



Food and Agriculture
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FAO AT THE CAIRO WATER WEEK 2022



16 - 19 October



Nile Ritz Carlton - Cairo, Egypt

FAO Technical Sessions at Cairo Water Week

16 – 19 October

Date	Time	Session Title	Room	Session Type
16-Oct	9:30 – 11:00	Building resilience within Water Scarce landscapes –storing rainwater to cope with droughts and harness floods for Climate Smart Agriculture (TS 1.1)	Alf Lila We Lila C Ballroom	FAO Technical Session
	11:30 – 13:00	Scaling-up Water Action for Food and Climate Security (TS 1.3)	Alf Lila We Lila C Ballroom	
	14:00 – 15:30	Climate Change Impact on Water Consumption and Water Productivity of Crops: Update on recent findings (TS 1.5)	Alf Lila We Lila C Ballroom	
18-Oct	16:00 – 17:30	The Role of Water Resource Management in Disaster Risk Reduction (TS 3.5)	AL Qahira B Ballroom	
19-Oct	9:30 – 11:00	Harnessing science, technology and innovation for advancing water-energy-food nexus (TS 4.1)	Alf Lila We Lila A Ballroom	
	11:30 – 13:00	A Word from the Wise: Enhancing water scarcity management with increased regional integration and cooperation (TS 4.6)	Alf Lila We Lila A Ballroom	



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Science for resilient livelihoods in dry areas



Shared Prosperity Dignified Life



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Theme 3:

Water Related adaptation to Climate Change

Topic 3.2

Water Conservation Innovations, Rainfall Harvesting, Channel Lining, and Modern and Smart Irrigation

BUILDING RESILIENCE WITHIN WATER SCARCE LANDSCAPES – STORING RAINWATER TO COPE WITH DROUGHTS AND HARNESS FLOODS FOR CLIMATE SMART AGRICULTURE



Date: 16 October 2022



Time: 09:30 – 11:00



Location: Alf Lila We Lila - C Ballroom

Conveners

Lead convener: FAO

Co-Convener: ICARDA, AOAD, LAS and UN-ESCWA

Speakers

Chair: Mohamed AlHamdi, FAO-RNE

Moderator: Kamel Mostafa El-sayed, Arab Organization for Agricultural Development (AOAD)

Rapporteur: Heba Al Hariry, FAO-RNE

Duration	Presentation/Topic	Speaker/Moderator
10 min	Opening Remarks & Introduction to the Session	Mohamed AlHamdi Senior Land and Water Officer and Delivery Manager of the Regional Water Scarcity Initiative, FAO-RNE
15 min	Climate Change at Watershed level: hotspots and resilience plans	Ziad Khayat Economic Affairs Officer, UN-ESCWA
15 min	Enhancing resilience to drought and early warning: experience from the field	Teresa Wong Natural Resources Officer, FAO-RNE
20 min	In situ Rain Water Harvesting feasibility in the NENA region, with country examples	Ajit Govind and Mira Haddad ICARDA
10 min	Q/A with the Audience	Kamel Mostafa El-sayed Head of Middle Region Office, AOAD
15 min	Water accounting in Use – fate of water with Water harvesting at scale	Domitille Vallée Chief Technical Adviser, WEPS Project, FAO-RNE
5 min	Wrapping up and Conclusion	Mohamed AlHamdi Chair

BACKGROUND AND RATIONALE

The Near East and North Africa region is a hotspot for climate change impacts – heat waves, uncertain hydrology, often with decreased rainfall and extreme events (e.g., drought, floods, heat waves, etc.). It is also a region suffering with growing water scarcity – more demand than available water resources in many countries or water systems. The need to secure food security is leading many countries to push water allocation to its limits. This is putting water security at risk if no action is taken to curb water allocation particularly to agriculture.

On one hand, agriculture is already the main water users in the region and asked to reduce its use. On the other hand, climate change impacts on rainfall will require rainfed agriculture to adapt when rainfall fails by adding water through irrigation or landscape water management to ensure food production and food security. The Climate change is putting food security also at risk without increasing water allocation to agriculture.

There is no easy answer to the challenge ahead for the countries in the Near East and North Africa but also other countries in the world experiencing severe water scarcity. Local solutions are needed to optimize the way water –green, blue and grey- is captured and used. Those solutions need to be thought at all scales (local to national) with a specific focus on landscape/watersheds. Water needs to work harder within a landscape to ensure both water and food security but it should be done while setting sustainable limits to water use. There is call for adding flexibility in the management of water and agriculture and being creative with reuse, recycling and storage but also by using water accounting to ensure the solutions do not create unintended consequences.

This Technical Session will focus on the opportunities of storage across scales (from in-situ to broader scales). The session will start by looking at climate risks and options for increasing resilience in those watersheds (illustration on 3 watersheds). It will then investigate further the potential for increased in situ water harvesting for rainfed systems for the near East and North Africa region and what can be obtained when working on in-situ water harvesting. Finally, it will discuss the implications of increased water harvesting on water that can be understood using water accounting to double check water fate.

The session will provide the opportunity to present the FAO/ICARDA/OAAD water-harvesting feasibility tool and the FAO/World Bank protocol on water accounting.





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Theme 1:

Water Security and Climate Change

Topic 1.5

Water Governance and Policy Planning

SCALING-UP WATER ACTION FOR FOOD AND CLIMATE SECURITY



Date: 16 October 2022



Time: 11:30 – 13:00



Location: Alf Lila We Lila - C Ballroom

Conveners







Lead convener: FAO *Inter-Regional Technical Platform on Water Scarcity (iRTP-WS)*

Co-Convener: The League of Arab States (LAS), UFMS-Union of the Mediterranean, Australia Water Partnership

Speakers

Chair: Jean-Marc Faures, Regional Programme Leader, FAO-RNE

Rapporteur: Hichem Charieg, FAO-RNE

Duration	Presentation/Topic	Speaker/Moderator
10 min	Opening Remarks: Ways to accelerate collective efforts and scale up water-related action to align with climate change adaptation and food security goals	Jean-Marc Faures Regional Programme Leader, FAO-RNE 
10 min	<i>Inter-Regional Technical Platform on Water Scarcity: A Roadmap to Water Resilience</i>	Heba Al-Hariry Technical Advisor - Water Scarcity, FAO-RNE 
5 min	Panel Discussion: Introduction to Panelists	Jean-Marc Faures Regional Programme Leader, FAO-RNE
10 min	Policy Coherence across Water, Climate and the Agricultural Sector for Sustainable Development	Ambassador Shahira Wahbi Chief of Natural Resources Sustainability, Partnerships, & Disaster Risk Reduction (DRR) at the League of Arab States LAS (The Arab Region) 
10 min	Advancing Finance for Water Action: Tracking barriers, Trends, Opportunities, and Commitments.	Roberto Martin Hurtado Water Economics Advisor, Union of the Mediterranean (UFM) 
10 min	Multi-level Inclusive Governance and Participation for Sustainable Systems.	Oumar Ndiaye Head of the land and water section at the FAO sub-regional office in Central Africa. 
10 min	Valuing localised nature-based solutions in South East Asia.	Lucia Gamarra Senior Partnerships and Impact Officer, Australia Water Partnership AWP 
15 min	Q/A with the Audience	Jean-Marc Faures Chair
10 Min	Commitments, Summing up, and way forward	Jean-Marc Faures Chair

BACKGROUND AND RATIONALE

The interlinked actions and coalitions resulting from the 2021 United Nations Food Systems Summit call for revisiting national and global priorities to advance the transformation of Agrifood systems to be more efficient, inclusive, resilient, and sustainable. It also calls for more environmentally responsible and climate-smart agricultural production to reverse trends in the deterioration of land and water resources and promote inclusive growth.

Considering the scale of challenge due to climate change and the complex feedback loops between climate, water, and land, in 2021, The State of Land and Water Resources for Food and Agriculture Report: Systems at Breaking Point", took stock of the implications for agriculture. Shocks, including severe floods, droughts, the COVID-19 pandemic, conflict, and social unrest was revealed to divert attention away from development priorities and building resilience.

The impacts from these accumulating global and national shocks combined with limited land and water resources are felt widely, particularly in rural communities, where dependency is high, and where alternative sources of food are limited. Hence, on the top of the revised global priority list, should come the meaningful engagement with key stakeholders – farmers and smallholders who are at most risk and are the best agents of change. Recommend solutions for transforming the combined role of land and water in global food systems should also include Embracing innovation and technology being a fundamental element in enhancing management options and in increasing productivity and production levels. The transition can't also be achieved without proper planning and management of land, soil, and water resources through effective governance that promotes sustainable management for better production, better nutrition, a better environment, and a better life for all, leaving no one behind.

The North East and North Africa (NENA) Region, where most of the Arab World located, is the most land- and water-scarce region of the world, with 0.16 ha of cropland per capita, against a global average of 0.20 ha per capita in 2018 and per capita water availability at 9 percent of the global average. The agriculture sector is an important pillar of the economy in the region, contributing 14 percent of regional GDP (excluding the oil-rich countries) and providing employment to 38 percent of the economically active population. NENA is also one of the world's regions predicted to be most affected by climate change, which is already altering crop productivity and growth cycles (SOLAW-NENA, 2022). To address these challenges, future agricultural production will need to be transformative,

becoming more productive and sustainable, focused on farming systems and crops that most efficiently use water resources. An increase in innovative approaches in response to the impacts of climate change is urgently required, and climate-smart practices must be scaled up and out.

In light of the above, in June 2022, FAO launched its newly *Inter-Regional Technical Platform on Water Scarcity (iRTP-WS): A Gate Way to Coping with Water Scarcity*, to advance water-related action by fostering the interoperability of interventions and by synergizing initiatives, sectors, and approaches at all levels and scales. The *iRTP-WS* aims towards identifying current gaps in innovation that can facilitate a real transformative change in water and agriculture management under the unprecedented impacts of climate change by specifying clear-sighted trade-offs. It also aims to pinpoint possible means for enhancing systems preparedness for water and climate-related challenges through effective governance, capacity building, and E-learning.

This proposed session aims to discuss actionable, replicable, and scalable integrated, Water, Agriculture, and Climate Nexus approaches that will contribute to FAO newly established *Inter-Regional Technical Platform on Water Scarcity (iRTP-WS) Work Programme*, by adopting interconnected systems thinking that embraces Complexity, Innovation, and Partnerships. A whole-of-government and whole-of-society approach is the hallmark of this Platform that will be a key highlight of the event in addressing the following guiding questions:

1. Exploring ways to advance the work of the regional and national actors in the Water, agriculture, and climate Communities to fortify the security of our water resource with a clear notion of how and where to intervene?
2. Flagging the main water, food, and climate-related issues at the ground level that need further attention in research and innovation.
3. Suggesting proper advocacy mechanisms to advance multi-level inclusive governance and participation. (i.e., national and local government, rural communities, the private sector, and governance that empowers women, youth, and communities in decision making.
4. Identifying entry points to support regional and global efforts concerning standardization of methods, identification of gaps, upscaling of investments, and mobilization to funding resources.





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Theme 1:

Water Security and Climate Change

Topic 1.4

Crop Water Requirement and Crop Productivity

**CLIMATE CHANGE IMPACT ON
WATER CONSUMPTION AND
WATER PRODUCTIVITY OF CROPS:
UPDATE ON RECENT FINDINGS**



Date: 16 October 2022



Time: 14:00 – 15:30 (Cairo Time)



Location: Alf Lila We Lila - C Ballroom

Hybrid Session: Register Here

Conveners







Lead convener: Food and Agriculture Organization of the United Nations – RNE Office

Co-Convener: University of Cordoba (Spain), KU Leuven University - Belgium, ACSAD

Speakers

Chair: Mohamed AlHamdi, FAO-RNE

Rapporteur: Fahide SiTahar, FAO-RNE

Duration	Presentation/Topic	Speaker/Moderator
5 min	Opening Remarks & Introduction to the Session and Moderation	Mohamed AlHamdi Senior Land and Water Officer, and Delivery Manager of the Regional Water Scarcity Initiative, FAO-RNE 
15 min	Predicting climate change effects on irrigation requirements	Elias Fereres Professor at the School of Agricultural and Forestry Engineering at the University of Cordoba (Spain) 
15 min	Simulation of Water productivity under climate change	Dirk Raes Professor at the Faculty of Bioscience Engineering at the Leuven University (Belgium) 
15 min	Assessing the impact of climate change on selected crops in the Arab region	Ihab Jnad Director, Water Resources Department - Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD) 
20 min	Q/A from the Audience	Mohamed Abdallah GIS Expert, FAO-RNE 
20 min	Conclusion Presenting the FAO Report on "Remote Sensing Determination of Evapotranspiration"	Mohamed AlHamdi Chair Pasquale Steduto International Water Expert 

BACKGROUND AND RATIONALE

- Leaving apart extreme events (e.g., drought, floods, heat waves, etc.), it is expected that Climate Change (CC) will impact crop performance mainly through two mechanisms which would affect both 'evapotranspiration' (ET) and 'productivity' in opposite directions: increased temperatures and increased atmospheric CO₂ concentrations.
- On one hand, increased temperatures due to CC will hasten the evaporative demand of the atmosphere (ET_o) while accelerating crop development. While ET_o is increased, shorter growing seasons would reduce the actual ET and lower potential productivity. On the other hand, the increased atmospheric CO₂ concentrations would enhance crop photosynthesis and thus productivity, while inducing partial closure of leaf stomata and, therefore, reduction in actual ET. What will be the end result on crop water consumption (actual ET) and on crop water productivity (CWP)?
- The answer is not straightforward given the complexity of the various processes involved and the difficulties to set up experiments to replicate the expected increased temperatures and increased atmospheric CO₂ concentrations in the field. In fact, a scientific debate is on-going on how to best establish the temperature and CO₂ conditions in field experiments, how to best interpret the experimental results, and on how to properly reflect the experimental results in simulation models.
- This Technical Session will first review the most valuable experimental results conducted in closed and open field, both at international level and within the NENA Region, where temperature and CO₂ treatments are compared. Then it will discuss what would be the likely expected crop response to these two CC variables, accounting for the interaction with other environmental factors (e.g., water and nutrients). Finally, it will draw some inferences about what to expect in terms of ET and CWP changes in the near- and mid-future.
- The session will provide the opportunity to present the FAO Report on the "Remote Sensing Determination of Evapotranspiration" that synthesizes the results of 24 webinars and a dialogue process concluded at the CWW-2021.
- This Technical session is organized in the context of the Regional Water scarcity Initiative and its regional project WEPS-NENA "implementing the 2030 Agenda on efficiency, productivity, and sustainability for water in the NENA region.





Theme 5:

Climate Water-Related Disasters Preparation and Management

Topic 5.4

Disaster Risk Management

THE ROLE OF WATER RESOURCE MANAGEMENT IN DISASTER RISK REDUCTION



Date: 18 October 2022



Time: 16:00 – 17:30



Location: AL Qahira - B Ballroom

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Conveners

Lead convener: FAO *Inter-Regional Technical Platform on Water Scarcity (iRTP-WS)*

Co-Convener: Australian Water Partnership (AWP) - Cairo University

Speakers

Chair and Moderator: Heba Al-Hariry, Technical Advisor, FAO-RNE

Rapporteur: Fahide SiTahar, FAO-RNE

Duration	Presentation/Topic	Speaker/Moderator
5 min	Session objectives and Introduction to Chair and speakers	Heba Al-Hariry, Technical Advisor (Water Scarcity), FAO-RNE
10 min	Keynote Speech: Living with a new Risk Landscape!	Dr. Wadid Erian, Prof. of Soil Science at Cairo University and Senior Advisor, Sustainable Development, League of Arab States (LAS)
10 min	Perspective from the Water Community: The Role of WRM in Disaster Risk Management	Caroline Turner, Program Manager, FAO-Regional Office of Asia and the Pacific
10 min	Perspective from the DRM Community: How Anticipatory Action is Utilizing Water Resources Information to Predict Climate Shocks and Mitigate/Prevent Shocks Impacts on Lives and Livelihoods	Catherine Jones, Emergency and Rehabilitation Officer, FAO-Regional Office of Asia and the Pacific
10 min	Joint Action to Enhance Flash Flood Early Warning Systems in the Pacific	Lucía Gamarra, Senior Partnerships and Impact Officer, Australia Water Partnership
15 min	The Role of WuA and Civil Society in DRM: Gender Empowerment and Water-related Conflict Resolutions in Yemen	Jacquelyn Piant, Programme Officer, FAO-RNE Walid Saleh, Chief Technical Advisor, FAO Yemen
10 min	Moving Towards Robust Institutions: The Maghreb Vision and Strategic Directions for Strengthening Drought Resilience in the Sub-Region	Abdourahman Maki, Land and Water officer, FAO-SNE
15 min	Q/A with the Audience	Heba Al-Hariry, Chair
5 min	Commitments and follow-up	Heba Al-Hariry, Chair

BACKGROUND AND RATIONALE

Globally, the risks associated with climate change and water are increasing. Water scarcity, combined with the three 'C's: climate crisis, COVID-19, and conflict, point to a new reality that necessitates water resource management as a foundation for disaster risk management. Floods and droughts are the most common natural disasters worldwide, and they are becoming more intense and damaging. Innovative approaches to water hazard preparedness and management are critical for ensuring resilience and transforming negative outcomes such as flooding into positive outcomes such as available water resources. In an uncertain world, the best way to boost resilience against future shocks is to build strong transformative systems that can anticipate and deal with cascading risks.

Water resource management is critical to maintaining food and climate security and mitigating the effects of climatic events and socioeconomic shocks. To improve the ability of traditional water management systems to manage wider parameters in a more responsive manner, advanced planning systems and non-traditional institutional cultures must be developed in order to work toward dynamic frameworks that can cope with the complexity of today's world. It also necessitates the use of advanced technologies and anticipatory systems to accelerate risk-informed sustainable development action.

Given the foregoing, this proposed session is being organized as part of the interregional activities conducted by FAO's newly established inter-regional technical Platform for Water Sacristy (IRTP-WS), with the goal of discussing the critical role that water resource management plays in reducing disaster risks. It will examine three key topics while drawing key examples from the MENA and Asia Pacific regions:

1. Current barriers to more effective integration of the water resource management and climate communities (bureaucratic silos, use of different languages, entrenched data capture mechanisms preventing data sharing or combined analysis, disparate sectoral goals/vision and stakeholders, and so on).
2. Highlight interregional examples of best practices in which the water and climate communities have collaborated to increase impact and effectiveness, as well as to initiate commitments for scaling-up collaborative efforts and promoting new synergies and partnerships.
3. How hydrometeorological data and analytics are shaping the future of disaster risk management, particularly in the area of anticipatory action. Early warning systems, which predict whether there will be too little (drought) or too much (flood) water, are a key component of the approach. The session will examine lessons learned from the Philippines, Bangladesh, Yemen, and the Maghreb Region, as well as future connections between anticipatory action and water resource management.





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17–21 October 2022

FAO SCIENCE AND INNOVATION FORUM

Harnessing science, technology
and innovation for advancing
water-energy-food nexus

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19 October 2022 | 9:30 (Cairo time) | Nile Ritz Carlton - Alf Lila We Lila - A Ballroom | in Hybrid format

19
October
2022

Special event for the Near East and North Africa

In a context of an increasing population, the demand for water and food is projected to double or more by 2050, while energy demand in a large part of the Near East and North Africa (NENA) region may expand to 61 percent by 2050, leading to competing needs for the already degraded regional resources. Water is needed everywhere for the development of the NENA region – for irrigating crops, watering livestock, supporting aquaculture and agricultural processing, water for energy production and cooling, drinking water, industrial waters. It represents 70 percent on average but more than 90 percent in some countries. In some countries, oil and gas revenues pay for food imports, in others butane enabled irrigation is booming enabling groundwater pumping. Fossil fuels use will need to be limited to curb the gas and climate change effects. Currently, the NENA region is one of the biggest net importers of cereals in the world – a staple crop for most of the countries. The current crisis with Ukraine War is leading countries to reconsider their import policies and increasing the share of staple crops produced internally even at high cost and increasing the pressure on scarce water. Science, innovation and dialogue between water, agriculture, energy, and the environment sectors seem to be at the center of finding a sustainable path for food system transformation in the NENA region.

The event in association with the Cairo Water Week, will discuss the use of a Water-Energy-Food and Environment nexus approach to implement the 2030 Agenda while coping with water scarcity. It will show how science and innovation are part of practical implementation and will advance understanding of the importance of developing effective science-policy interface platforms. In particular, the session seeks to:

- Frame the debate around the Water-Energy-Food nexus with focus on the NENA region.
- Obtain the views of scientists and experts on ways to cope with water scarcity with a Nexus approach to enable the emergence of resilient and efficient agri-food systems.
- Discuss the ways to support agri-food systems transformation through science, innovation, and dialogue.

REGISTER

Harnessing science, technology
and innovation for advancing
water-energy-food nexus

AGENDA

Organized by
Food and Agriculture Organization of the United Nations (FAO)
in association with the 2022 Cairo Water Week

5 min

OPENING

Abdulahkim ELwaer, FAO Assistant Director General and Regional Representative for the Near East and North Africa

Moderator

Jean-Marc Faurès, Regional Programme Leader, FAO Regional Office for the Near East and North Africa

10 min

GUEST SPEAKER

Hany Sewilam, Minister of Water Resources and Irrigation, Egypt

15 min

KEYNOTE PRESENTATION

Rabi H. Mohtar, Texas A&M Engineering Experiment Station (TEES) Endowed Professor, USA

35 min

PANEL DISCUSSION

Tarifa Alzaabi, Director General, International Center for Biosaline Agriculture (ICBA), UAE

Eckart Woertz, Director of the GIGA (German Institute of Global and Area) Institute for Middle East Studies, Germany

Carol Chouchani Cherrane, Head, Climate Change and Natural Resource Sustainability Cluster, Economic and Social Commission for Western Asia (ESCWA)

Abdelghani Chehbouni, Director, International Water Research Institute, Mohammed VI Polytechnics University, Morocco

20 min

Q&A

5 min

CLOSING



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Theme 4:

Water, Climate Change, and Future Cooperation

Topic 4.5

Climate Change Adaptation Strategies; Case Studies

**A WORD FROM THE WISE: ENHANCING
WATER SCARCITY MANAGEMENT WITH
INCREASED REGIONAL INTEGRATION
AND COOPERATION**



Date: 19 October 2022



Time: 11:30 – 13:00



Location: Alf Lila We Lila - A Ballroom

Conveners

Lead convener: FAO *Inter-Regional Technical Platform on Water Scarcity (iRTP-WS)*

Co-Convener: Australian Water Partnership (AWP)

Speakers

Chair and Moderator: Jean-Marc Faures, Regional Programme Leader, FAO-RNE

Rapporteur: Heba Al-Hariry, Technical Advisor, FAO-RNE

Duration	Presentation/Topic	Speaker/Moderator
5 min	Introduction and session objectives	Jean-Marc Faures, Regional Programme Leader, FAO-RNE
15 min	Keynote: Effective water scarcity management: Challenges and Opportunities	Hammou Laamrani, Economic Affairs officer, UN-ESCWA-NAFS programme
10 min	The Asia Pacific Water Scarcity Programme: FAO's approach to tackling water scarcity in the Asia Pacific Region	Caroline Turner, Programme Manager, FAO-Regional Office of Asia and the Pacific
10 min	Presentation from FAO-RNE, Water Scarcity Initiative	Mohamed Al Hamdi, Senior Land and Water officer, FAO-RNE
10 min	Water scarcity management in Australia: Key features and lessons learned	Lucía Gamarra, Senior Partnerships & Impact Officer, Australian Water Partnership (AWP)
35 min	<p>Moderated panel and audience discussion</p> <ol style="list-style-type: none"> Indonesia Morocco Thailand Vietnam <p>Leading Questions:</p> <ol style="list-style-type: none"> How is the status of water scarcity in your country? What are the key drivers of water scarcity in your country? What are some of the interventions your country has implemented to tackle the water scarcity challenge? Can you identify any shared challenges across regions? What would you define as critical success factors in tackling water scarcity? 	<ol style="list-style-type: none"> Taufiq Hidayat Putra, Acting Director of Water Resources, Ministry of National Development Planning of the Republic of Indonesia Faouzia Chakiri Boulouiz, Head of Division - Food security Direction, Arab Maghreb Union Secretariat Lerdphan Sukyirun, Expert on River Basin Management, Office of The National Water Resources, Thailand Nguyen Thuy Anh, Head of Development Cooperation, Department of Water Resources Management, Ministry of Natural Resources and Environment, Vietnam <p>Moderated by the Chair</p>
5 min	Commitments and close	Jean-Marc Faures, Chair

BACKGROUND AND RATIONALE

Water scarcity management is increasingly a priority for governments in both the Asia-Pacific Region and the Near East and Northern Africa (NENA) Region. Demand for water is increasing rapidly, which is driven by population and economic growth, and associated trends in urbanization, industrialization, and diet preferences. Climate change and the rise of water-related hazards, such as severe droughts, is exacerbating existing challenges.

These circumstances place compounding stressors on available water resources in both regions in terms of quantity and quality, as demand for water increases and competition for resources intensifies. Improvements in hydrological data, government and institutional capacity, education, risk assessment, and information sharing are areas that need further development to achieve progress toward the Sustainable Development Goals (SDGs) that target water security, food security and poverty eradication. There is also an urgent need for better integration of national and regional climate strategies and water management policies

In this context, the Asia-Pacific and NENA regions face similar water scarcity challenges. Both are experiencing extreme levels of water stress and the fastest rates of groundwater depletion globally. A high reliance on (often poorly performing) irrigation systems and concentrated rural poverty exacerbate these issues. At the same time, water challenges differ between the regions. The Asia-Pacific experiences more water variability, leading to seasonal and geographic rather than absolute water scarcity across countries, whereas NENA has the lowest absolute and per inhabitant water resources given its arid conditions, low rainfall and high evaporation rates. Asia also has 74 percent of the world's farms, compared to 3 percent in NENA. Yet the commonalities between the regions

uniquely position them to collaborate and integrate their water scarcity solutions and lessons learned. Given the urgency and growing water demands in an increasingly water scarce environment, FAO's Regional Office for Asia-Pacific has established a new Water Scarcity Programme (WSP) that is, in part, inspired by FAO-NENA's Initiative on Water Scarcity (WSI). Australia, through the Australian Water Partnership (AWP) is partnering with FAO to deliver the Asia Pacific WSP. According to the latest Intergovernmental Panel on Climate Change (IPCC) report, Australia has similar water scarcity risks to the Asia-Pacific and NENA regions in terms of the types of hazards and exposures to rainfed agriculture, although vulnerability is comparatively low.

The Asia-Pacific WSP is based on the clear understanding and acceptance that changes in water governance cannot occur until countries first monitor their resources, through water accounting, and then allocate them in an equitable and transparent manner. In this context, the WSP is structured around four pillars: water accounting, water allocation, working with farmers and water managers to adapt to water scarcity, and promoting regional cooperation. The WSP will promote the implementation of actions, solutions, innovations, technologies and financing required in the Asia-Pacific to combat water scarcity through country-specific Water Scarcity Action Plans and regional initiatives, including the Regional Water Scarcity Symposium and Regional Technical Platform. The Asia-Pacific WSP will draw on the Australian water management expertise to understand water availability through water accounting, identify overlap between ministries managing water as part of their portfolio and create individual national water accounting and allocation roadmaps that can be used to foster national action and investment. Through these program objectives, there are learning and collaboration opportunities between the Asia-Pacific and NENA regions. Indeed, the WSP has much to learn from the WSI experiences including successes and challenges during implementation.

SESSION OBJECTIVES

The objective of the session is to discuss areas of integration and cross-regional learning between the Asia-Pacific and NENA regions. It will also highlight key examples of experiences, success and challenges of the WSI in an effort to enhance and improve the WSP, while also seeking to achieve the following goals:

- Share best practices and key lessons from Australia's water reform journey which can contribute to addressing water scarcity across the regions;
- Establish new professional partnerships between practitioners and stakeholders in both regions;
- Facilitate the exchange of new knowledge and lessons between practitioners and stakeholders in both regions;
- Discuss ways in which future interaction between the two regions can be systematized.

Other Sessions/Events Supported by FAO

Date	Time	Session Title	Room	Session Type
17-Oct	9:30 – 11:00	Pre-COP27: Water Pavilion (Core Partners)	Alf Lila We Lila C Ballroom	Closed event - by invitation
	11:30 – 13:00	Pre-COP27: Water Pavilion meeting (Steering Committee)	Alf Lila We Lila C Ballroom	Closed event - by invitation
	14:00 – 15:30	COP27: Water and Climate Initiative (AWARE)	Alf Lila We Lila C Ballroom	
18-Oct	9:30 – 11:00	The Fourth Meeting of the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States (Session I)	Alf Lila We Lila C Ballroom	Closed event - by invitation
	11:30 – 13:00	The Fourth Meeting of the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States (Session II)	Alf Lila We Lila C Ballroom	Closed event - by invitation
	14:00 – 15:30	The Fourth Meeting of the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States (Session III)	Alf Lila We Lila C Ballroom	Closed event - by invitation
	9:30 – 11:00	Sub Session-4 'Water accounting with a case study on rainwater harvesting'		ICID - Fifth African Young Water Professional's Forum
	14:00 – 15:30	Sub Session 6 - Closing session "Achievements of Af-YWP-Forum & Current and future activities"		ICID - Fifth African Young Water Professional's Forum
20 Oct	Full Day	Sustainable Energy in Water Irrigation A field visit to two sites in Behera Governorate where Solar energy has been used for water pumping. the two sites represent using sustainable energy instead of fossil energy in water irrigation. one of the two sites where the solar panels in covering mesqa to minimize evaporation losses		Field Trip



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