

CONCEPT NOTE

HIGH-LEVEL INSTITUTIONAL DEBATE ON WATER ISSUES & RELATED CHALLENGES

*From Resources to Resilience: Water and Natural Assets
for Sustainable Food Systems in a Changing Climate*

OFFICIAL SIGNING OF THE MEMORANDUM
OF UNDERSTANDING BETWEEN THE
CIHEAM AND THE ARAB WATER COUNCIL



CIHEAM

158TH GOVERNING BOARD MEETING
EGYPT, CAIRO, 10-11 DECEMBER 2025

High Level Institutional Debate on water issues and related challenges

"From Resources to Resilience: Water and Natural Assets for Sustainable Food Systems in a Changing Climate"

Context and Framework

This high-level debate takes place in the context of two significant milestones:

- The signing of the Memorandum of Understanding (MoU) between the CIHEAM and the Arab Water Council (AWC).
- The [50th Anniversary of Egypt's National Water Research Center](#) (NWRC).



Within the Framework of the 158th CIHEAM Governing Board meeting, hosted by Egypt's Agricultural Research Center (ARC), this session underscores the country's leadership in water research and regional cooperation. It also reflects CIHEAM's commitment to promoting the sustainable management of natural resources and to strengthening scientific and institutional partnerships across the Mediterranean.

Looking ahead, the upcoming [Euro-Mediterranean Water Forum](#) in Rome from 29 September to 2 October 2026 will provide a key platform to further advance regional dialogue, knowledge sharing, and cooperation on water and climate challenges.

More broadly, it highlights the growing importance of scientific diplomacy and multi-stakeholder collaboration in addressing climate and resource challenges across the Mediterranean region.

Rationale and Objectives

Natural resources, especially water, soil, and biodiversity, are fundamental to sustainable food systems. In the Mediterranean, these resources are increasingly under pressure from climate change, desertification, and demographic growth. Their sustainable management is essential to ensure food sovereignty, social stability, and regional cooperation.

This debate seeks to explore how Mediterranean countries can work together to promote inclusive water governance, nature-based solutions, and innovative financing mechanisms (blue finance). It will highlight the shared responsibilities and opportunities that arise from managing water as a strategic asset for peace, resilience, and prosperity.

Debate Focus

Water is not just a resource, it is a social, economic, and environmental asset vital to life and livelihoods. Across the Mediterranean, communities, researchers, and institutions are redefining its value through responsible management, innovation, and collaboration.

The debate will focus on how to:

- Enhance cooperation in managing shared water resources.
- Strengthen scientific partnerships and research-policy linkages.
- Foster youth engagement and local initiatives in water-smart agriculture.
- Integrate climate adaptation and ecosystem-based approaches into agrifood systems.

Key Challenges and Discussion Points

Regional Water Scarcity

The Mediterranean is among the world's most water-stressed regions. Climate change is intensifying droughts and reducing rainfall, aggravating water insecurity.

CIHEAM supports member countries through initiatives like the MEDWATER Project, which provides technical assistance for integrated water management and regional knowledge exchange.

Impact on Agriculture and Food Security

Water scarcity directly threatens irrigation-dependent agriculture, with consequences for yields, livelihoods, and regional food security. CIHEAM promotes water-efficient practices through programs such as the Master in Mediterranean Agroecosystems and Food Security, training future professionals in sustainable irrigation and resilient agrifood systems.

Innovative Water Management

Modern irrigation, rainwater harvesting, wastewater reuse, and digital water monitoring are key tools promoted by CIHEAM projects such as the WaterSmart Agriculture Initiative (WATDEV), which tests and disseminates innovative water-saving technologies across pilot farms in the region.

Climate Adaptation Strategies

CIHEAM contributes to the design and implementation of regional climate adaptation strategies via initiatives like the Climate-Resilient Agriculture in the Mediterranean Program, combining water conservation, ecosystem protection, and sustainable agricultural practices to strengthen resilience across the region.

Policy and Research Linkages

CIHEAM acts as a bridge between science and policy, facilitating research networks such as the Mediterranean Water Knowledge Network and regional policy dialogues to support evidence-based water governance.

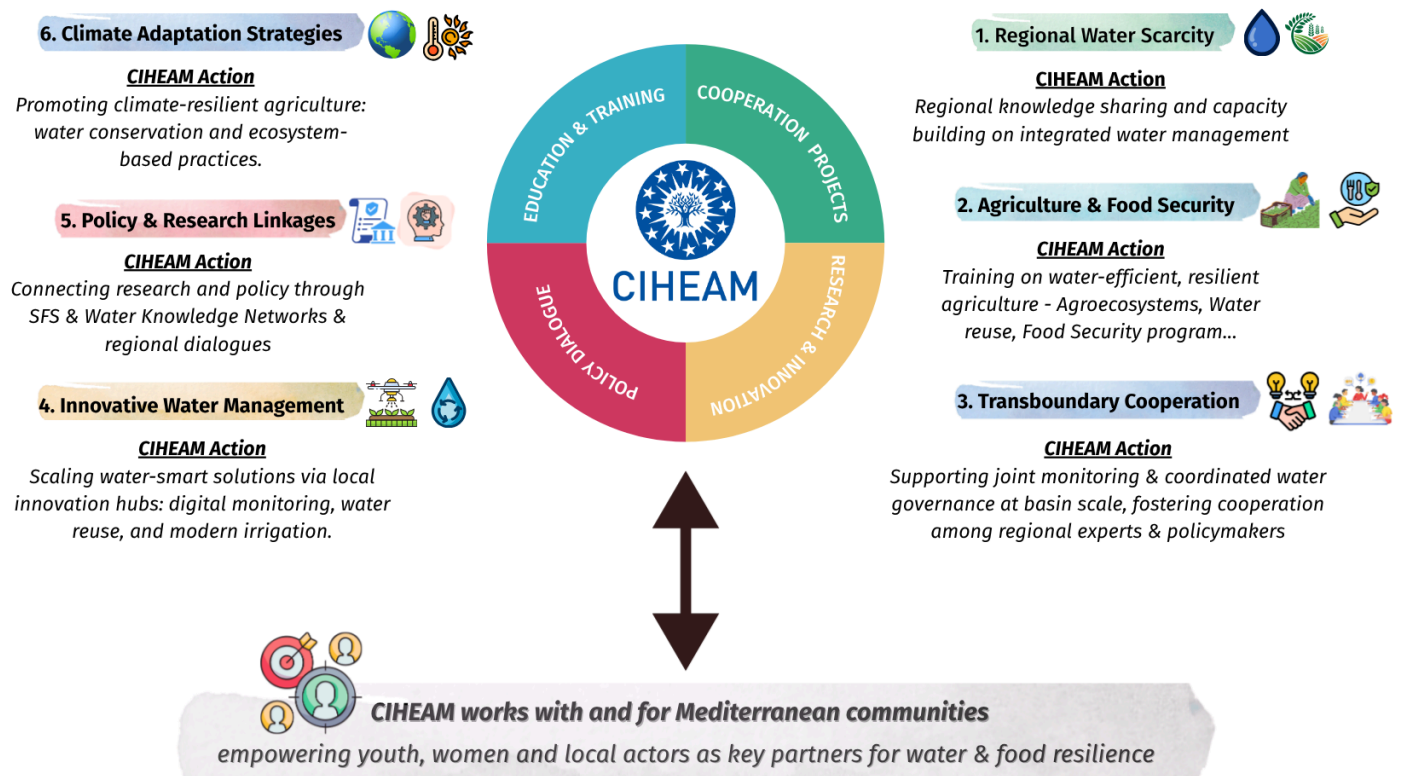
Transboundary Cooperation

Shared water resources call for cross-border collaboration. Knowledge exchange, joint monitoring, and coordinated initiatives are vital to prevent tensions and ensure equitable access. CIHEAM facilitates initiatives like the Transboundary River Basin Workshops, bringing together experts and policymakers from multiple Mediterranean countries to foster dialogue and coordinated water management.

Youth, Women and Local Engagement

CIHEAM empowers women, young professionals, farmers, and rural communities through programs like the Young Mediterranean Leaders in Sustainable Agriculture and local innovation hubs that train communities in water-smart agricultural practices.

CIHEAM Engagement: Advancing Water & Food Resilience in the Mediterranean



Structure of the Session

- **Welcome and Introduction**
By Mrs. Frida Krifca, President of the CIHEAM Governing Board
- **Opening Remarks**
By Prof. Adel Abdel Azeem, President of the Agricultural Research Center and Delegate of Egypt to the CIHEAM Governing Board
- **Panel Debate:** Water issues and related challenges in the Mediterranean

Moderator: Dr. Roula Khadra

*Science Coordinator - International Officer at CIHEAM Bari
Governor, Arab Water Council
Sustainable Water and Land Management*

Panellists:

- **Prof. Dr. Mahmoud Abu-Zeid**
President of the Arab Water Council (AWC), former Minister of Water Resources and Irrigation of Egypt
- **Dr. Aiman El Saadi**
Vice President of the National Water Research Center (NWRC)
- **Dr. Mohamed Eid Abdelhamid Elsayed**
Deputy Director for Research of the Soils, Water, and Environment Research Institute (SWERI) - ARC
- **Dr. Ali Abdelraouf Massoud**
*Researcher, Geoinformation in Environmental Management
Associate Professor, Department of Agricultural Applications
National Authority for Remote Sensing and Space Sciences (NARSS)*

SHORT BIOGRAPHIES

Mrs. Frida Krifca

President of the CIHEAM Governing Board



Frida Krifca is President of the CIHEAM Governing Board. From 2021 to 2023, she served as Albania's Minister of Agriculture and Rural Development. There, she oversaw a sector employing one-third of the population and drove record export growth. Her career spans 24 years in international development, financial services, and agricultural policy reform. She previously held leadership roles with USAID/FSVC and Albania's Agriculture and Rural Development Agency. A Fulbright Scholar with an MBA from the University of Akron, she also completed executive training at Harvard.



Mr. Teodoro Miano

Secretary General of the CIHEAM



Teodoro Miano has served as Secretary General of CIHEAM in Paris since March 2023. He is Full Professor of Agricultural Chemistry at the University of Bari Aldo Moro, where he was also Vice Rector for International Relations. With more than 35 years of academic and professional experience, he has contributed to Mediterranean and global discussions on agriculture, food systems, and sustainability. He has held leading roles in professional associations, including President of the Italian Society of Agricultural Chemistry and the International Humic Substances Society. His collaboration with CIHEAM began in 1996 through teaching, research, and cooperation initiatives. He later became Member and Vice President of the CIHEAM Governing Board before his current appointment as Secretary General.



Prof. Dr. Mahmoud Abu-Zeid

President of the Arab Water Council (AWC), former Minister of Water Resources and Irrigation of Egypt.



Dr. Prof. Mahmoud Abu Zeid holds a B.Sc. and M.Sc. in Irrigation from Cairo University and a Ph.D. from the University of California. A Fellow of the Economic Development Institute of the World Bank, he has held several leadership positions within Egypt's Ministry of Irrigation, including Director of the Water Distribution and Irrigation Systems Research Institute and later Chairman of the Water Research Centre, which oversees eleven institutes dedicated to irrigation and water management. He has authored numerous scientific publications and received the First Class Medal of Honor from the President of Egypt in recognition of his outstanding contributions to water resource management. Dr. Abu Zeid also served as Vice President of the International Commission on Irrigation and Drainage (ICID) from 1986 to 1989.



Prof. Adel Abdel Azeem

President of the Agricultural Research Center (ARC) and Delegate of Egypt to the CIHEAM GB.



Prof. Adel Abdel Azeem is the President of Egypt's Agricultural Research Centre (ARC). He earned his Ph.D. in Agronomy (Cotton) from the University of Tanta in 2001. He has held key leadership roles, including Director of the Cotton Research Institute (2016–2018) and Vice-President for Extension & Research at ARC (2018–2023). He also chaired the Cotton Breeding Research Team at the Sakha Station and served as Director of the Egyptian Cotton Improvement Fund and Head of ARC's Plant Production Committee. Prof. Abdel Azeem serves on the Governing Board of CIHEAM, is Principal Investigator of a FAO-funded national vegetable seed project, represents Egypt at the International Olive Council, and is a member of the Board of Trustees of the Science and Technology Development Fund. He is a Founding Member of the General Authority for Cotton Arbitration and Testing and has published over 15 scientific papers nationally and internationally.

Prof. Dr. Aiman El Saadi

Vice President of the National Water Research Center (NWRC), Egypt



Prof. Dr. Aiman El Saadi has been a researcher at Egypt's National Water Research Center (NWRC) since 1995, where he currently serves as Vice President for Research Affairs. A recognized expert in water resources and environmental management, he brings extensive scientific, academic, and technical experience spanning water hydraulics, environmental impact assessment, water quality and reuse, design of monitoring networks, modeling, and decision support systems (DSS) for water management. His research has been published in leading international journals such as the Journal of Hydrology, the Water and Environment Journal, and the Journal of Environmental Management. He has supervised and examined numerous Ph.D. and M.Sc. theses in Egypt and abroad, at institutions including Cairo University, Ain Shams University, and the Japan University in Egypt. Prof. El Saadi represents Egypt in several international water organizations, including the World Water Council (WWC) and the Union for the Mediterranean (UfM). He has also contributed to multiple national and international projects supported by the FAO, GEF, UN, EU, and USAID, focusing on water quality management, environmental assessment, and hydrological modeling.



Dr. Mohamed Eid Abdelhamid Elsayed

Deputy Director for Research of the Soils, Water, and Environment Research Institute (SWERI) - ARC



Dr. Mohamed Eid Abdelhamid Elsayed is a seasoned researcher and academician in soil and water management, currently serving as Chief Researcher at the Soils, Water and Environmental Research Institute (ARC), Egypt. With over two decades of experience, his expertise spans wastewater treatment, humic acid interaction with soil minerals, and sustainable agriculture practices. He has held leadership roles in international projects and served as a technical director. His contribution to academia and applied science are recognized through numerous awards, active roles in scientific committees, and a prolific publication record in high-impact journals.



Dr. Ali Abdelraouf Massoud

*Researcher, Geoinformation in Environmental Management
Associate Professor, Department of Agricultural Applications
National Authority for Remote Sensing and Space Sciences (NARSS)*



Dr. Ali Abdelraouf Massoud is an Assistant Professor at the National Authority for Remote Sensing & Space Sciences (NARSS) in Egypt. He specializes in applying remote sensing and geographic information systems (GIS) to agriculture, focusing on crop optimization, soil assessment, and water resource management. A recipient of the State Incentive Award in Agricultural Sciences, he has published extensively on the use of satellite data to support sustainable agriculture and land management. He is a former student of CIHEAM Chania.



Dr. Roula Khadra

*Science Coordinator - International Officer, CIHEAM Bari
Governor, Arab Water Council
Sustainable Water and Land Management*



Dr. Roula Khadra is Science Coordinator and International Officer at CIHEAM-Bari, with 20+ years of expertise in water management and agricultural innovation. She holds degrees in Rural Engineering, Land and Water Resources Management, and Mediterranean Agriculture, and was a Fulbright Post-Doctoral Fellow at UC Davis. A leading figure in water governance, she has advanced research and technology in water quality, the water-energy nexus, and sustainable irrigation. She has authored numerous scientific publications and played a key role in designing and implementing participatory irrigation programs across the Mediterranean. Dr. Khadra has pioneered modern irrigation systems and water distribution models, earning leadership roles in international organizations, including as Governor of the Arab Water Council Board of Delegates. At CIHEAM-Bari, she lectures, leads research, and coordinates the Master's program in "Sustainable Water and Land Management." She founded the "Digital Agriculture" Lab and actively promotes youth engagement, regional partnerships, and global cooperation through science diplomacy.

Institutional Profiles

International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM)



CIHEAM is an intergovernmental organization with 13 Member States, focused on education, research, and cooperation in agriculture and rural development, aiming to enhance food security and foster collaboration among Mediterranean countries. Its General Secretariat is based in Paris, and it operates four agronomic institutes in Bari (Italy), Chania (Greece), Montpellier (France), and Zaragoza (Spain).

<https://www.ciheam.org/>

Agricultural Research Center (ARC, Egypt)



The ARC is Egypt's leading research institution in agriculture, applied sciences, and innovation. Its areas of expertise include crop science, irrigation technologies, water-use efficiency, and the development of sustainable agricultural policies. During the panel, ARC will contribute by presenting applied solutions for water-efficient agriculture and sharing lessons relevant for Mediterranean countries facing similar challenges.

<https://www.arc.sci.eg/>

National Water Research Center (NWRC, Egypt)



NWRC is Egypt's first institute for water research, hydrology, and climate adaptation strategies. It specializes in integrated water resources management, water scarcity mitigation, and climate resilience. At the panel, NWRC will highlight research-driven solutions and national strategies aimed at supporting sustainable water management in the Mediterranean region.

www.nwrc-egypt.org

Arab Water Council (AWC)



The AWC is a regional organization that facilitates cooperation on water issues across Arab countries. Its mandate encompasses policy dialogue, capacity building, regional water governance, and transboundary water management. On the panel, AWC will support discussions on regional cooperation and will participate in the official signing of the Memorandum of Understanding with CIHEAM.

<https://www.arabwatercouncil.org/index.php?lang=en>

National Authority for Remote Sensing & Space Sciences (NARSS)



NARSS is Egypt's leading institution in the field of remote sensing, space science, and geospatial technologies. It focuses on satellite-based earth observation, environmental monitoring, natural resource management, and climate studies. NARSS develops scientific and technological solutions to support sustainable development, agriculture, water management, and disaster risk reduction. On the panel, NARSS will contribute expertise in satellite data applications for monitoring and managing resources in the Mediterranean region.

<https://www.narss.sci.eg/>



MoU Signing Ceremony CIHEAM and Arab Water Council



Advancing Water, Land, and Knowledge for a Resilient Mediterranean

Strengthening Longstanding Cooperation

CIHEAM and the Arab Water Council (AWC) share a long history of collaboration on regional water and agricultural issues. The signing of this MoU formalizes a renewed commitment to work together for sustainable development, resilience, and Mediterranean cooperation.

Purpose: Advancing shared Goals

The MoU aims to foster cooperation in support of sustainable water and land management, food security, and regional capacity-building through joint initiatives, dialogue, and knowledge sharing.

Scope of Collaboration: Concrete actions, Real impact

The partnership will advance cooperation on water, agriculture and climate challenges through joint capacity-building, knowledge exchange, participation in regional forums, and co-organized events and publications.



Key Areas of Collaboration



1 – Strengthening Regional Dialogue

Cooperation on water–agriculture–climate challenges across the Mediterranean and Arab regions



2 – Enhancing Capacity Building

Training programs, workshops, skill exchange, and policy dialogues.



3 – Sharing Knowledge and Best Practices

Exchange of data, expertise, and sustainable development insights.



4 – Joint Action on Regional & Global Platforms

Co-organizing events, contributing to publications, and engaging in international initiatives.



A Milestone for Regional Cooperation

The signing ceremony will mark a strategic milestone, reinforcing the synergy between CIHEAM's Mediterranean agronomic expertise and AWC's regional mandate on water issues, benefiting shared objectives in sustainable development and resilience.

CIHEAM AND OTHER KEY PLATFORMS ON WATER AND RELATED ISSUES



**United
Nations**



United Nations Water Conference
United Arab Emirates, 2026

The **United Nations Water Conference** is a global platform that brings together governments, UN agencies, civil society, academia, the private sector, and other stakeholders to address challenges related to water and sanitation, promote sustainable water management, foster partnerships, and advance the implementation of Sustainable Development Goal 6 (SDG 6). It serves as a key forum for dialogue, knowledge exchange, innovation, and coordinated action on water security and sanitation worldwide.

The next UN Water Conference will be held from 2 to 4 December 2026 in the United Arab Emirates, co-hosted by the UAE and Senegal.

Further information: [Click Here](#).



The **Cairo Water Week** (CWW) is an annual international event focused on water resilience and sustainable water management in the context of climate change. It brings together governments, experts, private-sector stakeholders, and civil-society organisations to share knowledge, promote innovation, and foster partnerships around key themes such as sustainable water management, climate-change adaptation, resilient water-resource innovations, nature-based solutions, and infrastructure sustainability.

Over its seven editions, the platform has grown significantly, engaging more than 26,000 participants, 123 exhibitors, nearly 1,900 international and regional keynote speakers, and over 550 organisations. In short, Cairo Water Week serves as a major Mediterranean and global hub for dialogue, networking, and action on water security, climate resilience, and sustainable water governance.

Further information: [Click here](#).



The **Arab Water Forum (AWF)** is a major triennial platform convened by the Arab Water Council to bring together public authorities, private-sector actors, academia, and civil society from the Arab region to address urgent water and climate challenges. It focuses on water security, transboundary cooperation, innovation, sustainable development, and governance, particularly in a region marked by severe scarcity and growing demand.

The most recent edition was held in Abu Dhabi from 16 to 18 September 2024 under the theme “For a Water Resilient and Prosperous Future”, also featured a strong emphasis on youth and women’s inclusion in water governance.

In this context, the CIHEAM, together with the Arab Water Council and the Union for the Mediterranean (UfM), supported the Youth draft Declaration on Water, Climate, and Food Systems, an initiative amplifying the voices of young professionals and students engaged in shaping sustainable solutions across the Mediterranean ([Learn more here](#)).

The next edition of the AWF will be held in Jeddah, Saudi Arabia, in April 2026.

Further information: [Click here](#).



FEED - The Knowledge Community is a collaborative platform within the MEDIET project, funded by the Italian Ministry of Foreign Affairs and International Cooperation. It is an open network where anyone can share knowledge and experiences in the field of Sustainable Food Systems (SFS). Among its recent contributions, FEED has published a dedicated report on water governance and innovation: Water. Policy. Innovation. Value ([Feed Files n°3, 2025](#)).

The purpose is to promote and capitalize on good practices, initiatives, projects, legislation, and research with replicable potential to improve living conditions in communities and regions. FEED fosters knowledge exchange and the creation of partnerships around sustainable solutions for food security and nutrition.

How it works: Members can share their projects and results, access the community’s knowledge database, and interact with others to exchange advice and establish new collaborations. The platform connects actors and initiatives to support the development of Sustainable Food Systems.

FEED thus serves as a central tool to disseminate knowledge, leverage actors’ experiences, and stimulate sustainable partnerships in the agri-food and environmental sectors.

Further information: [Click here](#).

SFS|MED Platform

SFS-MED Platform is a multi-stakeholder initiative co-led by FAO, CIHEAM, UfM, and PRIMA, under the [One Planet Network](#) Sustainable Food Systems Programme. It provides an open forum for sharing knowledge, building capacities, and fostering partnerships among public and private actors, researchers, producers, and civil society across the Mediterranean.

The purpose is to support the transformation of Mediterranean food systems toward inclusive, efficient, nutritious, resilient, and environmentally sustainable models. The platform promotes dialogue, regional cooperation, and the exchange of good practices, tools, and innovative initiatives, including case studies and actionable levers for sustainable food systems.

Further information: [Click here](#).