



Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS



# Water Scarcity in the Arb/NENA Region and the Role of the Water Scarcity Initiative (WSI)



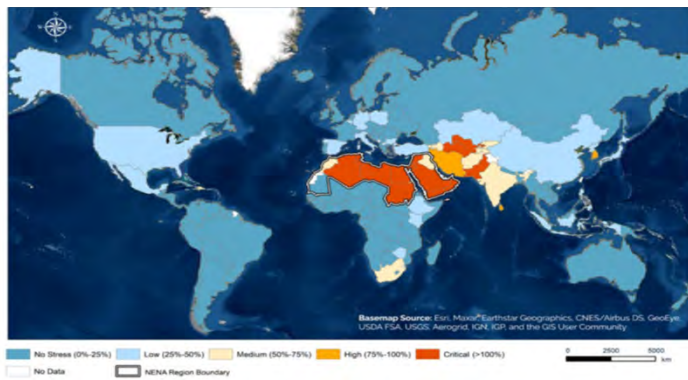
Monitoring and Reporting of SDG 6.4  
Target (water use and scarcity) in the  
Near East and North Africa  
13-14 December 2023, Cairo - Egypt



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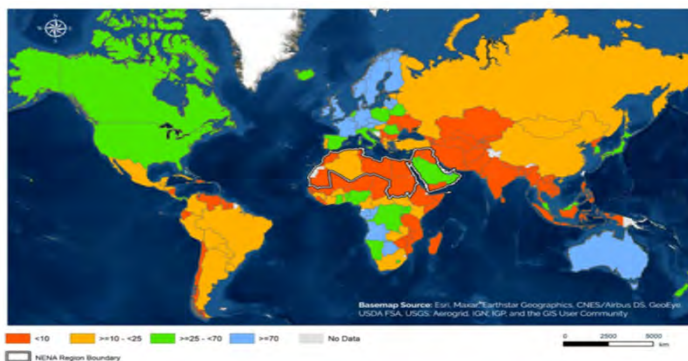
# KEY FACTS

## Level of water stress (SDG 6.4.2)



Source: AQUASTAT, 2021. [www.fao.org/aquastat/en/](http://www.fao.org/aquastat/en/)

## Water use efficiency (US\$/m<sup>3</sup>) (SDG 6.4.1)



Source: AQUASTAT, 2021. [www.fao.org/aquastat/en/](http://www.fao.org/aquastat/en/)

- Freshwater availability per capita declined in NENA by more than 75% between 1960 and 2018
- 12 countries in the top 15 highest levels of water stress in the world
- 60% of water resources generated outside the region
- Most groundwater aquifers are over-exploited
- Around 82% of wastewater untreated/not reused

# WATER CHALLENGES IN NENA

## CHALLENGES

- Physical water scarcity
- Inefficient utilization of water  
(water use efficiency and water productivity, network losses)
- Sustainability of water resources (GW)

## MAJOR PROGRESS, BUT

- Policy directions (**conflicting..**)
- Science-Policy interface (**Weak**)
- Legal framework (**challenged by enforcement capacity**)
- Institutional framework (**weak and overlapping mandates**)
- Technical capacity (**weak..**)
- Technology and Innovation (**low investment and slow adoption**)



# FAO REGIONAL INITIATIVE ON WATER SCARCITY-NENA (WSI)



**Overall Objective:** Contribute to **inclusive and sustainable development** in the context of increasing water scarcity, through:

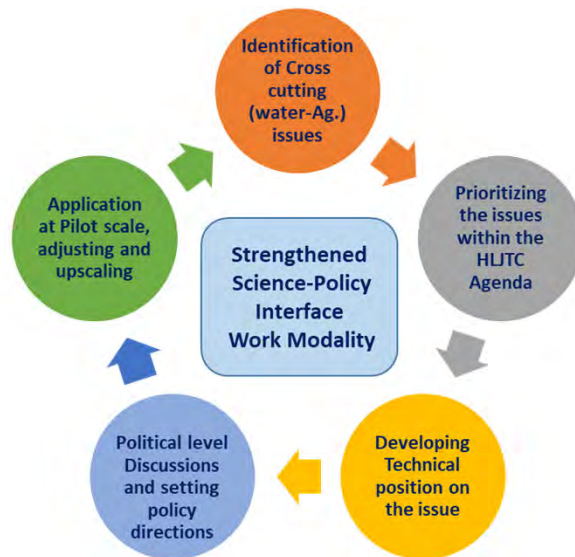
- Strengthened **policy coherence**/convergence/coordination between the **water and agriculture sectors**.
- Enhanced **Partnership** and Collaboration (*within the Region*)
- Higher awareness and collaboration - **inter-Regional Technical Platform** on Water Scarcity (*beyond the Region*)
- Informed strategic water planning driven by effective **water accounting**, enhanced **water productivity** and integrated **WEF nexus** management approach (WEPS project).
- **Non-conventional water** supply alternatives (wastewater reuse) SNE wastewater reuse initiative.



Launch of the WSI (December 2013)

# Policy Coherence and Cross-Sectoral Coordination

- **First Joint Ministerial Meeting (4 April 2019)**
  - Endorsed the **Cairo Declaration**.
  - Set **Joint Ministerial Meetings** at biennial basis.
  - Established **High-Level Joint Technical Committee** – annual meetings.
  - Established a **Joint Secretariat** (Secretariat of the AMWC and AOAD).



*First meeting of the LAS Joint (Water-Agriculture) Ministerial Council (4 April 2019)*



*Fourth meeting of the LAS High-Level Joint (Water-Agriculture) Technical Committee (18 October 2022)*

# Enhanced Partnership and Collaboration

Two Major Outputs (1st land & Water Days – Dec. 2013):

1. **Regional Collaborative Strategy** on Sustainable Agricultural Water Management (the ‘Regional Collaborative Strategy’)
2. **Regional Partnership** to Support Countries in the Implementation of the Regional Collaborative Strategy.

**Partnership Pledge** – in support of the Regional Initiative on Water Scarcity



“We declare our strong interest and willingness to work together, drawing on our collective knowledge and resources, in an effective, action-oriented and result-based Regional Partnership, to support the implementation of relevant collaborative strategies...”

<b>ACSAD</b>	Arab Center for the Studies of Arid Zones and Dry Lands
<b>AOAD</b>	Arab Organization for Agricultural Development
<b>AWC</b>	Arab Water Council
<b>CEDARE</b>	Center for Environment and Development for the Arab Region and Europe
<b>CIHEAM</b>	International Center for Advanced Mediterranean Agricultural Studies
<b>DRC</b>	Desert Research Center
<b>DWFI</b>	Daugherty Water for Food Institute
<b>GIZ</b>	German Cooperation Agency

<b>ICARDA</b>	International Center for Agricultural Research in the Dry Area
<b>ICBA</b>	International Center for Biosaline Agriculture
<b>IWMI</b>	International Water Management Institute
<b>LAS</b>	League of Arab States
<b>NWRC-Egypt</b>	National Water Research Center
<b>UNESCO</b>	UN Educational, Scientific and Cultural Organization
<b>UNESCWA</b>	UN Economic and Social Commission for Western Asia
<b>WB</b>	World Bank
<b>WFP</b>	World Food Program

# Enhanced Partnership and Collaboration



- Working Cluster 1: **Resilience and Climate Change Adaptation**  
(Coordinators: UNESCWA and ACSAD)
- Working Cluster 2: **Water Productivity Tools and Analytics**  
(Coordinators: FAO and ICARDA)
- Working Cluster 3: **Non-Conventional Water Resources**  
(Coordinators: IWMI and AWC)
- Working Cluster 4: **Water Governance**  
(Coordinators: UNESCO and CEDARE)

- Coordinators (Two Partners per WrC)
- Members (Partners Focal Points)
- Secretariat (FAO – WSI Team)

➤ **TOWARD JOINT PROGRAMING Funding Challenges!!**

Working Cluster	Organization	Area of Work	Activity Description	Service Provider	Planned Time Frame	Beneficial Countries	Location	Expected Outputs	Budget Allocated	Statistics	Notes
Working Cluster 2: Water Productivity Tools and Analytics	IWMI	WATER PRODUCTIVITY	Capacity building training in Lebanon and Egypt	IWMI	June.2020-Sep.2020	Lebanon and Egypt	Lebanon and Egypt	Build capacity to improve water productivity using ICT technologies	✓	11 organizations, 38 activities. (FAO: 10 activities; ICARDA: 8 activity; IWMI: 5 activities; AOAD: 4 activities; ACSAD: 1 activity; UNESCO: 2 activities; ICBA: 2 activities; ESCWA: 2 activities; IFAD : 1 activity; CEDARE: 2 activities; AWC: 1 activity)	N/A
	IWMI	WATER PRODUCTIVITY	Assessing water profitability in DELTA-Egypt	IWMI	June.2020-Sep.2021	Egypt					
	IWMI/FAO	Water Accounting	Conduct a Regional Training Workshop to build the Capacity of Technical Staff of the Ministry of Water Resources on Rapid and Advanced Water Accounting	IWMI	Sept. 2020-Dec. 2021	Egypt - Jordan - Lebanon	TBC	Build the Capacity of 5 staff members per country - Develop Training Materials - Establish an online Repository of the Course	✓		
	IWMI	Irrigation	Develop IRWI App (irrigation water) in Egypt	IWMI	June.2020-Sep.2020	Egypt					
	IWMI	Irrigation	Upgrade LARI App to provide irrigation water req in Lebanon	IWMI	June.2020-Sep.2020	Lebanon					
	Arab Organization for Agricultural Development (AOAD)	WATER PRODUCTIVITY	The use of smart agriculture to overcome water scarcity and increase productivity. TOT on smart agriculture / TOT on water productivity estimation at local and regional levels	Arab Organization for Agricultural Development (AOAD)	Nov-20	22 Arab Countries	Khartoum	Understanding the concept of water productivity, training on the use of GIS techniques, understanding the basic concepts of remote sensing concepts, estimation of crop yield, estimation of water use and water productivity.	50000		

# Enhanced Partnership and Collaboration

Toward Joint Programing (Funding Challenge!!)

## Water Scarcity Initiative Programme

Agricultural Water <u>Governance</u>					<u>Resilience</u> of Food Systems and Water Services to Climate Change					<u>Knowledge</u> Management				
Water Allocation	Groundwater Management	Non-Conventional Water Resources	WEFE Nexus	Policy Coherence and Cross-Sector Coordination	Integrated Land and Water Management	Water Accounting and Productivity	Food Loss and Waste	Drought Management	Saline Agriculture	WASH Services and Management	Data Gap	Tools for Knowledge Management	Awareness and Communication	Knowledge sharing

FAO, UN-ESCWA, ICBA, ICARDA, IWMI, UNICEF, + (LAS, AOAD, ACSAD, RCREEE,...)



# Enhanced Partnership and Collaboration (iRTP-WS)



**“Leaving No One Behind”**

*Five Areas of Work  
Embracing Complexity,  
Inclusion, Interconnectedness,  
and Innovation!*

(A) Supporting the International Agenda, Lead and facilitate discussions on governance reforms, effective nexus frameworks



(B) Knowledge Management, Technology and Innovation, Pool experiences, Make use of broader exchange and learning fora and promotes the use of digital transformation and advanced tools

(C) Inclusion & Participation, Forge strategic alliances and fostering intersectoral collaboration and Partnership

(D) Capacity Building and Engagement Promote joint ventures and Support the development of a common capacity development agenda to promote sound practices

(E) Scaling up investments and Innovation: Support Grant matching, funding alliance and cost-sharing.



Responsible Investment in Agriculture



Hand-in-Hand Initiative

# Informed Strategic Water Planning at National Level (WEPS-NENA Project)



## Water Accounting

- 10 case studies- rapid water accounting in 8 countries
- 500 people trained in the basics of water accounting
- 160 people trained in advanced water accounting,
- 80 Webinars on water accounting, ET etc.
- 1600 members of the community of Practice on water accounting,
- Five NENA countries engaged in a process of institutionalizing water accounting

## Water Productivity

- 500 farmer surveys for 9 local water productivity assessment,
- 90 people trained in water productivity concepts, tools and crop ET measurement,
- 600 farmers engaged in Farmer Field Schools activities on WP
- 14 Webinars on WP
- 400 members of the community of Practice on water Productivity,
- Seven countries engaged in a regional network on measurement of crop ET,
- 1 country local governance process engaged (groundwater governance & water productivity)

## Nexus WEF

- 2 Integrated WEF Model (Jordan, Souss Massa/Morocco),
- 1 assessment of Solar irrigation development (Palestine)
- 1 assessment of water/energy for agriculture water (ongoing)
- 60+ people trained in Nexus tools
- 14 webinars on Nexus
- 350 members of the community of Practice on Nexus WEF
- 1 reg. Training on SPIS

## Knowledge & Stakeholder engagement

- 5 Methodologies designed (water accounting, water productivity assessment, economic WP field to fork, Nexus, Gender/water/agriculture)
- Blocks of training modules & MOOC (ongoing)
- 4 community of practices created, enhanced or support
- 5000 people following the project work
- 1 website

Water Scarcity Initiative Program (Phase 2) Under preparation in consultation with Sida and the Netherlands and 5 partner organizations

# Reflections and Directions

- Water Scarcity is **A GROWING IMPEDIMENT** to sustainable development, climate change impacts as an aggravating factor.
- Improvements are visible, **but NOT ENOUGH** to overcome the mounting challenges.
- **POLITICAL WELL** is the underpinning factor for any meaningful improvements.
- **CROSS SECTOR COORDINATION AND POLICY COHERENCE** is no longer an option, it is a must.
- Timely **TECHNOLOGY** transfer and an enabling environment for **INNOVATION** is key for facing water scarcity.
- **TECHNICAL CAPACITY** and **EVIDENCE** are elemental for informed decision making.
- **INNOVATIVE FINANCING** mechanisms are needed to bridge the growing financing gap.
- Water Scarcity is **TOO COMPLEX** to be addressed and resolved without genuine collaboration.



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*Thank you for your attention*

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