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@ Cairo Water Week









Action on Water Adaptation for Sustainability

FINAL REPORT

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Introduction

Cairo Water Week (CWW) stands as a significant water-related gathering with implications at the local, regional, and global levels. This yearly occasion is orchestrated by the Egyptian Ministry of Water Resources and Irrigation (MWRI), under the esteemed patronage of H.E Mr. Abdel Fatah El-Sisi, the President of the Arab Republic of Egypt. Collaboration with national, regional, and international partners is integral to the event's success.

CWW serves as an outstanding platform for professional interaction, fostering the exchange of ideas, learning from diverse perspectives, and pinpointing opportunities for partnerships. The overarching goal of CWW is to facilitate connections among water organizations, industries in the water sector, regional stakeholders, and communities, thereby promoting collaboration and progress in the field.

The sixth edition of the CWW series of conferences was held from 29th October to 2nd November 2023 in Cairo- Egypt and addressed the main theme; Action on Water Adaptation for Sustainability. The following five related sub-themes and several sub-topics were addressed during the event through various plenary and technical sessions.

- Cooperative Management of River Basins.
- > Support co-benefits of water management adaptation actions and economic growth.
- Green water for restoring freshwater ecosystems and adapting to changing climates.
- Improving early warning systems for severe weather events and prolonged droughts.
- Integration of Climate and Water Policies with National Sustainable Development Visions.

Cairo Water Week 2023 In Numbers





Cairo Water Week 2023 Activities

Pre-Conference Preparations:

In the lead-up to the event, the CWW Permanent Secretariat dedicated the past ten months to meticulous technical and logistical groundwork. The eminent CWW 2023 Scientific Committee comprised esteemed professors and researchers from the MWRI alongside distinguished faculty members from prominent Egyptian Universities. Notably, it was chaired by Prof. Dr. Mohamed Safwat Abdel-Dayem Eid, Professor Emeritus at the National Water Research Center and Former Drainage Advisor at The World Bank.

A series of extensive coordination meetings were convened by the CWW Permanent Secretariat, engaging various participating entities. These encompassed a diverse spectrum, including international and regional organizations, governmental bodies, private universities, and multiple ministries.

The comprehensive preparations for the CWW Exhibition orchestrated a harmonious convergence of national and international stakeholders alongside public and private entities operating within the water sector. This platform facilitated the showcasing of their initiatives, programs, and products, elucidating their contributions to the domain. Furthermore, the Exhibition served as a hub for the introduction of cutting-edge ideas and state-of-the-art technologies in pivotal water-related domains, spanning desalination, renewable energy, wastewater treatment, and innovative water conservation technologies.

CWW Website and Platform

The CWW Permanent Secretariat led the development of the conference website, ensuring comprehensive coverage of pertinent details encompassing main themes, agenda, publications, and more. Additionally, the secretariat in collaboration with Orbscope Company coordinated the creation of a streamlined event platform, facilitating attendee engagement and registration within the conference database. Impressively, the website has garnered a total of 797746 visitors, underscoring its significant outreach and impact.

CWW Opening Ceremony

The sixth edition of the CWW was inaugurated in Cairo, bringing together a prestigious gathering of ministers, official delegations, senior water sector officials, scientists, international organizations, leading financial institutions, civil society organizations, and NGOs. The opening ceremony, a grand affair attended by distinguished personalities, set the stage for a week of intensive discussions and collaborations on pressing challenges related to water sustainability under the theme "Action on Water Adaptation for Sustainability."

The ceremony commenced with a warm welcome extended to all attendees, reflecting the inclusive spirit of the event. Several esteemed water leaders delivered impactful speeches during the opening session, shedding light on the critical intersection of water and climate change.

Among the opening ceremony speakers were:

- H.E. Prof. Dr. Hani Sewilam, the Egyptian Minister of Water Resources and Irrigation
- Amb. Ahmed Abo El-Gheit, Secretary General of the League of Arab States
- Ms. Meike van Ginneken, Special Envoy of International Water Affairs- the Netherlands
- H.E AbdulHakim Elwaer, FAO Assistant Director-General, Regional Representative for Near East and North Africa
- Ms. Florika Fink-Hooijer, Director-General for Environment, European Union
- Hon. Pal Mai Deng, Minister of Water Resources and Irrigation- South Sudan
- H.E. Madam Zhu Chengqing, Vice Minister of Water Resources of China

Their insightful addresses underscored the urgency of addressing water sustainability challenges and emphasized the importance of collaborative action in combating the impacts of climate change on water resources.

The opening ceremony set a profound tone for the week-long event, emphasizing the interconnectedness of global water and climate efforts. As participants engage in discussions over the coming days, the focus remains on collaborative, innovative solutions that bridge the gap between water and climate, forging a path toward a more sustainable and resilient future for all.

Plenary Sessions

Cooperative Management of River Basins.

This session was organized by MWRI and sponsored by the Joint Technical Committee for the Nile Water brought together experts to explore adaptation and mitigation options, fostering mutually agreed policies and sustainable practices, with a special focus on Africa.

Support Co-Benefits of Water Management Adaptation Actions and Economic Growth.

The session was sponsored by the Food and Agriculture Organization (FAO) and the Suez Company and organized by MWRI. The session discussed the support for environmental and economic benefits achieved through proper water management to bolster a growing economy. It also highlighted the integrated approach to water and climate and the significance of water in decision-making concerning climate change mitigation and adaptation.

Green Water for Restoring Freshwater Ecosystems and Adapting to Changing Climates.

The session was convened by MWRI and sponsored by UNESCO, explored strategies for restoring freshwater ecosystems in the face of climate change challenges.

Improving Early Warning Systems for Severe Weather Events and Prolonged Droughts.

MWRI hosted this pivotal plenary session sponsored by the United Nations Development Programme (UNDP). The session emphasized the generation of enhanced drought indices and probabilistic flood forecasting systems. It integrated various tools to create a robust early warning system, promoting collaboration with stakeholders for effective implementation.

Integration of Climate and Water Policies with National Sustainable Development Visions.

This session was organized by MWRI and sponsored by the European Union (EU), experts highlighted the integrated approach to water and climate, emphasizing the role of water in informed decision-making for climate change mitigation and adaptation. The session also emphasized the importance of linking water resources policies with national climate actions to prepare for climate change's long-term impacts on water resources and demand.

High-Level Events

The Egyptian-Dutch Expert Water Panel on Water, convened by the Ministry of Water Resources and Irrigation (MWRI) of Egypt. Experts from both nations engaged in fruitful discussions, sharing knowledge and insights to boost collaborative efforts in water management.

Towards Harnessing Successful Transition of the Water Agenda from COP27 to COP28, was also hosted by MWRI. This event provided a platform for delegates to strategize on the continuity of water-related policies between COP conferences, ensuring a seamless transition in global water agendas.

EU-UfM-AfDB Water Investment Forum, convened by the European Union (EU). The event provided a platform for policymakers and stakeholders to discuss and improve water finance and investment policies.

MWRI organized a high-level event, titled "Towards Harnessing Successful Transition of the Water Agenda from COP27 to COP28". This event not only served as a preparatory session for the water agenda at COP28 but also addressed national, regional, and global challenges.

AWARE 1st **Steering Committee Meeting** led by MWRI. Its main goal was to focus on steering the Action for Water Adaptation and Resilience (AWARE) initiative towards impactful outcomes.

MWRI organized a high-level event, titled "Refugee's Water Rights in Water-Scarce Countries and Its Implication on SDGs." The event focused on water-related challenges in water-scarce countries hosting refugees. It emphasized international cooperation and the role of organizations in supporting affected governments. Discussions centered on learning from regional cases, proposing cooperation in tackling the water crisis, implementing refugee rights, and providing financial aid to prevent the issue from escalating regionally and globally.

Follow-up Interactive Dialogue 3: Water for Climate, Resilience, and Environment of the 2023 UN Conference on the Midterm Comprehensive Review of the Water Action Decade, organized by MWRI and was geared towards enhancing policy recommendations and supporting the implementation of water and climate-related goals and targets of the 2030 Agenda for Sustainable Development.

African Event: On the Road to the 10th World Water Forum, organized by MWRI and stood out as one of the preparatory meetings on the Road to the 10th World Water Forum, to be held in Bali, Indonesia. During this event, perspectives and messages from various African countries were gathered. These insights will be disseminated to the global community through the 10th World Water Forum, amplifying the voices and concerns of African nations on the world stage.

The Fifth Meeting of the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States (LAO), organized jointly by LAO and the Arab Organization for Agricultural Development (AOAD). The event focused on joint water-agriculture initiatives and aimed at strengthening coordination and cooperation to address regional challenges.

Side Events

The European Union (EU) hosted **the EU-Egypt Water Talks/Water Investment Forum**, establishing a long-term policy dialogue platform to emphasize the importance of international collaboration and investments in addressing water challenges.

The United Nations Economic and Social Commission for Western Asia (ESCWA) organized a session on "Urban Planning for Water Scarcity in the MENA Region," shedding light on innovative urban solutions to combat water scarcity.

VNG International spearheaded a session focused on "Improving Sustainability of the WASH Sector in Upper Egypt (ISWS)," exploring ways to enhance water, sanitation, and hygiene services in the region through sharing the ISWS project learnings.

Building on the success of five editions of **the African Young Water Professional Forum** (Af-YWPF), which were organized under the platform of CWW, the 6th Af-YWPF is organized this year by the International Commission on Irrigation and Drainage (ICID), the African Regional Working Group (AFRWG), the Economic and Social Commission for Western Asia (ESCWA), the International Center for Agricultural Research in the Dry Areas (ICARDA), the Global Water Partnership Mediterranean (GWP-MED), the International Water Management Institute (IWMI), the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD), and the United Nations Convention to Combat Desertification (UNCCD). The 6th Af-YWPF launched virtually, the 3-day training workshops aimed to cover some important topics related to the themes of CWW and to the training needs assessment of African young professionals under the theme "Actions on the Climate Change Impacts and Sustainability of Irrigated Agriculture."

The "EU-UfM-AfDB Water Investment Forum," convened by the European Union (EU), aimed to integrate finance into the water-energy-food-environment (WEFE) nexus concept in the Mediterranean and Africa. It explored regional implementation efforts, fostered peer learning among financial institutions, and emphasized green finance for transforming the water sector. The focus was on gathering best practices and high-level guidance to advance water finance agendas in national and regional contexts.

The International Water Management Institute (IWMI) organized an event to introduce **the newly launched policy report on "Expanding Wastewater Reuse in MENA."** The Islamic Organization for Food Security hosted the "Round Table on Supporting Policy Development for Integrated Water Management in OIC Member States," promoting global sharing of experiences and best practices among OIC Member States and international entities. Simultaneously, the "Water Reclamation/Desalination Expert Meeting," led by the United Nations Development Programme (UNDP) and MWRI, delved into advancements in water reclamation technologies.

The "Aqua Dialogues: Youth Debates on Global Water Challenges/EU-Water Talks," led by the European Union (EU), empowered young leaders to contribute to the future of water management. By engaging young professionals, the event enriched policy discussions, promoting a more inclusive approach to water challenges. The Water and Environment Support (WES) hosted "WES in Egypt: Consultations with Stakeholders," focusing on developing financial mechanisms for on-farm water resource management.

Workshops

Maintaining Productivity of Salinity-Affected Landscapes: Roadmap for Egypt, this workshop, facilitated by the International Water Management Institute (IWMI), focused on addressing soil and water salinity challenges in Egypt and offering practical solutions for managing salinity in agricultural lands.

Three workshops organized by ESCWA, AGWA, and IWMI, exploring the following themes: "Improved Groundwater Management in the Arab Region through Enhanced Data and Information Access and Innovative Technologies," "Resilient Water for a Resilient Future: a Community of Practice for Innovative Adaptation in Africa," and "Nexus Perspective in Water Reuse Projects in Egypt: Scientific Evidence for Policy Advice," respectively. These workshops fostered innovative adaptation strategies through enhanced data access, community practices, and evidence guiding policy decisions.

The United Nations Economic and Social Commission for Western Asia (ESCWA) organized a crucial workshop titled "Improved Groundwater Management in the Arab Region through Enhanced Data and Information Access and Innovative Technologies." It provided a platform for discussions on data access and innovative groundwater management techniques to enhance the capacity of ESCWA member countries in integrated groundwater management.

The workshop, facilitated by the Enhancing Climate Change Adaptation Project in the North Coast and Nile Delta in Egypt (ECCADP), focused on "The GCF Project in Egypt/Status of the ICZM Plan," presenting the status of the Integrated Coastal Zone Management (ICZM) plan. It discussed institutional setups, progress in the National Observation System, modeling work, and future directions. The other workshop, "Adaptation to climate change through the water-energy nexus in Egypt," was convened by the Ministry of Agriculture and Land Reclamation (MALR), Desert Research Center (DRC), Egyptian Desalination Research Center of Excellence (EDRC), and Technology Innovation Commercialization Office (TICO). The workshop focused on promoting sustainable solutions to enhance water security and uplift living standards in impoverished communities.

ASRT convened the workshop "Research for Water Sector Adaptation to Climate Change," aiming to guide future research and enhance Egypt's resilience and sustainability in the face of climate change impacts. The workshop shared findings from a comprehensive study by Egyptian research institutions, identifying crucial gaps in technical and institutional aspects.

Technical Sessions

The National Water Research Center (NWRC) led a session on "Intelligence in Water Resources Management," underlining the significance of advanced technologies and sharing its artificial intelligence (AI) and internet of things (IoT) water management experience.

The International Water Management Institute (IWMI) facilitated a session on "Building the Foundations for Community-Led Development of Integrated, Nature-Inspired Water Solutions in Egypt and the Wider MENA Region," focusing on sustainable, community-driven water solutions inspired by nature.

UNICEF convened a session titled "Strengthening Resilience of Governorate in Egypt for Climate Change Crisis and Water Scarcity Management - National Model," emphasizing the need for robust strategies at the local level to combat the challenges posed by climate change and water scarcity.

"Action on the Ground" by Deltares, which explored real-life solutions for water security by combining global and local data. Collaborative efforts between Egypt, the Netherlands, and Bangladesh focused on Nile basin hydrology and erosion mapping in the Brahmaputra River corridor, which fostered cooperation and scientific development.

Deltares and IPDC organized the "IPDC—International Panel of Deltas and Coasts—Bridging the Gap between Implementation and Financing for Climate Adaption" to explore the gap between climate adaptation implementation and financing on the example of IPDC member country Egypt.

A group of Deltares, IPDC, Joint Cooperation on Applied Research on Water (JCAR), and Enhancing Climate Change Adaptation Project in the North Coast and Nile Delta in Egypt (ECCADP) together convened the "Egypt Sea Level Rise Hackathon (Launching event): Impacts and adaptation options to cope with accelerated sea level rise." The session delved into challenges and adaptation pathways for socio-economic development amidst accelerated sea-level rise in the Nile Delta and Egyptian Coast.

The Food and Agriculture Organization (FAO) organized six technical sessions on "Non-Conventional Water Resources: Addressing Opportunities and Challenges in the Context of Changing Climate and the Global Agricultural Commodity Market," "Navigating the NEXUS: Synergies and Strategies for Water, Food, and Energy in the NENA Region," "Harnessing Open Access Data and Earth Observation Technologies to Tackle Water Scarcity: A Data-Driven Approach," "A Multi-Dimensional and Coordinated Response to Cope with Drought Challenge to Achieve Food Security in the Arab Region," "Climate-Resilient Water Systems and Infrastructure for Sustainable Agriculture," and "Enhancing Sustainable Agriculture: FAO's Irrigation Projects in Egypt: A Focus on Achievements and Future Pathways." Through these sessions, FAO delved into coordinated responses to drought challenges, climate-resilient water systems, and achievements in irrigation projects.

IHE-Delft led discussions on "Water and Wastewater Treatment for Resource Recovery and Reuse in the Middle East: Technological Innovations and Practice," showcasing technological innovations, while IWMI organized "Addressing Water Scarcity in Fragile and Refugee-Hosting Communities - Anticipatory Action, Climate Change Adaptation, and Nature-Based Solutions,"

exploring anticipatory actions and nature-based solutions.

The Nile Basin Capacity Building Network (NBCBN) Foundation convened the session "Wetlands Adaptation and Resilience to Climate Change along the Nile: Bridging between Wetlands Ecosystems and Communities Livelihoods," bridging ecosystems and communities for sustainable livelihoods.

"Evidence-Based Decision-Making in Water Management: The Role of Applied Research," convened by the Joint Cooperation on Applied Research on Water (JCAR) and Deltares; "Climate Adaptive Water Productivity Management: Building Coherence Across Food, Water, and Land Policies," convened by IWMI; and "Accounting for Green Water: Water Adaptation Actions towards COP28," convened by the United Nations Educational, Scientific, and Cultural Organization (UNESCO-Cairo).

The German International Cooperation Agency (GIZ) organized three sessions: "Water Supply and Wastewater Management," "Efficient Water Management in Irrigated Agriculture," and "Water-Energy-Food Nexus: Challenges and Opportunities." These sessions aimed to address efficient water and wastewater management and explore the intricate relationship between water, energy, and food security.

Collaborative efforts between organizations and universities were showcased, including the Egyptian Chinese University's role in implementing nature-based solutions for community well-being. The session titled "Egyptian Chinese University (ECU) Role in Serving the Community through its International Cooperation with Prima Foundation" was organized by the EU-Prima-funded project "Safeguarding the livelihood of rural communities and the environment in the Mediterranean through Nature-Based Solutions (Mara-Mediterra)."

CIHEAM-Bari hosted "Capacity Development to Foster Sustainable Management of Water Resources in Egypt and in the Region: The Water Knowledge Project," emphasizing the Egyptian-Italian Water Training Programme's role in sustainable water management. The session highlighted the importance of capacity development and shared insights on fostering resilience in water ecosystems.

The Nile Basin Capacity Building Network (NBCBN) Foundation led "The Roadmap Towards Sustainable Capacity Development of Africa's Water Sector," addressing fundamental water challenges in Africa and aligning efforts with the UN 2030 Sustainable Development Goals.

The International Center for Agricultural Research in the Dry Areas (ICARDA) organized two sessions: "Water-Energy-Food-Environment Nexus for Enhanced Climate Resilience in the Mena Region," showcasing best practices in the Water-Energy-Food-Environment Nexus approach, and "Digital Applications for Improved Water Resources Management," focusing on technologies and data-driven platforms for efficient water use in the MENA region.

The session titled "The National Drainage Programme 3 in the context of the Joint Integrated Sector Approach in the Irrigation Sector (NDP3/JISA)," organized by the MWRI in collaboration with the Egyptian Public Authority for Drainage Projects (EPADP), discussed the NDP3 project, which aims to optimize water use and improve the efficiency of drainage systems to support socioeconomic development in Egypt.

Another significant session, "Advances in managing water resources, exploration, and contamination evaluation," led by the Academy of Scientific Research and Technology (ASRT) and the National Research Institute of Astronomy and Geophysics (NRIAG), delved into comprehensive studies and innovative techniques addressing crucial water challenges in the Nile Basin.

The session "Strengthening WASH Systems for a Water-Secure MENA Region," convened by the United Nations Children's Fund (UNICEF), explored governance tools and good practices to enhance WASH systems in the MENA region. The session showcased successful approaches to governance, emphasizing the importance of effective implementation strategies, regulations, and financing mechanisms in regions facing water scarcity and climate change challenges.

Scientific Sessions:

The week included six scientific sessions on the week's themes, totaling 66 presentations from 12 countries, comprising 121 submitted research papers, 37 oral presentations, and 29 posters.

Competitions:

- For the fifth year, the Cairo Water Week organized a **Three-Minute Thesis Competition** for postgraduate researchers in water-related fields. Participants were invited to share their passion for the subject and face the challenge of educating and engaging a multidisciplinary audience about their research topic in under 3 minutes. 36 master's and doctoral students participated, and four winners were honored during the week's closing ceremony.
- The Best Graduation Project Competition aimed to inspire and encourage creativity among graduate students in sustainable water development projects. Twenty-three graduation projects from various government and private universities were evaluated, and four winners were honored during the closing ceremony.
- The STEM School Competition for young water inventors was organized to promote interest in water challenges among today's youth. The competition targeted students of Science, Technology, Engineering, and Mathematics (STEM) in Egypt, aged between 15 and 19. 160 projects were submitted from across the country's provinces, and 5 winners were honored during the closing ceremony.
- The sixth National Competition for Best Water Conservation Practices, titled 'Preserve Water, Encounter It,' was organized for the sixth consecutive year under the auspices of the Ministry of Water Resources and Irrigation. The competition aimed to raise awareness about water conservation and its efficient use, specifically among the highest consumers of freshwater, the farmers. 407 farmers participated, and 10 winners were honored during the closing ceremony.
- A new award was introduced this year, the **Ibtikar Award**, dedicated to innovative ideas and solutions supporting the resolution of water-related issues within Egypt. 25 ideas were submitted, and two ideas were honored in a special session during the week.

Technical Tours

- A specialized tour was conducted to explore the "Enhancing Adaptation to Climate Change in Egypt's Delta Regions" project.
- The visit by the Iraqi Minister of Water Resources and the Tunisian Minister of Agriculture to the Hamam Station aimed at addressing agricultural wastewater treatment.
- An on-site excursion was organized to solar-powered agricultural stations in the Governorate of Al-Buhaira.
- A delegation from the Czech Republic visited the National Water Research Center.

Exhibition

The week featured an exhibition running concurrently with the conference activities, affording twenty-three public and private institutions within the water sector, alongside associated companies and industries, the platform to present their products, initiatives, and cutting-edge technologies in water desalination, renewable energy, and water conservation.

Bilateral Meetings

Prof. Dr. Hani Sewilam, the Egyptian Minister of Water Resources and Irrigation, engaged in a series of bilateral meetings with distinguished counterparts, including water ministers, delegation leaders, as well as representatives from regional and international organizations:

- Executive Director of the Islamic Organization for Food Security
- Resident Representative of the United Nations Development Programme
- Deputy Minister of Land and Infrastructure, Japan
- Deputy Minister of Water and Irrigation, Jordan
- Secretary-General of the Ministry of Water Resources, Bangladesh
- Regional Director of the African Development Bank in Egypt
- Minister of Water Resources, Republic of Iraq
- Minister of Water Resources, Republic of Tunisia
- Minister of Fisheries and Water Resources, Equatorial Guinea
- Special Dutch Envoy for Water
- Advisor to the United Nations Development Programme
- Minister of Water and Environment, Republic of Uganda
- Director of the Mediterranean Institute for Water
- Deputy Minister of Water Resources, China
- Deputy Secretary-General of the World Meteorological Organization
- Minister of Water, Namibia
- Deputy Minister of Irrigation, Malawi
- Deputy Minister of Water and Sanitation, Republic of South Africa
- Minister of Water Resources and Irrigation, Republic of South Sudan

The Closing Ceremony

The conclusion of the Sixth Cairo Water Week was marked by a remarkable ceremony. Prof. Dr. Hani Sewilam, Minister of Water Resources and Irrigation delivered a speech expressing profound gratitude to H.E Mr. President Abdel Fattah el-Sisi for his invaluable support of the Cairo Water Week. He extended appreciation to participants from diverse countries and global organizations. Prof. Sewilam also extended thanks to the collaborative efforts of organizers, sponsors, and Egyptian governmental entities, pivotal in ensuring the resounding success of this monumental event, aligning perfectly with Egypt's esteemed stature and influential role.

Prof. Sewilam underscored the evolution of Cairo Water Week into an international nexus for discussing global water challenges, notably emphasizing the pivotal focus on addressing the specific challenges encountered by African nations. He highlighted the Week's crucial role in scrutinizing the detrimental impacts of climate change on the water sector.

Furthermore, Prof. Sewilam took the opportunity to honor retired ministry leaders and distinguished professors at the National Water Research Center. Additionally, he lauded the winners of various competitions: "Young Water Inventors," recognizing exceptional STEM students; "Best Graduation Projects," acknowledging the achievements of Egypt's engineering, science, and agriculture faculties; and the "Three-Minute Thesis" competition, showcasing the work of master's and doctoral scholars. He also commended participants of the "Best Water Conservation Practices" competition, promoting sustainable agricultural methods for water conservation and environmental preservation.