and about the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures, its objective, relation to the agriculture sector, main achievements to date and program of work. He highlighted its importance as a way to promote economic diversification and transformation and concluded by calling upon further collaboration and coordination with the Arab Climate Center for Policies to avoid negative impact of response measure on international trade, in particular of the commitment of parties in WTO and dispute settlements.

33. Impact of Climate Change on livelihoods was the highlight of the intervention provided by *Ms. Maha Moussa*, Director, Watershed and Development Initiative (WADI), Jordan. She briefed participants on the objectives and main outcomes of the WADI project in advancing water conservation and land stewardship practices to build resilient communities and healthy watersheds by actively engaging local communities in activities. The WADI is currently working on creating viable ecosystems in Jordan by establishing soil and water conservation sites that serve as reference models for scaling watershed restoration techniques.

34. Discussion followed on trade constraints and discussions with WTO member countries and their effects on the agriculture sector in particular, and national food security in general. The issue of supporting the trade of local products was also raised. Current role of Arab negotiators on Climate Change was also found to be important especially that agriculture has been identified as an important sector for adaptation, and there is a need to hold periodic consultations to provide negotiators accurate information on the agriculture sector. Climate as presented will also increase trade deficit in the Arab region as crop productivity will decrease, therefore information transmitted to decision makers need to be accurate and should not be done in a deterministic way, with no room left for uncertainty.

F. HOW DO FOOD SECURITY PROGRAMS WORK IN A CONFLICT CONTEXT: FIELD EXAMPLES AND MODELS ADOPTED?

35. *Ms. Shahira Wahbi*, Chief, Natural Resources Sustainability and Partnerships, at the League of Arab States moderated the session. After her opening remarks on current conflicts in the region and negative impact on food security, she introduced the speakers.

36. *Ms. Anna Gaunt*, Senior regional livelihoods officer, UNHCR, highlighted the efforts of UNHCR in promoting the economic inclusion of refugees in Jordan building on the Global Compact on refugees, which aims to support countries to ensure that refugees become more self-reliant. To this end, HCR provides support to refugees and hosting countries to create employment and small business opportunities for refugees to enhance self-reliance.

37. *Mr. Mohammad Ilyas*, Livelihoods team Leader, the Pragma Corporation, highlighted the work to promote agriculture value chains in Yemen in support of the country's agricultural sector. A livelihood approach is used with emphasis on high-impact value chains aimed at increasing farmers' income. They support them to access finance and link them to markets, e.g. the establishment of greenhouses that more than double the productivity of traditional agricultural systems.

38. *Mr. Hassan Katana*, Expert and consultant, agricultural sector and rural & community development, highlighted the challenges faced by the agricultural sector of Syria following the on-going conflict and prevailing droughts. Farmers are challenged by the lack of export opportunities and to this end the government is supporting the development of cooperatives that could support farmers in their efforts to rebuild their farms. Current plans include enhancing food security through three paths, i.e., the rehabilitation of lands, the sustainable management of resources and rebuilding the destroyed infrastructure all of which cooperative can have a strong role to play.

39. *Ms. Mariam Al Jaajaa*, Executive Director, Arab Group for the Protection of Nature, introduced the Food Security Framework in Protracted Crises, which originate from the Committee on World Food Security. The framework aims among others at enhancing humanitarian assistance, building resilience, addressing root causes of food insecurity and preventing further descent into conflicts. It should involve many stakeholders including governments, farmers, civil society and others. The framework encourages a strong country ownership of the programme.

40. *Mr. Elias Ghadban*, Regional Advisor on Food Security at ESCWA, discussed the impact of conflict on food security. He highlighted that the longer the conflict lasts the harder is the impact notably at the local level as the case in Syria shows whereby the governorates most affected by conflicts suffer more from food insecurity. This concerns the receiving communities in host countries as well as refugees have a major impact on the local economy. He highlighted for

example the case of Baalbeck where refugees make up about 60% of the population and the rising challenges are leading to the re-location of greenhouses within city limits.

41. In the ensuing discussions, emphasis was placed on building the capacity and training refugees in various fields including the high-tech sector could further enhance opportunities. It was understood that most United Nations programmes assisting refugees are now moving towards long-term self-sustaining programmes to enhance resilience. It was also suggested to look into options of resettling the refugees in protected areas within their country of origin and build resilience from there so it could further help in rebuilding the countries at the end of the conflict. There is a huge data-gap that hampers most effort to monitor the impact of programmes and a solution needs to be found to better support monitoring and evaluation efforts. Programmes would be encouraged to conduct their own self-evaluation.

G. CROSS SECTORAL INTERLINKAGES: REFLECTION OF FOOD SECURITY INTO WATER SECURITY

42. *Mr. Rida Shibli*, Executive Secretary, Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA) moderated this session. Prior to introducing the speakers, he highlighted the importance of having coherent policies and strategies in the Arab region to be able to address the huge challenges facing both the agriculture and the water resources sectors.

43. *Ms. Julie Abouarab*, Project Coordinator at ESCWA provided an overview of the rational and methodology followed towards enhancing intra-regional coordinated policy development on food and water security in the Arab region. She presented the main findings of the assessment of the existing coordination level and efficacy between the two sectors; the resulting proposals for priority actions for coordination mechanisms including the adopted institutional arrangement for regional intergovernmental coordination mechanism between agriculture and water; and a review of the main technical and logistical support provided to operationalize the proposed joint institutional setup.

44. An overview of intersectoral cooperation, and the related Ministerial Declarations and Policy Decisions were presented by *Mr. Hammou Laamrani*, Advisor, Environment, Housing and Water Resources Department, League of Arab States. He informed on the outcomes of the First Joint Meeting of Arab Ministers of Agriculture and Water held in Cairo on 4 April 2019 that included the institutionalization of the Joint Committee, and the adoption of Cairo Declaration that called for the activation of regional coordination mechanisms and mobilization of all stakeholders to ensure effective implementation of new policies and investments, the harmonization and integration of policies across the agriculture and water sectors, the increase of investments in agricultural water management and the use of innovations, data management and analysis, and exchange of expertise. He also informed on the outcomes of the first meeting of the High-Level Joint Committee, 23-24 October 2019 that resulted in the prioritization of areas of common interest in view of proposing joint policies and translating them into programs and projects.

45. *Mr. Theib Oweiss* Consultant, Water, Land and Ecosystems, Jordan, reviewed with participants the various cross sectoral issues of concern, notably the water allocation system in the Arab Region. After presenting the current state of unsustainable water allocations in the region, and the increasing need for water in the agriculture sector, he called upon the preparation of a Guideline for water allocation in the Arab region. This guideline needs to be dynamic, integrated, enhances water productivity , adjusts water allocation based on projected impacts of climate

change, empowers water users' organizations through delegating them more decision making powers, preserves groundwater for future generations, calls upon the use of nonconventional water resources, and calls upon preserving the environmental sustainability of water resources.

46. Discussion that followed included a brief description, from selected national focal points for the initiative, on the main activities undertaken and achievements realised under each of the four components of the Initiative on Promoting Food and Water Security. They also informed participants about the main challenges faced and lesson learnt in addition to providing a brief description of the current state of the cross-sectoral coordination at national levels. *Mr. Jamal EL Batch*, Chairman of the International Olive Council for the Year 2008/2009, provided the perspectives and milestones achieved from Jordan. *Mr. Mohammedamin Shahbari*, Assistant Deputy, Natural Resources Department, Ministry of Agriculture presented those of Palestine, while *Mr. Mohammed Alkhattab*, Manager, Agricultural Planning Department; Planning sector, Ministry of Planning, presented those of Iraq.

H. TOWARDS REDUCING FOOD LOSS AND WASTE: GREEN TECHNOLOGY SOLUTIONS

47. The session moderator *Ms. Monia Braham*, Executive Director, Resilience and Sustainability Analysis Center, Tunisia, presented the speakers and stressed on the technological solutions dedicated to reducing food loss and waste.

48. In her intervention on key facts from the Arab region on food loss and waste, *Ms. Lara Geadah*, Economic Affairs Assistant at ESCWA, highlighted the difference between food loss and waste while emphasizing on their relationship and correlation with food security, and how losing almost a third of the globally produced food affects progress towards achieving the SDGs especially in the Arab region. She ended by mentioning previous initiatives and some solutions to the above-mentioned problems such as improving infrastructure, measuring food loss and waste along the food chain in a more effective way, benefitting from technologies etc...

49. *Mr. Moez El-Shohdi*, Co-founder and CEO, the Egyptian Food Bank, presented the success story and positive results of the Egyptian Food Bank. Ending hunger was targeted by creating a diversity of longterm development, education and feeding programmes and establishing food banks in the region. Their successful strategy is based on several pillars such as feeding and developing related activities, sustainable philanthropy, reducing food waste, engaging the community and investments. Detailed results of the EFB were also highlighted in addition to several innovative projects.

50. *Ms. Liliana Annovazzi-Jakab*, Head, Agricultural Standards Unit at UNECE, introduced UNECE's impact initiatives on leveraging digital solutions for greener trade and less waste. Quantitative and economical facts about food loss and waste were presented in addition to UNECE's framework. Facts on impact solutions and their limits were emphasized upon, as well as the two components and the importance and impact of related circular economy.

51. The fourth speaker; *Mr. Mohammad Oqeili*, Founder and Chief Executive, Ghoorcom, Jordan, described Ghoorcom as an intelligent online marketplace that connects farmers with businesses in Jordan. It facilitates quality assurance, improves logistical tracking and supplying and distribution as well as payment through e wallets. This initiative enhanced food security by guiding farmers, analysing and predicting consumption rate, helped increase the income of some retailers and decreased food waste.

52. The last intervention by *Ms. Bushra Hattab*, Acting General Manager, EDAMA Association, Jordan described how the solid waste management was improved in Hotel Industry at Aqaba. An estimated waste composition, food waste assessment, problem and solution identification allowed for food waste management options such as composting facilities and donation of surplus food. The short term and long-term positive impacts were then detailed. At the end of the session there was no time for discussion however the participants took it during the lunch break.

53. During the discussion the following points were raised: the private sector must see sustainability as an opportunity instead of a cost and needs a clear green technology model that they can follow and benefit from reducing food waste.

I. CLOSING SESSION

54. The workshop sessions were closed by Ms. Reem Nejdawi, Chief of the Food and Environment Section, Sustainable Development Policies Division at ESCWA and Mr. Djameldinne Djaballah, Director of the Environment, Housing, Water Resources and Sustainable Development Department at the League of Arab States. The closing statement emphasized the fruitful discussions during the meeting and the intention to continue the coordination and collaboration between ESCWA, League of Arab States and other regional organization on Food security related issues, notably those related to climate change.

III. ORGANIZATION

A. DATE AND VENUE

55. The meeting was held at the Kempinski Hotel in Amman over two days 27-28 November 2019.

B. AGENDA

56. The meeting was organized in seven main sessions in addition to the opening and closing sessions. The detailed agenda is included in Annex I.

C. PARTICIPANTS

57. The meeting was attended by seventy-eight participants representing Arab Countries, experts, non-government and private organizations, regional and international organizations with working experience in the areas of agriculture, food security, water and policy planning. It also includes all partner organizations that cooperated in implementing the initiative, namely the FAO-RNE, AOAD, ACSAD, AITRS, American University of Beirut and Sida. The full list of participants is provided in Annex II.

D. EVALUATION OF THE MEETING

58. An evaluation questionnaire was distributed to assess the substantive and logistical aspects of the meeting. Twenty-nine participants responded to the questionnaire. 95% of respondents said the overall quality of the meeting was good to excellent, 85% said it had clear objectives, 80% said it was successful in reaching its intended objectives, 80% said the quality of presentations was good to excellent and all agreed that the logistics and other administrative arrangements were good to excellent. In addition, 95% of the participants expressed the need for follow up actions in the form of additional meetings notably to further elaborate on the concepts and to exchange views. There

were positive comments: (very impressive) regarding achieving the initiative milestones, the speakers seemed very knowledgeable and that it was a great opportunity for networking and the exchange of ideas. However, many commented that time for discussion was tight or non-existent in some sessions, necessitating allowance for more discussion on future meeting by either adding an extra day or reducing the number of presentations in each session.

59. Presentations delivered during the meeting may be accessed through the following meeting webpage: <https://www.unescwa.org/events/promoting-food-water-security-Arab-region>

Annex I. Agenda

AGENDA

<i>Wednesday, 27 November 2019</i>	
08:30 – 09:30	Registration
09:30 – 10:00	<p>OPENING SESSION</p> <ul style="list-style-type: none">- Mr. Djameldinne Djaballah, Director, Environment, Housing, Water Resources and Sustainable Development Department, League of Arab States (LAS)- Mr. Peter Lundberg, Head of Regional Development Cooperation, MENA, Embassy of Sweden, Amman, Jordan- Mr. Izzat Al Ajaleen, Representative of the Ministry of Agriculture in Jordan- Mr. Ahmed Abdulwali Ali Al-Samawi, Representative of Executive Director, Arab Organization for Agricultural Development (AOAD)- Mr. Ihab Jnad, Representative of Director General, Arab Center for the Studies of Arid Zones and Drylands (ACSAD)- Mr. Serge Nakouzi, Deputy Regional Representative, Regional Office for the Near East, Food and Agriculture Organization of the United Nations (FAO-RNE)- Ms. Roula Majdalani, Director, Sustainable Development and Productivity Division (SDPD), ESCWA <p>Project Overview</p>
10:00 – 11:30	<p><u>SESSION 1: TOOLS FOR INFORMED DECISION MAKING: ARAB MONITORING FRAMEWORK FOR FOOD SECURITY</u></p> <p><u>Moderator:</u> Mr. Waleed Zubari, Professor of Water Resources, Water Resources Management Program, Arabian Gulf University (AGU)</p> <ul style="list-style-type: none">- Why Do We Need an Arab Monitoring Framework, and How Did We Go About It? <i>Mr. Rami Zurayk, Chairperson and Professor, Landscape Design and Ecosystem Management Department, American University of Beirut (AUB)</i>- Regional Tracking of Food security <i>Mr. Ali Eissa, Supervisor of Agricultural Integration & Food Security Department, AOAD</i>- -Support of Statistics Bureaus for the Arab Monitoring Framework <i>Mr. Hedi Saidi, Director-General, Arab Institute for Training and Statistical Research</i>- Applying the Arab Monitoring Framework at the Regional and Sub Regional Levels <i>Ms. Reem Nejdawi, Chief, Food and Environment Policies Section, ESCWA</i>- Applying Arab Monitoring Framework at the National Level <i>Mr. Kamil Hamati, PhD Researcher, University of Geneva</i> <p>National interventions on implications towards policy formulation and Discussion</p>
11:30 – 12:00	Coffee Break

12:00 – 13:30	<p><u>SESSION 2: TOOLS FOR INFORMED DECISION MAKING: ASSESSING IMPACT OF CLIMATE ON CROP PRODUCTIVITY</u></p> <p><u>Moderator:</u> Mr. Louis Lahoud, Director General, Ministry of Agriculture, Lebanon</p> <ul style="list-style-type: none"> - AquaCrop, a tool for assessing crop productivity <i>Mr. Ihab Jnad, Head, Water Resources Department, ACSAD</i> - From Tool Results to Policy Recommendations <i>Mr. Hammou Laamrani, Advisor, Environment, Housing and Water Resources Department, League of Arab States</i> - Prospects for a Regional Network of AquaCrop Practitioners <i>Mr. Pasquale Steduto, Senior Expert on Water and Climate Change issues</i> - Climate Change Impact on Food and Water Security. <i>Mr. Nadim Farajalla, Program Director, Issam Fares Institute for Public Policy and International Affairs, American University of Beirut</i> <p>National Interventions on implications towards policy formulation and Discussion</p>
13:30 – 14:30	<p>Lunch Break</p>
14:30 – 15:45	<p><u>SESSION 3: FOOD SECURITY WITHIN THE CONTEXT OF CLIMATE CHANGE</u></p> <p><u>Moderator:</u> Ms. Nisreen Ellahham, Regional Advisor, WEF Nexus Programme in the MENA Region, GIZ</p> <ul style="list-style-type: none"> - Food Security in The Arab Region: A Follow Up to The Arab Horizon 2030 <i>Mr. Fidele Byiringiro, Economic Affairs Officer, ESCWA</i> - A Regional Perspective on Food Security and Climate Change From FAO <i>Ms. Tamara Nanitashvili, Nutrition and Food Systems Officer, FAO/RNE</i> - Simulated Effects of Price and Trade on Food Security Under Climate Change <i>Mr. Rene Araujo Enciso, Economist, Trade and Markets Division, UN FAO</i> - Food Security and Trade Under Climate Change in The Arab Region: Early Results <i>Mr. Mahmut Tekce Professor, Department of Economics, Marmara University</i> - Climate Negotiations Agenda and Agriculture Sector <i>Mr. Mohammed Ramadan, Director of Trade and Environment Department, Central WTO Department, Ministry of Trade and Industry, Egypt</i> - Climate Change Impact on Livelihoods <i>Ms. Maha Moussa, Director, Watershed and Development Initiative (WADI), Jordan</i> <p>Discussion</p>
15:45 – 16:00	<p>Coffee Break</p>
16:00 – 17:30	<p><u>SESSION 4: FOOD SECURITY THROUGH THE LENS OF ARAB YOUTH</u></p> <p><u>Moderator:</u> Ms. Reem Nejdawi, Chief, Food and Environment Policies Section, Sustainable Development Policies Division, ESCWA</p> <p>PANEL DISCUSSION</p>

<i>Thursday, 28 November 2019</i>	
09:30 – 11:00	<p>SESSION 5: HOW DO FOOD SECURITY PROGRAMS WORK IN A CONFLICT CONTEXT: FIELD EXAMPLES AND MODELS ADOPTED</p> <p><u>Moderator:</u> Ms. Shahira Wahbi Chief, Natural Resources Sustainability and Partnerships, LAS</p> <ul style="list-style-type: none"> - UNHCR’s Role as Facilitator Across the Humanitarian-Development Nexus <i>Ms. Anna Gaunt, Senior regional livelihoods officer, UNHCR</i> - Using an Inclusive Cluster Process to Restore Yemen Agriculture Value Chains Under Conflict - Challenges and Impacts Achieved <i>Mr. Mohammad Ilyas, Livelihoods team Leader, The Pragma Corporation</i> - Agriculture Livelihoods Under Conflict - Syria Case Study with Focus on the Role of Cooperatives <i>Mr. Hassan Katana, Expert and consultant, agricultural sector and rural & community development</i> - Framework for Action on Food Security and Nutrition in Protracted Crises <i>Ms. Mariam Al Jaajaa, Executive Director, Arab Group for the Protection of Nature</i> - Understanding the Vulnerability of Agri-Food Systems to External Shocks- A Case Study at Micro-Level from Lebanon <i>Mr. Elias Ghadban, Regional Advisor on Food Security, ESCWA</i> <p>Discussion</p>
11:00 – 11:30	Coffee Break
11:30 – 13:00	<p>SESSION 6: CROSS SECTORAL INTERLINKAGES: REFLECTION OF FOOD SECURITY INTO WATER SECURITY</p> <p><u>Moderator:</u> Mr. Rida Shibli, Executive Secretary, Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA)</p> <ul style="list-style-type: none"> - Assessment of Cooperation in the Arab Region <i>Ms. Julie Abouarab, Project Coordinator, ESCWA</i> - Overview of Joint Cooperation, Ministerial Declarations and Policy Decisions <i>Mr. Hammou Laamrani, Advisor, Environment, Housing and Water Resources Department, League of Arab States</i> - Cross Sectoral Issues of Concern: Water Allocation in the Arab Region <i>Mr. Theib Oweiss Consultant, Water, Land and Ecosystems, Jordan</i> - Expert perspective on National Cross Sectoral Coordination <i>Mr. Jamal EL Batch, Chairman of the International Olive Council for the Year 2008/2009, Jordan</i> <i>Mr. Mohammedamin Shahbari, Assistant Deputy, Natural Resources Department Ministry of Agriculture, Palestine</i> <i>Mr. Mohammed Alkhatab, Manager, Agricultural Planning Department; Planning sector, Ministry of Planning, Iraq</i> <p>Discussion</p>
13:00 – 14:00	Lunch break

14:00 – 15:30	<p>SESSION 7: TOWARDS REDUCING FOOD LOSS AND WASTE: GREEN TECHNOLOGY SOLUTIONS</p> <p>Moderator: Ms. Monia Braham, Executive Director, Resilience and Sustainability Analysis Center</p> <ul style="list-style-type: none"> - Food Loss and Waste: Overview and Key Facts from the Arab Region <i>Ms. Lara Geadah, Economic Affairs Assistant, ESCWA</i> - A Model to End Hunger, Poverty and Save Environment <i>Mr. Moez El-Shohdi, Co-founder and CEO, the Egyptian Food Bank, Egypt</i> - Cutting Food Loss Where it Matters - Leveraging Digital Solutions for Greener Trade and Less Waste - UNECE’s Impact Initiatives <i>Ms. Liliana Annovazzi-Jakab, Head, Agricultural Standards Unit, UNECE</i> - Impact of E-commerce on Reducing the Food Waste <i>Mr. Mohammad Oqeili, Founder and Chief Executive, Ghoorcom, Jordan</i> - Food Waste in Aqaba’s Hotel Industry <i>Ms. Bushra Hattab, Acting General Manager, EDAMA Association, Jordan</i> <p>Discussion</p>
15:30 – 15:45	Coffee Break
15:45 – 16:30	CLOSING SESSION AND WAY FORWARD

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