



Water
at the **Heart**
of Climate Action

16 - 19 October

FINAL REPORT

CWW
2022
Cairo-Egypt

November 2022

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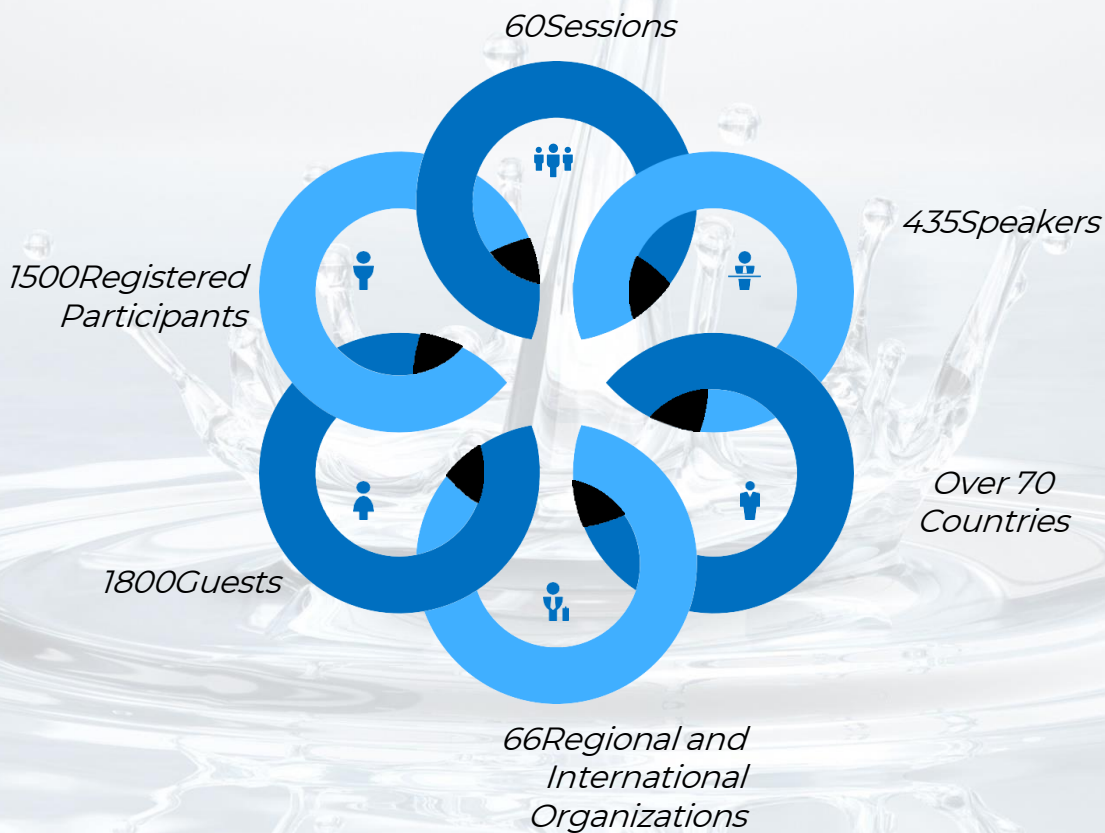
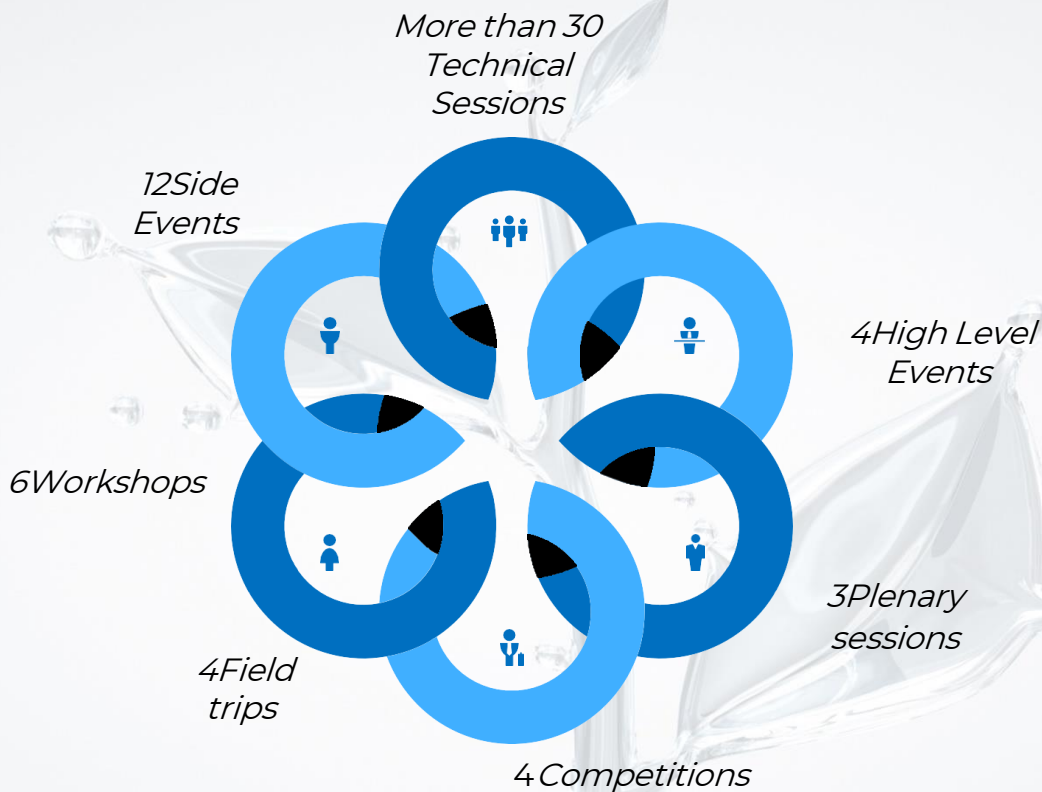
Cairo Water Week (CWW) is considered one of the enormous water-related events at the national, regional, and international levels. It is an annual event organized by the Egyptian Ministry of Water Resources and Irrigation, under the auspices of his excellency Mr. Abdel Fatah El-Sisi, President of the Arab Republic of Egypt, in collaboration with national, regional, and international partners.

CWW is an exceptional platform for professional engagement to exchange, share ideas, learn from others, and identify areas for partnerships and collaborations. CWW aims to connect water organizations, water sector industries, regional interests, and communities.

The fifth edition of the CWW series of conferences was held from 16th to 19th October 2022 in Cairo- Egypt, and addressed the main theme; Water at the Heart of Climate Action. The following five related sub-themes and several sub-topics were addressed during the event through various plenary and technical sessions.

- Water Security and Climate Change
- Protecting the Deltas
- Water-Related Adaptations to Climate Change
- Water, Climate Change, and Future Cooperation
- Climate Water-Related Disasters Preparation and Management

Cairo Water Week 2022
Water at the Heart of Climate Action
16th – 19th of October, 2022



- Over the past ten months, the CWW Permanent Secretariat prepared for the event at the technical and logistical levels.
- The CWW 2022 Scientific Committee was composed of distinguished professors and researchers from the MWRI, and prestigious Egyptian Universities headed by Prof. Dr. Abdel Qawi Khalifa - Emeritus Professor at the Department of Irrigation and Hydraulics, Faculty of Engineering, Ain Shams University. Also, Dr. Khalifa occupied many prestigious positions as Minister of Drinking Water and Sanitation Utility, Cairo Governor, and Chairman of the Holding Company for Drinking Water and Wastewater.
- Tens of coordination meetings were held including many international and regional organizations, governmental and private universities, and several ministries (Foreign Affairs and Environment)
- The CWW Permanent Secretariat Prepared for the second edition of the High-level Event titled “Policy Dialogues in Water Scarce Countries for Achieving SDGs, which coordinated at the highest level with the regional and international organizations such as the United Nations Economic and Social Commission for Western Asia (ESCWA) and Food and Agriculture Organization of the United Nations (FAO), as well as delegations of participating countries from around the world such as Netherlands and Tajikistan.
- A well-organized preparation for the CWW Exhibition brought together national, international, public, and private water-related companies in which they displayed their activities, programs, and products. Moreover, the Exhibition presented modern ideas & advanced technologies in water-related fields such as desalination, renewable energy, wastewater treatment, and water conservation technologies.
- Development of the website including all the relevant information, which has been visited more than 547,750 times.

The fifth edition of the Cairo Water Week (CWW) was launched in Cairo today, with the participation of ministers, official delegations, senior officials in the water sector, scientists, international organizations, and leading financial institutions, as well as civil society organizations and NGOs.

The opening ceremony started by welcoming all attendees. Then, Several distinguished water leaders delivered their speeches during the ceremony. Among them, Dr. AbdulHakim Elwaer, Assistant-Director General & Regional, Representative of the Regional Office for the Near East and North Africa - FAO, who mentioned that " This year is a very special year. The Cairo Water Week is coming a few weeks before the 27th Conference of Parties of the UN Framework Convention on climate change, hosted by Egypt and which will take place next month in Sharm-El-Sheikh."

"From Cairo to Sharm El-Sheikh to New York, linking water and climate for a just, sustainable and resilient world." H.E. Mr. Henk WJ Ovink, the Netherlands' Special Envoy for Water Affairs, said. He also added that water is the catalyst for sustainable development and climate action.

H.E. Mr. Sameh Shoukry, Minister of Foreign Affairs of Egypt, President Designate of the U.N. Climate Change Conference 2022 (COP27), said during his speech, "The fifth edition of CWW is taking place within two important events COP27 and UN Water Conference". Egypt's Minister of Water Resources and Irrigation, Prof. Dr. Hani Sewilam, stated that since its first edition, CWW hosted many events related to water and sustainable in order to raise the community awareness about the water related issues.

Finally, H.E. Mr. Abdel Fattah El Sisi, President of the Arab Republic of Egypt, concluded the ceremony with a recorded message where he addressed that CWW2022, under the theme "Water at the Heart of Climate Action," is in the midst of international discussions aimed at intensifying global action on water and climate issues.

Water, Climate Change, and Future Cooperation

The plenary session was organized by the Egyptian Ministry of Water Resources and Irrigation (MWRI). It highlighted the integrated water and climate approach, recognizing the role of water for informed decision-making in climate change mitigation and adaptation action. Some of the dignitaries present at this session gave speeches addressing regional and international support to improve water management to face the water challenges of climate change impact.

Climate Resilient Water Management

Arousing keynote speeches addressed the possible solutions for climate change challenges within the implementation of integrated water resources management. The speakers highlighted the need for forward-thinking policies and technologies to ensure communities are resilient to climatic risks. Some distinguished panelists discussed how these policies preserve and enhance the natural system and its associated ecosystem's health.

Water Security and Adaptation to Climate Change

The Ministry of Water Resources and Irrigation devoted this plenary session to identify the linkages between climate change adaptation and water security. Dignitaries who graced the event with their presence discussed the contributions of adaptation measures and water management to reduce the negative effects of climate change through good practices for building climate



79th Board of Governors Meeting - World Water Council (Closed Event – By invitation)

On the occasion of the Cairo Water Week, the 36 Governors of the World Water Council held their 79th Board in Cairo. In co-organization with the highest representatives of the Republic of Indonesia, they have decided to open their meeting to Cairo Water Week participants and announced from Cairo the latest updates and save-the-dates about the upcoming 10th World Water Forum.

Policy Dialogues in Water Scarce Countries for Achieving SDGs Midterm Review of the Water Action Decade.

After the success of the fourth edition of Cairo Water Week (October 2021), Egypt conveyed its outcomes, the “Cairo Conclusions,” to the Secretary General of the UN 2023 Water Conference and the Co-hosts of the Conference from the Governments of Tajikistan and the Kingdom of the Netherlands in February 2022.

In this respect, the High-Level Segment constituted a Policy dialogue in the water- scarce countries for achieving the SDGs to discuss challenges and opportunities to the implementation of water-related goals, including the Sustainable Development Goals (SDGs), with a focus on the acceleration of their implementation in order to contribute to the success of the UN 2023 Water Conference and the Water Action Decade. The session focused on proposing concrete actions to face the Global Water Crisis, as 2.5 billion people live in water- scarce regions, with more than 700 million living in conditions of critical water stress.

The High-Level Segment discussed national and regional water challenges affecting water-scarce countries and defined key action and potential cooperation areas. It also finalized the Cairo Call for Action, which will contribute to the UN 2023 Water Conference. The aim was to accelerate the achievement of the internationally agreed water-related goals and targets, including those contained in the 2030 Agenda for Sustainable Development, especially SDG6, and efforts to

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[EU UFM Egypt Water Finance and Investment Policies Forum \(Closed Event – By invitation\)](#)

The overall objective of the Conference was to support progress toward achieving water security in the Mediterranean by providing a highvisibility platform for policymakers and stakeholders to discuss how to further improve water finance and investment policies in Mediterranean countries.

Fifth African Young Water Professionals' Forum

Building on the success of the 1st, 2nd, 3rd, and 4th African Young Water Professionals' Forums, which were organized under the platform of CWW, it gives pleasure and honor to International Commission on Irrigation and Drainage and the African Regional Working Group to continue the success and to organize the 5th AfYWP-Forum in collaboration with Cairo Water Week, 16th-19th October 2022. The 5th Af-YWP Forum was organized during 17-18 October 2022 in Hybrid mode. The forum organized in 2 days of training and workshops to cover some important topics related to the themes of CWW and the training needs assessment of young African professionals under the theme "Smart irrigation water management to mitigate climate change impacts."

The Second EU-AfDB Investment Forum

The European Union and the African Development Bank organized this Forum for the second year. The event's overall objective was to support efforts toward achieving water security in the African continent by providing an annual platform for policymakers, financiers, developers, and other stakeholders to discuss further how to improve water investment policies in African countries.

Round Table on "Policy Guidelines for Sustainable Water Management in Agriculture in OIC Member Countries"

The Islamic Development Bank organized this Round Table where the key representatives of governmental authorities of OIC member states were invited to raise awareness for collective and integrated actions and expand participants' knowledge relating to important aspects addressing cross-sectoral issues that impact the state of water and food security. The main objective of the round table was to present and discuss OIC countries' experience, good international practices, and concrete policy solutions implemented for ensuring food security through sustainable water management in agricultural development. The round table also aimed to provide insights into promoting the use of modern irrigation and water-saving technologies among farmers.

Water Scarcity and Climate Change Enabling Environment Analysis in MENA

UNICEF MENARO, League of Arab States (LAS), and FAO organized a High-Level Meeting on Water Scarcity on November 17 within the 13th session of the Arab Ministerial Water Council (AMWC). This event aimed to increase visibility of the water scarcity crisis in the region by providing a multi-sectoral forum to examine challenges and opportunities. Various recommendations arose from the special session related to strengthening the enabling environment to address water scarcity. To highlight water at the heart of climate action and building on the momentum from the High-Level Meeting on Water Scarcity as well as in anticipation of the Water Pavilion at COP 27 in Egypt, UNICEF and SIWI proposed to do a deep dive session on the report “Water Scarcity and Climate Change Enabling Environment Analysis in MENA”.

Pre-COP27: Water Pavilion Meetings

In the context of preparations for the main water-related activities on the 27th session of the Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change (UNFCCC), Cairo Water Week organized a side event titled “Pre-COP27: Water Pavilion Partners Meeting” to review progress in preparations of COP27 water-related activities managed jointly by the Egyptian Ministry of Water Resources and Irrigation (MWRI) and national and international partners. During the meeting, the COP27 Water Pavilion activities were highlighted and discussed in detail through three consecutive sessions over the day.

The Center of Excellence for Water

The Center of Excellence for Water aims to boost Egyptian Higher Education, Research, and Training, in the field of Water Sciences and Engineering. Since its start, the CoE partners (more than 20 partners from Government, Universities, Research Centers, Private Sectors, and Foundations) have been working to study the status quo and capacities of Egyptian Higher Education and Research Institutions. As a result, an in-depth needs assessment has been carried out by the CoE, and its results reveal interesting facts, potentials, and needs for Higher Education curricula, Research Grants, and Training (Capacity Building). The workshop was divided into two main sessions, the status quo of Higher Education, research and capacity building, and challenges concerning the Egyptian Water Strategy within the Egyptian Strategy for Sustainable Development, and a closed meeting for all project partners.

Towards a more resilient coast in Egypt - The GCF project (Closed Event – By invitation)

This session aimed to present the progress that was made so far to enhance adaptation efforts in Egypt through promoting and upscaling Nature-Based coastal protection measures and developing an Integrated Coastal Zone Management (ICZM) Plan for Mediterranean coasts in Egypt.

COP27 Water and Climate Initiative: AWARE

COP27 was the first climate COP to ever dedicate a full day to Water Systems. The day will kick off with an opening session hosted by the Ministry of Water Resources and Irrigation of Egypt, to set the stage on the global challenges at the nexus of Climate and Water and announce the launch of the Action for Water Adaptation and Resilience (AWARE) initiative. In partnership with the World Meteorological Organization (WMO), this initiative will foster political efforts, practical action, knowledge sharing and field capacity development to place adaptive water management systems at the heart of the climate change adaptation agenda.

JCAR- from Research to Impact

Through this event, the Joint Cooperation of Applied Research (JCAR) shared its expertise and comparable research projects of its partners, focusing specifically on adapting impact-based research on water security and delta protection in light of the climate crisis.

Regular Meeting of the Joint Authority of the Nubian Sandstone Aquifer System

The twenty-second regular meeting of the Board of Directors, which was held within the activities of CWW2022, turned out to be pivotal in following up on the recommendations of the twenty-first meeting and reviewing the Joint Authority's annual financial report, along with the headway of the riparian countries' joint project, which is partially funded by UNESCO.

Depolluting the Kitchener Drain: Innovative Financial Solutions

The European Bank for Reconstruction and Development (EBRD) jointly with the European Investment Bank (EIB) and the European Union (EU) are supporting the development and sustainability of Egypt's infrastructure by financing the Kitchener Drain Depollution Programme. At this side event, representatives from the EBRD, EIB, and EU shared their experience in managing the first integrated project, highlighting the benefits and challenges of this approach.

EU Egypt Water Talks

The milestone side event was organized by the EU, in collaboration with the ministry of international cooperation. The one-day forum served as a meeting place for all stakeholders, partners, and potential supporters/stakeholders involved in Egypt's water and irrigation ecosystem. The forum followed a comprehensive model, starting with an interactive workshop on strategic transformation and planning, followed by a variety of one-on-one and group activities.

Transformative Futures for Water Security – An Opportunity to Raise Global Ambition

To strengthen the response to these pressing challenges, the International Water Management Institute (IWMI) is promoting a year-long Transformative Futures for Water Security (TFWS) initiative. The aim of the session was to ensure that water science better serves global ambition to accelerate progress on SDG 6 and build water security that will be robust in the face of deepening water risks this century

Scientific Research and Technology for Adaptation to Climate Change in Egypt's Water Sector

During the workshop, the Research Council of Water and Irrigation, Academy of Science and Technology (ASRT) of Egypt, conducted a thorough evaluation of the work done so far by different research and development institutions to adapt to climate change. UNESCO/UNDP then organized a follow-up consultation session on the proposed support program on Scaling up Climate Ambition on Land Use and Agriculture (SCALA), building on the outcome of a comprehensive study done by the ASRT.

Water Utility Management and Climate Change

The workshop brought together key players in managing water supply utilities in Egypt and experts on energy efficiency, climate resilience plans, and the impacts of climate change on water utilities. The speakers presented practical case studies about what has been done to mitigate the impacts of climate change and how planning can prepare companies for climate change.



German Solutions for Egyptian Water and Wastewater Projects- ATLANTIS

The ATLANTIS project uses selected sewage treatment plants in Egypt and investigates how they can become centers for raw materials and energy recovery. The Technical University of Berlin and the German Water Partnership held the final workshop of the ATLANTIS project. During the milestone occasion, the speakers showed the holistic solutions "Made in Germany" for modern and sustainable municipal wastewater treatment coupled with concepts of energy and raw material recovery.

Connecting Climate and Water for a Water Secure Future: Showcasing Innovative Water Adaptation from Africa

The Alliance for Global Water Adaptation (AGWA) and its partners have been working over the past year under the Adaptation Action Coalition (AAC) water workstream to co-develop a new tool for enhancing water resilience in national climate plans, the "Water Tracker for National Climate Planning." In this workshop, AGWA brought together representatives from the region, civil society organizations, and local experts in a technical dialogue to highlight the work of the AAC on water and climate resilience.

Greendustrial Dialogues Egypt 2022

The German Water Partnership e.V. organized this momentous workshop on the fourth day of the CWW. At the one-day event, various German experts presented their holistic approach to the green, sustainable, and energy-efficient treatment of industrial wastewater. From the fruitful discussions, developed solutions to current challenges were raised.



Building Resilience Within Water Scarce landscapes – Storing Rainwater to Cope with Droughts and Harness Floods for Climate Smart Agriculture

The Near East and North Africa region is a hotspot for climate change impacts. Therefore, this session focused on Local solutions needed to optimize how water

–green, blue, and grey- is captured and used. The session stressed that water needs to work harder within a landscape to ensure water and food security. However, it should be done while setting sustainable limits to water use.

The National Drainage Programme 3 in the context of the Joint Integrated Sector Approach in the Irrigation Sector (NDP3/JISA)

The session presented the NDP3, which is a key part of the government's Water Resources Development Strategy that seeks to optimize water use and improve drainage system efficiency. The goal of NDP3, implemented by the Egyptian Public Authority for Drainage Projects (EPADP) of MWRI, is to achieve socio- economic development in Egypt by generating and strengthening sustainable economic activities by improving agricultural performance.

Scaling-up Water Action for Food and Climate Security

In June 2022, FAO launched its newly Interregional Technical Platform on Water Scarcity (iRTP-WS): The iRTP-WS aims to identify 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.



Digital Applications for Improved Water Resources Management

The International Center for Agricultural Research in the Dry Areas organized this session. The session presented the developments in technologies, irrigation applications, tools, digital analytics, remote sensing, networks, knowledge-sharing hubs, data-driven platforms, and data pools. The event involved presentations and panel discussions about innovations, best practices, and success stories from the farm to basin levels.

Climate Change Impact on Water Consumption and Water Productivity of Crops: Update on recent findings

This technical session reviewed the most valuable experimental results conducted in closed and open fields, where temperature and CO₂ treatments are compared. Then it discussed what would be the likely expected crop response to these two CC variables. Finally, the FAO Report on the "Remote Sensing Determination of Evapotranspiration" was presented.

Flood and Drought Risk Management

The World Bank convened this session. The session discussed the importance of improved management of drought and flood and share different international experiences and innovative tools for flood forecasting and early warning, as well as planning, mitigation, and response to drought and flood risks.

Water Security and Climate Change

MWRI convened this session. The session covered the Impact of Climate Change on Water Resources, Climate Change and Water Quality, Modeling Climate Change and Hydrology, and Crop Water Requirements.

Outline of Climate Risk Informed Decision Analysis (CRIDA) for the Arab Region.

Wetlands Eco-systems services and livelihoods Wetlands wise use-wise gain in the Nile Basin

This session focused on Wetlands Eco-Systems economic valuation and creating better livelihoods through wetlands wise use-wise gain.

Water for Resilient and Adaptive Water Systems

This session introduced the I-Water (Integration, Information, Innovation) concept focusing on the spectrum of how digital solutions are being integrated into the water sector. The session aimed to provide a clear understanding of the drivers behind digitalization and the challenges and opportunities for the water sector to manage its assets and make informed decisions while optimizing the delivery of services in a digital era. It also explored the role of universities and policymakers in paving the way for the digital transformation of the water sector, especially in Egypt.

Protecting the Deltas

This session addressed the impact of climate change on the deltas, causes of flooding of the coastal area and land subsidence and means of protecting the deltas, seawater intrusion and its influence on different aspects of daily life like agriculture and groundwater use, the ecosystem, and livelihood, risk assessment and innovation in protecting coastal zone, and land use under climate change in coastal zones

Improving Water Productivity under Changing Climate

The session presented the tools and analytics of Wrc2 to strengthen the resilience of the water system to withstand the negative impacts of climate change and improve water productivity.

Management of Aquatic Natural Resources

This session discussed the Water budget in Tushka Lakes and their annual variation. Using artificial intelligence and automation in integrated agriculture-aquaculture systems for cycling nutrients, enhance aquaculture production, and protect the aquatic environment

Water-Energy-Food Nexus for Climate-proofing MENA Agriculture

The event provided best practices, innovations, and success stories for maximizing WEF Nexus parameters on the field level in MENA such as ultra-low energy (ULE) drip irrigation, raised bed machinery (RBM), conservation agriculture, and water harvesting. The event involved presentations/panel discussions around linkages between water, energy, and food on the farm level and the cross-sectoral coordination on the basin level in the region.

Capacity Development and Knowledge Sharing New Pathways: Accelerating Progress Towards 2030 Agenda

The session focused on highlighting the new pathways of capacity development and knowledge sharing in the water sector. The speakers concentrated on the need to work on multidisciplinary and transdisciplinary approaches to support the implementation of SDGs at local and regional levels.

Water-Related Adaptations to Climate Change

The Ministry of Water Resources and Irrigation convened this session to explain how data availability and innovations in water production, use, and the agriculture sector could help us adapt to future climate change impacts on water supply and demand. Under this theme, different topics were covered in order to advance delegates' understanding of new concepts and methodologies, e.g. Mainstreaming Climate Change Strategies into Development Plans; Water Conservation Innovations, Rainfall Harvesting, Channel Lining, and Modern & Smart Irrigation; Water Allocation and Recycling; Desalination Technology, Energy, and Carbon Footprint; Early Warning Systems; Glacier Protection; Sustainable Financing Solutions for Better Climate Change Adaptation in the Water Sector.

Water, Climate Change, and Future Cooperation

Since water and climate change related laws and policies differ from one country to another, cooperation and integration in transboundary basins regarding climate change legislation are imperative. Under this theme, different topics were covered, e.g. Transboundary Cooperation; Capacity Building and Knowledge Exchange; Integrated Water and Climate Approach; Cooperation for Better Adaptation on Shared Water Basins; Climate Change Adaptation Strategies (Case Studies); Legal and Institutional Frameworks to Cope with Climate Change.

The Role of Water Resource Management in Disaster Risk Management

Water Resource Management plays an integral role in sustaining food and climate security and reducing the impact of climatic events and socio-economic shocks. This session presented how to enhance the ability of conventional water management systems to responsively manage wider parameters requires the development of advanced planning systems and non-conventional institutional cultures to work towards dynamic frameworks to cope with the complexity of today's world.

Food Trade, Food Safety, and Water Reuse: Unlocking the Regional Potential

The International Water Management Institute (IWMI) organized this session within the activities of CWW2022. During the session, powerful speeches were delivered by prominent experts about the links between food security, safety, trade, and water reuse standards. Moreover, solutions to unlock the regional potential were proposed.

Harnessing Science, Technology, and Innovation for Advancing Water-Energy-Food Nexus

The Food and Agriculture Organization Regional Office for the Near East and North Africa (FAO-RNE) and the FAO Office of Chief Scientist organized this special event within the framework of the FAO Science and Innovation Forum 2022. During the session, the speakers discussed the use of a Water-Energy-Food and Environment nexus approach to implementing the 2030 Agenda while coping with water scarcity. The session focused on highlighting the role of science and innovation in practical implementation and the importance of developing effective science-policy interface platforms.

A Word from the Wise: Enhancing Water Scarcity Management with Increased Regional Integration and Cooperation

The session discussed areas of integration and cross-regional learning between the Asia-Pacific and NENA regions. Powerful speeches were delivered outlining significant examples of experience, success, and challenges in implementing water scarcity interventions across the two regions.

CGIAR Contribution to Sustainable Agriculture Water Management in the MENA: Tapping into Research for Development Impact

The CGIAR centers are working to strengthen agricultural water governance and build resilience in the farming sector in the MENA region, as well as in other global climate change hotspots. This event was organized by the International Water Management Institute (IWMI). Dignitaries presented at this interactive platform discussed and shared with the audience learnings, evidence, best practices, and success stories about CGIAR water management-related innovations in MENA at the farm and basin levels.

Climate Water-Related Disasters Preparation and Management

The Ministry of Water Resources and Irrigation convened this session to address climate water-related disasters preparation and management aspects through the following sub-themes: Impacts of Hydro-climatic Disasters on Water Resources; Early Warning Techniques and Tools; Role of Technology and Information in Disaster Risk Reduction; Disaster Risk Management; Financial Strategies to Manage Economic Impacts of Water-Related Disasters; Water Data and Information for A Climate Ready World.



Best Graduation Project

The Scientific Committee evaluated twenty-three graduation projects. In addition, students from national and private universities (7 public and 4 private universities) with graduation projects related to water management and related fields were encouraged to submit their projects. As a result, the following top three projects were awarded by the Minister of Water Resources and Irrigation during the closing ceremony of the week:

- The first winner was Design of Sustainable Water Infrastructure for a University Campus, Zewail University.
- The second winner was Development of Ras El-Hekma City, Ain Shams University.
- The third winner was Flood Protection System to Aswan under Current and Future Climate Change Conditions, Cairo University.
- The third replicator was Integrated Water Resources Management for New Delta, Cairo University.

The European Union (EU), the National Bank of Egypt (NBE), and UNESCO presented financial awards to the first three winners. The awards were 30,000 for the 1st winner, 20,000 for the 2nd, and 10,000 for the 3rd.

Young Water Inventors for STEM School Students

For the second year in a row this competition was held during the CWW activities in cooperation with the Ministry of Education. It aimed to encourage youth enthusiasm for water management and sustainable development issues. The CWW2022 received more than 70 projects delivered by 250 students from 20 different STEM schools from different governorates in Egypt. However, during three stages of evaluation only the top 5 competitors presented their projects during the week. It is worth mentioning that UNESCO, The European Union (EU) and the National Bank of Egypt sponsored this competition.

Best Graduation Project



Three Minute Thesis “3MT.”

On the sidelines of CWW 2022, the Ministry of Water Resources and Irrigation organized this competition in collaboration with the European Union (EU) and the National Bank of Egypt. 19 master students and 4 doctoral students has submitted to the competition. Through three stages of interviews, eleven masters and doctoral students has been selected to present a compelling talk on their Thesis/Dissertation topic and its significance to a non-specialist audience just in three minutes. The arbitration committee chose the following top three presenters:

- Eng. Sarah Salah El-Din Taher, Modeling of Groundwater Flow in Karst Aquifers: Application to West West El-Minia Region, M.Sc. (Cairo University).
- Eng. Bassma Taher, Effect of Urbanization, Climate Change and Drainage Design on Urban Flashfloods: Case Study New Cairo, Egypt, M.Sc. (The American University in Cairo “AUC”)
- Eng. Karim Soliman, A framework for Estimating Groundwater Recharge and the Projection of the Climate Change Potential Impacts in El-Qaa Plain Area, South Sinai, Egypt, M.Sc. (Cairo University), and Eng. Mohamed Soliman, Flood Hazard Mapping Using DL-Based Models, Ph.D. (Cairo University)

They were honored at the closing ceremony of the week.



- Group of CWW2022 participants had a full-day technical visit to the Solar Irrigation Planet at Albehira governorate and AlMaghraby Farm. It is worth mentioning that FAO has convened this visit.
- The Sierra Leone Minister of irrigation and a number of CWW participants have visited the National Water Research center.
- The Palestinian Minister of Water and the Palestinian official delegation visited the Regional Training Center for Water Resources and Irrigation.



Exhibition

On the sidelines of the CWW, Prof. Dr. Hani Sewilam inaugurated the Cairo Water Week exhibition at the Nile Ritz-Carlton Hotel, which was running during the whole CWW period from 16 to 19 October.

It is worth mentioning that 23 exhibitors from different Egyptian and foreign companies and agencies are participating in the Exhibition.

This Exhibition demonstrates the latest state of art for technologies in water- related fields. The Exhibition brings water experts, practitioners, and companies together to exchange solutions to water challenges nationwide, regionally, and internationally.

The CWW's Gala Dinner was held at Studio Misr, Al-Azhar Park, where an impressive Fatimid-style building overlooks the formal gardens with a panoramic view of historic Cairo and the citadel from the terraces and first-floor tearoom.



Bilateral Meetings

Prof. Dr. Hani Sewilam, the Egyptian Minister of Water Resources and Irrigation, held several bilateral meetings with the following water ministers, heads of delegations, regional and international organizations:

- Mr. Henk WJ Ovink, Special Envoy for International Water Affairs, Kingdom of The Netherlands
- Minister Mazen Ghoniem, Palestinian Water Authority
- Minister of Water Resources, Somalia.
- Minister of Water Resources, Sudan.
- Minister of Water Resources, Lebanon.
- Minister of Water Resources, Tanzania

The Closing Ceremony

The ceremony was opened by a speech given by Ambassador Christian Berger, the European Union ambassador to Egypt, followed by a summary of the week's activities presented by Prof. Dr. Hani Sewilam, the Minister of Water Resources and Irrigation, Egypt. The week gathered four high-level events; three plenary sessions; more than thirty technical sessions; six workshops; and twelve side events convened by more than sixty-six international, regional, and national organizations.

More than four hundred international and regional speakers have participated in CWW2022, with about three thousand participants worldwide. Furthermore, Prof. Dr. Hani Sewilam, Minister of Water Resources and Irrigation, honoured the winners of the week's competitions.

Finally, Dr. Sewilam gave the closing speech in which he announced the next Cairo Water Week in November 2023 to be under the main theme "Action on Water Adaptation for Sustainability" and thanked all the participating countries and the state entities for their collaboration over the past ten months.



- Water is the primary medium through which the effects of climate change are felt. At the same time water security will affect the achievement of most, if not all, of the SDGs. Water should be acknowledged as an important key to the achievement of all SDGs. And water cannot continue to be treated as a sector on its own but needs to be recognized as the main connector between sectors.
- A concern was raised in many sessions that the world is not on track to achieve SDG6 and other water-related Sustainable Development Goals and targets by 2030, which has a tremendous impact on human well-being and on the three dimensions of sustainable development (environment, economy and society).
- A strong commitment was expressed to advancing water-related SDGs, as well as all related aspects of the 2030 Agenda as appropriate and supporting the implementation of the objectives of the Water Action Decade.
- Critical importance of water has been highlighted by the COVID19 pandemic, as access to safe drinking water, adequate sanitation, and hygiene are among the first lines of defence against such pandemic, especially in the developing countries.
- There is a clear gap between the climate change international commitments and the actions that are actually taken on the ground. We need to shift to a more action-oriented approach with concrete measures on the ground that should be felt by the local communities.
- The links between water and adaptation should be clearly realized, as increased resilience against climate change and enhanced adaptation stimulates economic activity, ensures fiscal stability, and provides the foundation for sustainable societies and livelihoods. Adaptation efforts need to be complemented by means of implementation and financing, mainly adaptation finance, access to appropriate technology and capacity building.
- Smart financing is needed for the protection of water resources, adaptation to climate change, and the prevention of water-related disaster risks aimed at addressing water scarcity and increasing the resilience of people and communities vulnerable to water stress, water scarcity, and water-related disasters.

Summary and Conclusions

- There is a clear need to expand the international cooperation and capacity building support to developing countries in water-related activities and programs, including water harvesting, desalination technologies, water efficiency, waste water treatment, recycling and reuse technologies.
- During the bilateral ministerial meetings on the sidelines of the conference, MWRI affirmed to strengthen cooperation with several countries, the most important of which is cooperation with Sudan and preparation for an MoU in the field of preventing the risks of drought and floods. In addition, The cooperation activities with Tanzania are reviewed to evaluate the MoU for groundwater wells and rainwater harvesting dams. Also, MWRI emphasized that the Egyptian efforts will continue in Southern Sudan in the field of weed control and the provision of clean drinking water using wells powered by solar energy.
- Peace, sustainable development and regional integration shall prevail around shared water resources. Political dialogue and water diplomacy must be strengthened now more than ever before, including in the framework of conflict-prevention and building opportunities for cooperation to address the global water crisis.
- Exploring non-conventional water resources in water-scarce countries must be supported by appropriate technology transfer, financing, and capacity building that engage national and regional institutions, research centres, and local knowledge.
- There is a necessity to expand in using modern and smart irrigation systems and to attract the private sector to invest in these systems. On the other hand, there is a need to further develop institutional frameworks, use the most appropriate technologies, and develop the farmers' capacity in order to deal with these technologies.
- Joint actions that address both climate and water can reduce risks and save lives. Drawing upon science to support policy and collaborative efforts is essential to mitigate the water crisis, address water stress and overcome water scarcity under changing climate conditions.
- Establishment of Action Program on Water Scarcity to address the specificities and disproportionate impacts on the people in vulnerable situations, particularly rural communities, people living in arid regions, and those facing water scarcity, desertification, drought, and land degradation.
- The importance of promoting Aware initiative, and start the implementation of Pan African centre of climate and water adaption.

- Cairo Water Week (CWW) 2022 organized high-level segment on "Policy Dialogues in Water Scarce Countries for Achieving SDGs, towards the UN Conference on the Midterm Comprehensive Review of the Water Action Decade". Ministers and high representatives responsible for water affairs, environment, and sustainable development from different countries and international organizations were invited to deliver consolidated messages during the high-level segment. The conference addressed a number of topics including, water scarcity, cooperation, finance, and innovation.
- The high-level segment was concluded by developing the "Cairo Call for Action" that has defined thematic priorities as follows:
 - Water Scarcity and Accessibility
 - Transboundary Cooperation
 - Promoting Water and Climate Cooperation
 - Expanding Smart Finance Mechanism
 - Accelerating Innovation for sustainable water management
- It is now timely to bring the water discussions from the margins to the centre of climate deliberations. In this vein, the COP27 initiative on water "Action for Water Adaptation and Resilience (AWARe) initiative" is highly valued.
- The CWW organized a number of competitions, namely, Best Graduation Project, Young Water Inventors, Three Minute Thesis "3MT", and the National Water Conservation Farmers competition. The competitions were considered a very effective way for inclusion and raising awareness for a number of key stakeholders like youth (high schools and universities), researchers and farmers.

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- The "Cairo Call for Action" will be submitted from the CWW as one of the international selected conferences to the United Nations Conference on the Midterm Comprehensive Review of the Water Action Decade to be held in March 2023.
- Follow up the Egyptian efforts that have continued over the past two years by organizing high-level segments for water-scarce countries within the roadmap of the Water Action Decade conference, which is to be held in New York in March 2023 through the extensive participation of the Ministry of Water Resources and Irrigation in cooperation with international partners to organize an important event during the conference activities.
- The Egyptian Ministry of Water Resources and Irrigation, together with the national, regional and international institutions, shall continue the preparation for the water-related activities during the COP27, mainly the water pavilion.
- The COP27 presidency and the Ministry of Water Resources and Irrigation shall continue the preparation for the COP27 Water Thematic Day. It will be the first time in the history of COP to organize a thematic day dedicated to water. It is an important step towards bringing the water into the heart of climate action.
- The COP27 presidency and the Ministry of Water Resources and Irrigation shall further develop the "Action for Water and Adaptation Resilience (AWARe) Initiative" in order to be launched during the COP27. The initiative will aim to catalyse inclusive cooperation in order to address water as a key to climate change adaptation and its co-benefits, as well as resilience. AWARe will offer transitional adaptation solutions for planet and people, starting with the world's most vulnerable communities and ecosystems, including water scarce countries.
- After the Launch of the (AWARe) Initiative at the COP27, the Egyptian Ministry of Water Resources and Irrigation, together with WMO and other relevant institutions, shall develop a "Conceptual Program and a Roadmap of Action" for the initiative in order to achieve its main objectives and come up with tangible outcomes.
- The next Cairo Water Week will be organized in November 2023 under the main theme "Action on Water Adaptation for Sustainability", and it will focus on the implementation steps of the Egyptian initiative AWARe.
- The Cairo Water Week will continue the organization of its annual competitions: Best Graduation Project, Young Water Inventors STEM Schools, Three Minute Thesis "3MT", and the National Water Conservation Farmers competition.



Opening Ceremony



Side Events









Closing Ceremony

