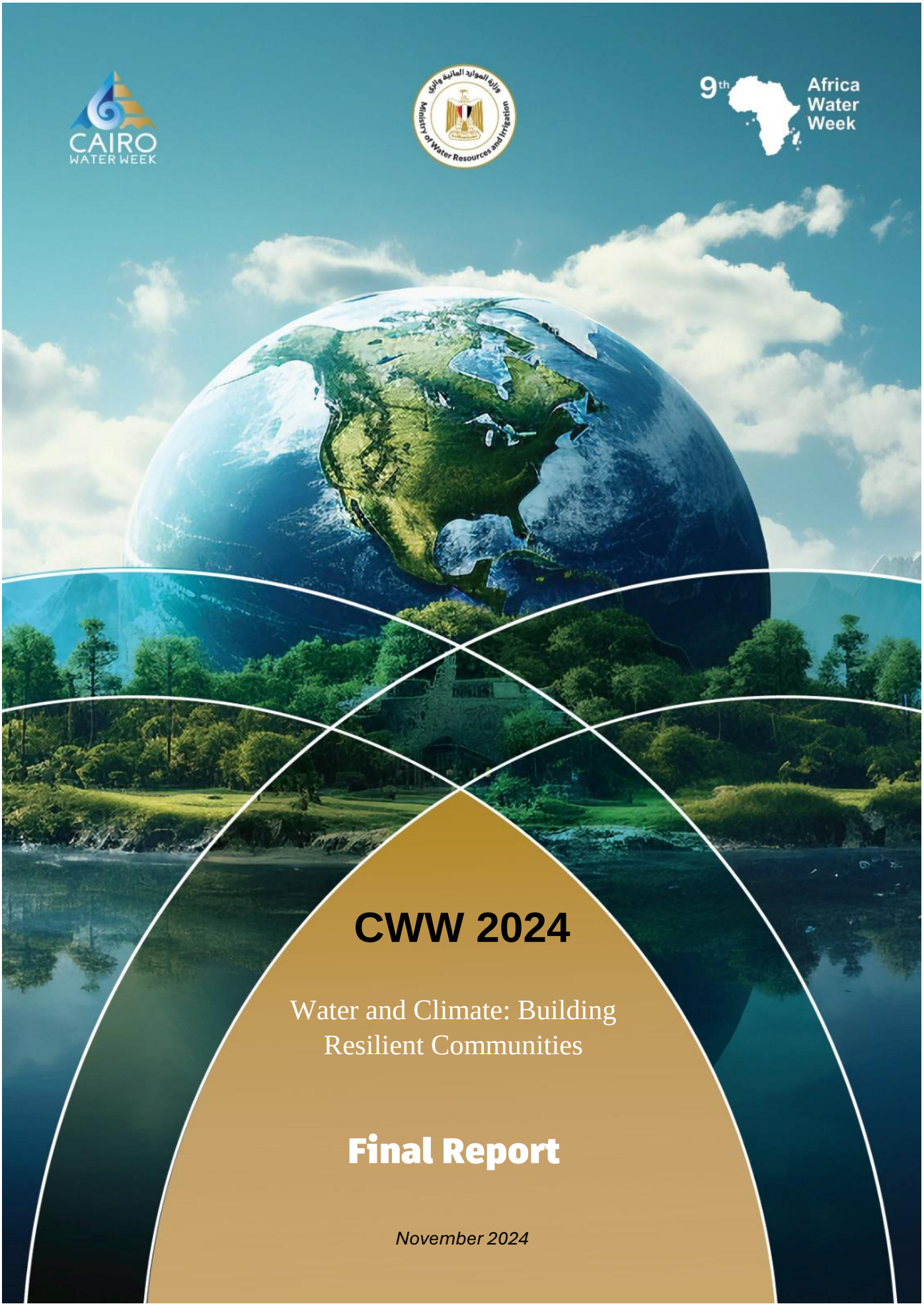

CWW 2024

Water and Climate: Building Resilient Communities

Final Report

November 2024

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Introduction

Cairo Water Week (CWW) has become a cornerstone event in global water resource management, tackling issues that resonate on local, regional, and international scales. Organized each year by the Egyptian Ministry of Water Resources and Irrigation (MWRI) and held under the distinguished patronage of H.E. Mr. Abdel Fattah El-Sisi, President of the Arab Republic of Egypt, CWW brings together a dynamic gathering of experts, policymakers, and practitioners from across the globe. This unique forum is designed to advance cutting-edge knowledge, facilitate strategic partnerships, and encourage dialogue for sustainable water solutions.

The 7th Edition of Cairo Water Week, held from 13 to 17 October 2024, brought together leaders, experts, and stakeholders from around the world to tackle some of the most pressing water and climate challenges. This year's conference theme, *Water and Climate: Building Resilient Communities*, encapsulated the shared ambition to confront water security issues in the face of climate uncertainties. Through five key sub-themes, participants engaged in thought-provoking discussions, exchanges of expertise, and actionable insights aimed at shaping a resilient future:

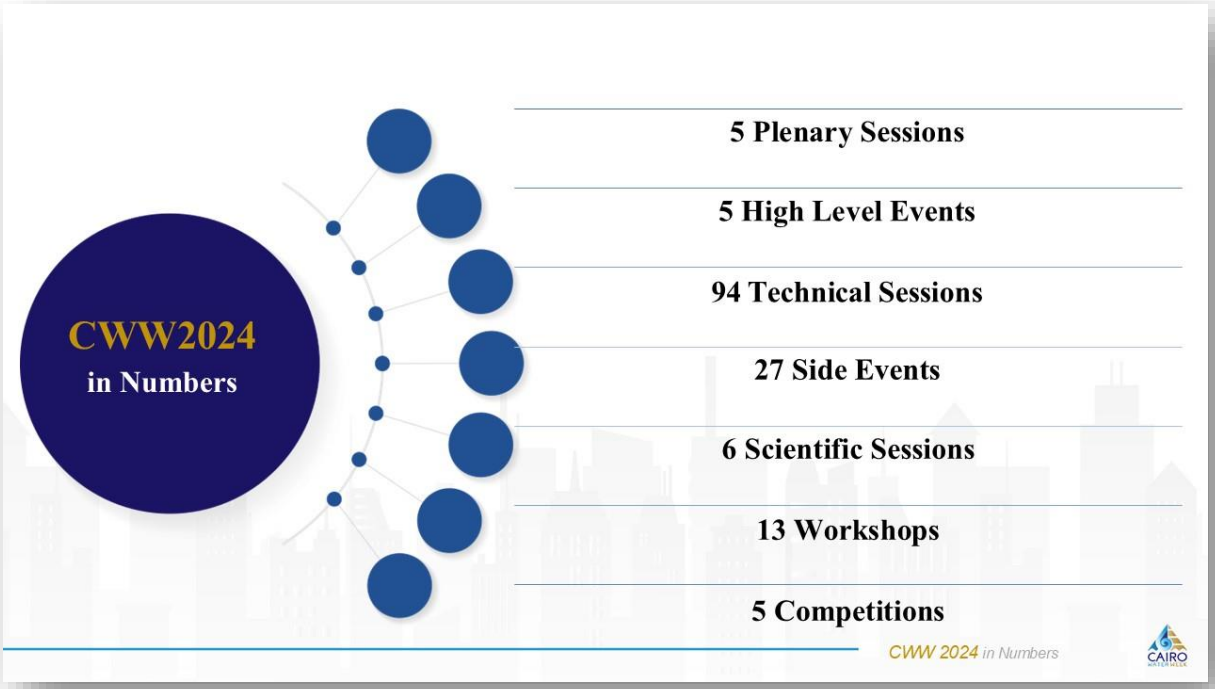
- **Transboundary Water Governance for Sustainable Development:** Focusing on shared water resources, this theme delved into cooperation and policy-making essential for equitable and sustainable water use across borders.
- **Strategic Water Resources Management in Enhancing Community Resilience:** This track examined strategic approaches to water management, highlighting the role of effective policies and practices in strengthening community adaptation to climate impacts.
- **Innovation and Financing Resilient Solutions for Water Security:** With an eye on cutting-edge solutions, this theme explored innovations and financing models designed to fortify water systems against current and future climate challenges.
- **Actions for Water and Climate Adaptations and Resilience:** Practical actions and frameworks took center stage here, showcasing efforts aimed at integrating water and climate adaptation strategies to bolster resilience.

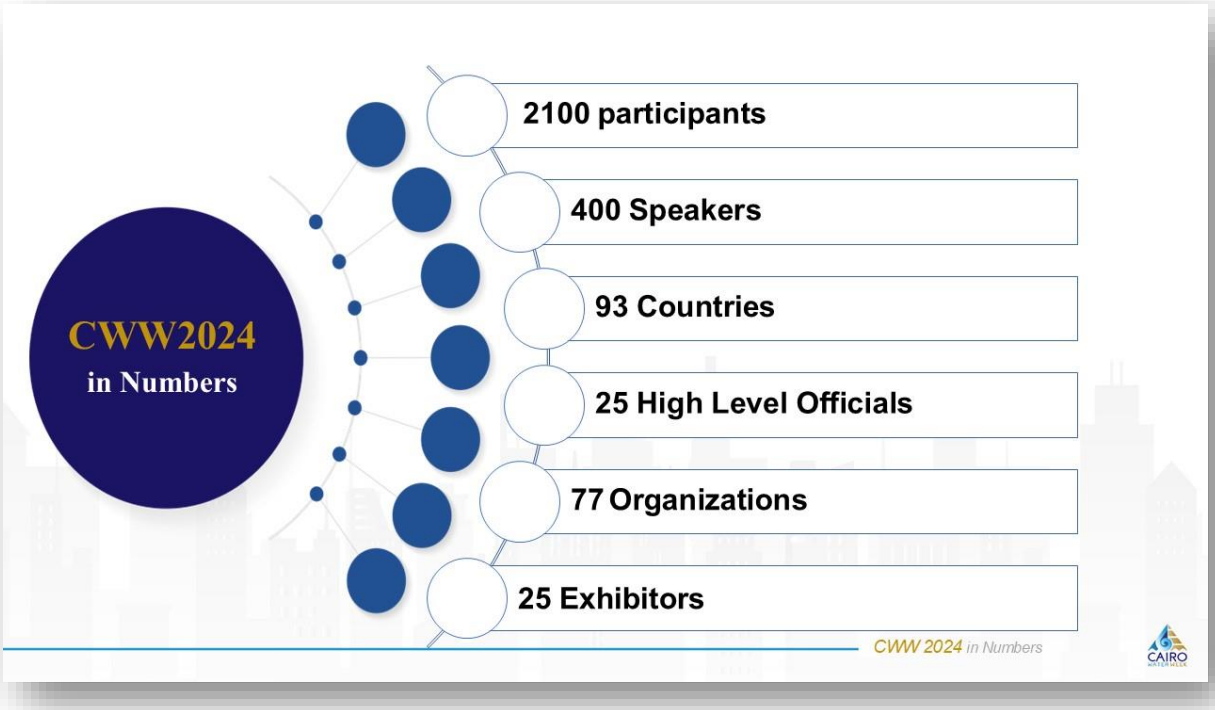
- **Climate-Smart Communities: Planning and Legislation:** Addressing the importance of governance, this theme looked at how thoughtful planning and legislation can drive the development of communities that are better prepared for climate variability.

CWW2024 was held alongside the Ninth Africa Water Week (AWW9), establishing a powerful platform for regional and global collaboration on critical water and climate issues. By merging these two pivotal events, participants accessed a broader spectrum of expertise, perspectives, and innovative solutions from across Africa and the global community. This joint event deepened opportunities for meaningful dialogue, knowledge exchange, and partnerships, strengthening efforts to address shared challenges. The unified approach amplified the impact of both conferences, empowering participants to develop more comprehensive strategies for water management and climate adaptation, ultimately advancing community resilience worldwide.

This year's Cairo Water Week stood out as a significant milestone, facilitating vital conversations on the nexus of water and climate resilience. Through its diverse sessions and collaborative environment, CWW 2024 underscored the urgent need for joint action to secure a sustainable and resilient water future for communities worldwide.

CWW2024 In Numbers





Preparations Leading Up to the 7th Edition of CWW 2024

In the lead-up to the 7th Edition of Cairo Water Week (CWW) 2024, the CWW Permanent Secretariat invested ten months in detailed technical and logistical preparation to ensure a seamless and impactful event. This year, the esteemed CWW 2024 Scientific Committee was led by Prof. Yasser M. Raslan, Emeritus Professor at the Nile Research Institute, National Water Research Center. Prof. Raslan, along with a team of distinguished professors and researchers from MWRI and prominent Egyptian universities, steered the scientific direction of the event.

The CWW Permanent Secretariat held numerous coordination meetings with an array of participating entities, including international and regional organizations, government bodies, private universities, and several ministries. This extensive collaboration fostered a well-rounded approach to the conference's objectives and engagement.

Another vital part of CWW 2024 was the Competition Committee, which organized various challenges and contests aimed at inspiring innovation and engagement among participants, particularly young professionals and students. This committee developed competitions that highlighted practical solutions and creative ideas across several key themes, including water management, climate adaptation, and technological advancements in water conservation. The competitions provided a platform for showcasing emerging talents, fostering a spirit of innovation, and encouraging actionable ideas that could contribute to sustainable water solutions in Egypt and beyond.

Preparations for the CWW Exhibition brought together national and international stakeholders, along with public and private entities active in the water sector. This dynamic exhibition served as a showcase for their initiatives, programs, and products, highlighting their contributions to the field of water resources. Additionally, it provided a platform for introducing cutting-edge technologies and innovations, featuring advancements in desalination, renewable energy, wastewater treatment, and innovative water conservation methods.

Opening Ceremony

The opening ceremony of Cairo Water Week 2024 marked the start of an ambitious gathering focused on water security and climate resilience. **H.E. President Abdel Fattah el-Sisi** delivered a recorded message highlighting Egypt's longstanding dedication to sustainable water management and stressing the critical need for global collaboration to address pressing water challenges. **Prime Minister H.E. Dr. Mostafa Madbouly** followed, underscoring the integral role of water in Egypt's national development strategy and calling for robust partnerships at both regional and global scales to ensure water security for future generations.

H.E. Prof. Dr. Hani Sewilam, Egyptian Minister of Water Resources and Irrigation, emphasized Cairo Water Week's role as a vital forum for dialogue and innovation, especially concerning transboundary water management across Africa. Additional powerful voices **included Dr. Florika Fink-Hooijer, Director-General of the European Commission's Environment Department; H.E. Dr. Badr Abdel Ati, Egyptian Minister of Foreign Affairs, Immigration, and Egyptian Expatriates Affairs; Dr. F.Z. Jihane El Gaouzi from the African Union Commission; and Mr. Loïc Fauchon, President of the World Water Council**. Each highlighted the need for unified action and sustainable solutions to confront water and climate challenges on a global scale.

Further contributions from **Dr. Rashid Mbaziira, Executive Secretary of AMCOW, Mr. Mtchera Chirwa from the African Development Bank, and AbdulHakim Elwaer, FAO Assistant Director-General for the Near East and North Africa,** reinforced the urgency of addressing the water-climate link, collectively underscoring the shared mission to build a sustainable, resilient future for all.

Day by Day Brief

Day One

The Egyptian Ministry of Water Resources and Irrigation (MWRI) convened the **Plenary Session on Transboundary Water Governance for Sustainable Development**, emphasizing the need for cross-border collaboration in managing shared water resources. This session explored frameworks for joint forecasting, data-sharing policies, and comprehensive agreements aimed at tackling water scarcity, pollution, and climate impacts. Participants discussed inclusive governance models to enhance equitable access to shared water resources and examined the role of regional bodies in supporting effective transboundary water management.

In a **Technical Session on Water Storage for Security and Resilience to Climate Change**, hosted by MWRI and the Academy of Scientific Research and Technology, speakers reviewed Egypt's historical and current water storage projects, including the High Aswan Dam and Lake Nasser. The session highlighted innovative methods such as artificial groundwater recharge and flash flood water storage to increase resilience in the face of climate-related challenges and rising demands.

The **2nd EU-Egypt Water Business Forum** hosted by the European Union presented an opportunity to strengthen EU-Egypt partnerships in water and food security. The forum, which built on the Team Europe Initiative, showcased investment opportunities and circular economy models that aim to maximize water use efficiency, reduce waste, and foster sustainable practices. Policymakers, industry leaders, and researchers collaborated on strategies for building a resilient water sector in Egypt.

A notable technical session led by the **International Water Management Institute (IWMI)**, titled "Multidimensional Analysis of Fragility and Resilience Pathways - Bouregreg Watershed, Morocco," introduced a comprehensive study assessing resilience and vulnerability in Morocco's Bouregreg region. This session outlined findings on sustainable water management pathways that can inform future resilience strategies across similar regions.

Roscoe Moss Sahara conducted a session on **Water Well Screen Selection**, offering insights on selecting appropriate well screens based on production, well type, and material specifications. This technical focus addressed best practices that enhance the longevity and productivity of water wells, a crucial factor in areas with limited groundwater resources.

IHE Delft Institute for Water Education and the **Water Development and Partnership Program** led a **Technical Session on Innovative Approaches in Agriculture for MENA and Sub-Saharan Africa**, which addressed water resource challenges due to scarcity and contamination. This session introduced unconventional methods, including smart monitoring tools, wastewater reuse in irrigation, and adaptive agricultural practices to combat salinization and water depletion.

The **High-Level Session of the AWARe Initiative**, co-sponsored by UNESCO and supported by multiple organizations, reviewed progress on Africa's water resilience efforts since COP27. The session emphasized coordinated climate adaptation projects in water management, highlighting the successful establishment of regional hubs and collaborative frameworks for implementing these strategies across Africa.

Deltares and its partners led the **Side Event on Boosting Water Security Through Integrated Adaptation Actions**, showcasing the UK's Water Resilience Tracker as part of the Just Transitions for Water Security initiative. This event illustrated how countries can incorporate water commitments into national climate plans, supported by insights from climate policy experts and national planners on improving water resilience in the face of climate challenges.

In another **Scientific Session on Transboundary Water Governance**, MWRI explored cooperative governance models that facilitate rural development, waterborne pathogen control, and hazard mapping. The session featured case studies on transboundary water management from the Nile Basin and other regions, underscoring the significance of data sharing and regional collaboration in achieving sustainable water solutions.

The **iWater Digital Transformation Session**, convened by TH Köln University of Applied Sciences, introduced the potential of IoT, AI, and big data in water management. This session focused on real-time monitoring, data analysis, and policy development to improve Integrated Water Resources Management (IWRM) across Egypt, with discussions on a new IWRM master's program to advance digital literacy in the water sector.

The **Launch of the Lebanese Water Reuse Standard** was another significant event led by IWMI, LIBNOR, and Lebanon's Ministry of Energy and Water. This side event highlighted Lebanon's progress in setting standards for treated wastewater reuse, an essential step in addressing water scarcity and ensuring sustainable water management.

UN-Habitat Egypt led a **Workshop on Nature-Based Solutions and Green Energy for Water**, discussing financing solutions for climate-resilient projects. The panel showcased case studies on nature-based solutions like Riverbank Filtration (RBF) units and offered guidance from financial institutions on aligning climate-resilient projects with international funding standards.

Day Two

The **Plenary Session on Strategic Water Resources Management in Enhancing Community Resilience** was convened by the Ministry of Water Resources and Irrigation (MWRI). This session emphasized the role of strategic water management in enhancing resilience amidst climate variability and changing land use patterns. Participants explored strategies that integrate risk communication, cross-sector collaboration, and sustainable practices to manage water resources more effectively and support community resilience.

FAO and the **Regional Initiative on Water Scarcity (WSI)** hosted a **Technical Session on Technologies for Sustainable Water Management**. The session focused on technology-driven interventions in the NENA region, highlighting FAO projects that aim to improve water efficiency, support agricultural productivity, and transition communities to advanced irrigation practices for better resilience.

The **5th Annual Conference on Water Finance and Investment**, co-convened by the **European Union (EU)**, **Union for the Mediterranean (UfM)**, and the **African Development Bank (AfDB)**, spanned the day with in-depth discussions on water finance strategies for the Mediterranean and Africa. Key topics included guidance on WASH finance, resource generation, and public-private partnerships. The session concluded with a draft Policy Brief summarizing the recommendations aimed at enhancing WASH investment sustainability.

A **Technical Session on Demonstrating Resilient Nature-Based Water Solutions** was led by **IWMI**, **IUCN**, **CEDARE**, and the **Palestinian Hydrology Group (PHG)**. This session explored the implementation of nature-based solutions across Egypt, Jordan, Lebanon, and the Occupied Palestinian Territories to address water scarcity and bolster climate adaptation in agriculture, showcasing practical models for resilience.

In the **Management in Mediterranean WEFE Governance** session, **IWMI**, **PRIMA**, and **CIHEAM of Bari** delved into the Water-Energy-Food (WEF) nexus as a paradigm for integrated resource management. Discussions covered the application of the WEF nexus in reducing climate risks and enhancing sustainability across the Mediterranean, underscoring how this approach supports stable resource supplies and climate adaptation.

The **EG-NL High-Level Expert Water Panel**, organized by **MWRI** and the **Dutch Embassy in Egypt**, provided a platform for Egyptian and Dutch experts to exchange insights on water management. The discussions focused on shared water challenges and collaborative approaches to resource sustainability, strengthening the bilateral relationship in the field of water resources.

A session led by **JCAR** titled **Supporting Policies for Modernization of Irrigation** highlighted Egypt's push for agricultural water efficiency. This session reviewed various irrigation techniques, including canal lining and drip irrigation, supported by field data and stakeholder feedback, to improve water use efficiency and agricultural performance.

FAO and **WSI** organized a session on **Enhancing Water Resilience Using a Data-Driven Approach**. This technical session explored the application of data-driven methodologies to support water management in the NENA region, with a particular focus on optimizing water use in agriculture and supporting the water-energy-food nexus for improved productivity.

A **Technical Session on Asset Management for Decision-Making in Pumping Operations** led by **JCAR** introduced an asset management system aimed at improving the efficiency of pumping systems in Egypt. The session featured presentations from system developers and engineers, who discussed the operational insights gained and outlined plans for expanding the system's implementation.

MWRI convened a **Scientific Session on Strategic Water Resources Management for Community Resilience**, which examined the interplay between land use, climate change, and water resources. The session emphasized the importance of simulation models and circular economy principles, addressing diverse strategies for sustainable water management and resilience building, including the effects of the Grand Ethiopian Renaissance Dam on water resources.

In a collaborative effort, **IWMI**, **MWRI**, and the **Arab Organization for Agricultural Development (AOAD)** held a **Launching Event for the Roadmap on Salt-Affected Agricultural Areas in Egypt**. This roadmap was introduced to address water and soil salinity challenges, providing pathways to maintain productivity in salt-affected lands crucial for food security.

The **Global Water Operators Partnership Alliance** conducted a **Session on Enhancing Climate Resilience through Water Operators' Partnerships (WOPs)** in the MENA region. Given the high levels of water stress across MENA, the session demonstrated the impact of peer-support exchanges between water operators in promoting resource efficiency, resilience, and reliable water service delivery amid climate challenges.

The **Empowering Sustainable Solutions** side event, convened by **CIHEAM** and **Hydroaid**, emphasized capacity building as the foundation of sustainable water governance. The session highlighted strategies for knowledge sharing, institutional strengthening, and the inclusive participation necessary to tackle water challenges through a long-term, sustainable approach.

JCAR and **ECCADP** co-convened the **Safe Coasts: Climate Resilience in the Mediterranean** session. This discussion focused on Integrated Coastal Zone Management (ICZM) to support decision-making for coastal resilience and development. Tools and programs developed by both projects were showcased to encourage collaborative efforts in the sustainable development of Egypt's coastal zones.

FAO led a session on **Multidimensional Approaches to Water Planning**. This event emphasized the role of cross-sectoral policies and adapted financing mechanisms in supporting Sustainable Development Goals. By facilitating intergovernmental coordination, the session aimed to foster effective water strategies that align with social and economic priorities.

The **Workshop on Source Water Protection Investments**, organized by **The Nature Conservancy**, **AFWASA**, and **SIWI**, discussed conservation efforts for source watersheds across Africa. By employing replicable financial and governance models, this workshop underscored the critical role of ecosystem conservation in supporting biodiversity and sustaining essential services.

IWMI and the **Arab Water Council (AWC)** introduced a session on **Enhancing Water Reuse in MENA through AI-Based Technologies**. This technical session showcased AI and advanced analytics applications in wastewater reuse, providing insights that support Egypt, the UAE, and Saudi Arabia in formulating policies to increase water reuse and promote resource efficiency.

A high-level session on the **Institutionalization of the WEFE Nexus Hub for MENA**, led by **INWRDAM** in collaboration with Jordan's Ministry of Water and Irrigation and MWRI, explored strategies to integrate the Water-Energy-Food-Ecosystems approach within the MENA region's national frameworks. The event highlighted progress and best practices for cross-sectoral collaboration.

In the **Follow-Up Session on the UN 2023 Water Conference** organized by **MWRI**, participants reviewed outcomes from the UN Water Conference and began planning aspirations for the UN 2026 Water Conference. The session reaffirmed commitments to the Sustainable Development Goals and emphasized the essential role of water in sustainable development, health, and poverty eradication.

The **Towards a Climate-Resilient and Safe Mediterranean Coast** session, co-convened by **ECCADP** and **JCAR**, explored the Integrated Coastal Zone Management (ICZM) approach in Egypt. Project leaders reviewed current efforts to adapt Egypt's coastlines to climate risks, discussing the ICZM's role in supporting sustainable coastal development through evidence-based tools.

In a session on **Advancing Water Resilience in the NENA Region**, **FAO** addressed the region's vulnerability to climate change, water scarcity, and food insecurity. The session discussed measures such as groundwater recharge, early warning systems, and community-based water management to support agricultural resilience and secure water resources. **PRIMA** and **IWMI** hosted a session on **Gender Equality in the Water-Energy-Food-Ecosystems Nexus**.

This discussion highlighted the pivotal role women play in water resource management, food security, and green energy. Success stories and initiatives within the MENA region underscored the importance of women's active participation in the WEF nexus for gender equality and sustainable resource management.

The **How Policy Shaped Water Reuse Reality in MENA** session by **IWMI** and **FAO** examined past policy successes and challenges in promoting wastewater reuse across the MENA region. Policy recommendations were discussed to further support safe and productive water reuse practices, emphasizing the importance of accelerating recovery and reuse efforts.

Finally, the **Technical Discussion on Solar Power Desalination for Irrigation under the AWARe Initiative (Part I)**, convened by **IDRC** and **UNDP** in collaboration with MWRI, engaged countries in a closed discussion on implementing solar-powered desalination as a sustainable water source. The session examined global best practices and approaches for desalination in agriculture, aiming to boost food production while addressing water scarcity in the region.

Day Three

The **Plenary Session on Innovation and Financing Resilient Solutions for Water Security** by MWRI and sponsored by IWMI explored strategic approaches to address challenges related to climate change and population growth. This session underscored the importance of non-conventional water resources, advanced technology, and innovative financing methods, including public-private partnerships, to bolster water resilience. The **Data Diplomacy and Exchange: Hydrological Data Management, Interoperability, and Access** side event, organized by the International Centre for Water Resources and Global Change and the Permanent Joint Technical Commission for Nile Waters, highlighted hydrological data's role in climate resilience. Discussions centered on data interoperability, knowledge-sharing platforms, and partnerships to improve hydrological systems across Africa. In the **Enabling Environment for Implementation of Nature-Based Solutions in MENA** session by IWMI and CEDARE, findings on systemic factors crucial for scaling nature-based water solutions were presented. Panel discussions enabled participants to delve into the components necessary for the effective implementation of these solutions across the region.

The **Advancing Science-Based Decision Making in Desalination for Agriculture Development** session by FAO and WSI focused on recent innovations in desalination for agriculture, addressing both opportunities and ecological impacts while showcasing sustainable agricultural practices. Convened by the National Water Research Center, the **Integrated Research for Sustainable Water Solutions in Egypt** session emphasized cross-sector partnerships in sustainable water management. Presentations covered innovative research and solutions to inform policy for Egypt's long-term water security. The **National Climate Change Adaptation Plan for Egypt** workshop by NAP Project, UNDP, and the Green Climate Fund provided updates on Egypt's adaptation strategy, focusing on climate resilience initiatives through policy and investment. **Scaling Resilient Nature-Based Water Solutions: MENA Lessons and Opportunities** by IWMI, IUCN, and CEDARE brought together stakeholders to share insights and recommendations for expanding nature-based water solutions in MENA. The **Policy and Technical Solutions for Water Data Diplomacy and Exchange** session by the Center for Geospatial Solutions, WMO, and the Lincoln Institute engaged participants in an interactive discussion on data-sharing best practices, with a focus on supporting water diplomacy. In the **Adaptation Costing for Mobilizing Climate Finance for Water** session by the League of Arab States and GCF, participants explored tools and methodologies for assessing climate adaptation costs in water projects to facilitate access to climate finance in the Arab region. In the **Strategic Orientations in Desalination for Agriculture Development** session by FAO and WSI, a panel examined decision-making considerations for the sustainable use of desalinated water in agriculture, focusing on food security and climate resilience. The **High-Level Session on Solar Power Desalination for Irrigation under AWARe** by IDRC, UNDP, and MWRI showcased solar-powered desalination technologies as alternative water sources for agriculture, with regional case studies highlighting integrated approaches to maximize desalination benefits. **Green Energy Transition for Enhanced Climate Resilience in MENA Agriculture** by ICARDA and MIT presented green energy innovations for sustainable irrigation, including solar-powered technologies and challenges in scalability within MENA agriculture. The **Launch of the Report 'Food-Land-Water Policies Coherence in Egypt'** by IWMI, MWRI, and World Fish introduced policy recommendations for climate-adaptive water productivity in Egypt. **Shaping Water Policies: National Water Research Center's Contributions** highlighted NWRC's research on water scarcity and climate impacts, with policy discussions for sustainable water management. **From Waste to Resource: Advanced Frameworks for Treated Wastewater in Agriculture** by FAO and WSI examined frameworks for the safe reuse of treated wastewater in agriculture, emphasizing regulatory practices and successful reuse examples.

The **Connections: From Observations to Resilience—Recent Advances** session by UNESCO's Regional Office in Cairo presented hydrological science advancements, with experts discussing innovations in remote sensing and hydrological modeling. **Best Practices on Groundwater Management** by MWRI featured successful models for sustainable groundwater management in Egypt, with companies sharing experiences that positively impacted water balance. In the **High-Level Session on Empowering Key Perspectives in Water Diplomacy** by SIWI and the Women in Water Diplomacy Network, gender equality's role in transboundary water governance was highlighted, focusing on initiatives supporting women's leadership in water diplomacy. The **Shaping the Future of Sustainable Water Management through Precision Agriculture** session by ICARDA and the Excellence in Agronomy Initiative emphasized digital solutions for efficient water use in MENA agriculture, showcasing innovations in remote sensing and data-driven platforms. **Supporting Water Security in Africa with Nuclear Science and Technology** by CRDF Global and CNESTEN explored isotope hydrology's role in supporting clean water goals and its applications in water management. **Launch of the One CGIAR Water Systems Integration Framework 2024-2030** by IWMI and CGIAR partners introduced a roadmap to unify water systems research for future water security, emphasizing the importance of stakeholder collaboration. The **Technical Discussion on Solar Power Desalination for Irrigation under AWARe (Part II)** by IDRC, UNDP, and MWRI continued discussions on regional collaboration for solar desalination projects. Finally, **Launching UNESCO NEXUS Hackathon on Water-Energy-Food in Egypt** by UNESCO's Regional Office in Cairo aimed to inspire youth-led innovation in sustainable management of water, energy, and food resources, while **From Satellites to Fields: Innovations Supporting Water Managers and Farmers** by IWMI and FAO showcased remote sensing tools for irrigation support in Jordan, Tunisia, and Iraq, highlighting the integration of satellite and ground data to enhance agricultural water management.

Day Four

The **Plenary Session: Actions for Water and Climate Adaptations and Resilience** by MWRI and WMO focused on the importance of resilience and adaptation in tackling climate impacts, with discussions on advancements in climate modeling, resilient hydraulic infrastructure, and early warning systems to protect communities and secure water resources. Complementing this, a **side event on Empowering Climate Action: The Water Resilience Tracker's Role in National Adaptation Planning** organized by AGWA and co-convened by Deltares, ARUP, and IWMI, examined the Water Resilience Tracker's (WRT) role in integrating water resilience into national climate adaptation strategies. Another notable **side event, The Second EU Aqua Dialogues - Nurturing Water Innovators: Youth and Entrepreneurship in the Heart of the Nile**, held by the EU, provided support to young Egyptian entrepreneurs by showcasing innovative water solutions, offering capacity-building workshops, and fostering partnerships aligned with the EU-Egypt Water Partnership for sustainable water business development. Addressing regional challenges, the **High-Level Session: The 6th Meeting of the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States**, hosted by the League of Arab States with support from FAO and ESCWA, gathered regional experts to tackle water and agriculture issues, promoting collaboration on water scarcity and food security across the Arab world. Meanwhile, the **Scientific Session: Actions for Water and Climate Adaptations and Resilience**, also by MWRI, highlighted the role of resilience in climate response, covering topics such as climate impacts on water and crop productivity, flood risk assessment, and other adaptation strategies for water and climate challenges. This was further emphasized in the **Technical Session: Building a Water-Secure Future for Africa: Capacity Building Success Stories for Sustainable Water Management**, organized by the Center for Applied Research on the Environment and Sustainability with the National Water Research Center, which presented African capacity-building successes, best practices, and skill development initiatives in sustainable water management. The **Workshop: Building Peace through Water Governance in Fragile and Conflict-Affected Regions**, hosted by IWMI, SPARC, and CCCPA, explored how water governance can foster peace and resilience, using examples of governance models that mitigate water insecurity and build climate resilience. For research sharing, a **Poster Session** organized by MWRI provided a platform

for about 15 studies showcased innovative approaches and research findings on water resilience and climate adaptation. The **Technical Session: Innovation in Climate Change Adaptation**, led by the Nile Water Sector and MWRI, tackled Africa's water challenges, particularly addressing seawater intrusion, drought impacts, and the development of resilient water management strategies for at-risk communities. Lastly, the **Technical Session: Results in Community-Water Company Collaboration & Energy Efficiency in Upper Egypt**, organized by VNG International, highlighted initiatives to strengthen community and water company collaboration in Upper Egypt. This session included efforts to enhance energy efficiency through ISO 50001 certification, advancing sustainability in Egypt's WASH sector and promoting effective water services management.

Day Five

The **Plenary Session on Climate-Smart Communities Planning and Legislation** led by MWRI focused on embedding climate resilience into urban development policies and regulations to proactively address climate change impacts. This approach aims to promote sustainable growth and enhance communities' adaptive capacity, particularly by considering affordability, human migration, land use, and job dynamics. Essential components discussed included integrating water, sanitation, and hygiene services, addressing the Water-Food-Energy Nexus, and implementing technologies like leak detection and water efficiency standards. The session highlighted the importance of community-based water management supported by robust legislative frameworks to ensure resilient urban infrastructure and equitable access to resources for all.

The **Technical Session on the National Drainage Programme 3 in the Context of the Joint Integrated Sector Approach in the Irrigation Sector (NDP3/JISA)**, convened by MWRI with support from the EU and other partners, detailed Egypt's efforts to improve agricultural performance through enhanced drainage infrastructure. The NDP3 aims to increase agricultural production by rehabilitating drainage networks and enhancing stakeholder capacities. This project is aligned with JISA, which seeks to boost investment effectiveness in Egypt's irrigation sector through better coordination and monitoring within MWRI, thus supporting Egypt's socio-economic development.

In the **Side Event on Climate-Resilient Cities: Innovative Solutions for Strategic Water Resources Management**, ESCWA and UN Habitat explored urban water-focused climate adaptation solutions. This session utilized an Adaptation Fund project to illustrate how satellite imagery and GIS can be leveraged in urban planning to address freshwater availability, quality, and climate change impacts. By demonstrating the interconnectedness of technical solutions for water resource management, the session underscored strategies for achieving climate adaptation and water security in urban areas, while also emphasizing financial sustainability. The **Scientific Session on Climate-Smart Communities Planning and Legislation**, also convened by MWRI, emphasized proactive measures for climate resilience in urban areas, focusing on sustainable growth, human migration, and job dynamics. This session presented an array of topics, including a policy framework to integrate the Water-Food-Energy-Environment Nexus into water management, innovations in coastal structures, methane mitigation in rice cultivation, virtual reality applications in water management, and climate risk management. Through these discussions, the session promoted innovative approaches to building climate-smart communities, fostering resilience and sustainability in urban planning and legislation amidst evolving climate challenges.

Competitions

- In February 2024, the Ministry of Water Resources and Irrigation (MWRI), in collaboration with the Food and Agriculture Organization (FAO) and the German International Cooperation Agency (GIZ), launched **the seventh edition of the National Competition for Water Conservation, titled "Best Farmers' Practices."** This competition recognized the valuable efforts of farmers and water user associations dedicated to conserving water resources. With enthusiastic participation from 392 entrants, a dedicated panel of judges carefully evaluated the submissions, ultimately honoring ten winners in a special session held during the week.
- The Ministry of Water Resources and Irrigation (MWRI), sponsored by the National Bank of Egypt, **continued the Three-Minute Thesis (3MT) competition**, originally introduced by The University of Queensland and first held at Cairo Water Week in 2019. This competition invites postgraduate researchers to present their thesis and its practical applications in a concise, three-minute format for a general audience. The 2024 competition, which concluded on June 30, included 41 participants from 33 Egyptian and eight international universities. After careful evaluations, 13 researchers were chosen to present in the final session at Cairo Water Week, where three winners were awarded. Port Said University took first place with the presentation titled "Role of Entophytic Fungi Isolated from Harsh Habitat Plants in Mitigation of Drought Stress Impact on Maize Plant."
- **The EBTIKAR Award**, dedicated to fostering innovative ideas and solutions for addressing water-related challenges in Egypt, received 26 submissions this year. Sponsored by the European Union (EU), the award celebrated standout contributions in a special session during Cairo Water Week. The first-place honor was awarded to Maadi STEM School for their project, "The Genetically Modified Bacteria for Enhanced Dairy Wastewater Treatment."
- **The Best Graduation Projects (BGP),** dedicated to encouraging innovative solutions for water-related challenges, received 41 submissions this year. Sponsored by the European Union, the award celebrated outstanding projects in a special session during Cairo Water Week. The first-place honor was awarded to the Faculty of Engineering at Cairo University for their project, "Climate Change and Cyclones Impacts on the Mediterranean Sea: Case Study of Derna, Libya, and Marsa Matrouh."

- **The Young Water Inventors Competition**, dedicated to inspiring youth engagement in water challenges, received 123 submissions from STEM students aged 15 to 19 across Egypt's governorates. Convened by the Ministry of Water Resources and Irrigation (MWRI) and sponsored by FAO, the German International Cooperation Agency (GIZ), and the National Bank of Egypt, the competition highlighted innovative science projects in a special session during Cairo Water Week. The first-place award went to the project "Smart IoT-Based Irrigation System for Efficient Water Management in Agriculture."

Technical Tours

As part of Cairo Water Week 2024, participants had the opportunity to engage in field visits that highlighted Egypt's ongoing efforts in water management and agricultural productivity. Sponsored by the **FAO**, the visit to **Al Fawazia village in Kafr Elsheikh** showcased the impactful work of the Enhancement of Agriculture Productivity Project, allowing participants to observe advancements in water management and agricultural practices firsthand. Additionally, a visit to **the National Water Research Center in Al Qanater** offered an in-depth look at the latest research and innovations shaping Egypt's water future. These visits provided participants with valuable insights into the country's commitment to sustainable water and agricultural practices.

Exhibition

The Exhibition, held alongside Cairo Water Week activities, was a premier event showcasing the latest advancements in water-related technologies. With the participation of **25 exhibitors** from research institutes, the private sector, international partners, and universities, the exhibition served as a central hub for water professionals, industry practitioners, and leading companies to exchange solutions addressing water challenges on national, regional, and international levels. It provided exhibitors with an invaluable opportunity to present their services and products to a discerning professional audience, fostering a strong platform for communication and knowledge-sharing within the water industry.

Bilateral Meetings

Prof. Dr. Hani Sewilam, Egypt's Minister of Water Resources and Irrigation, engaged in a series of important bilateral meetings with international leaders to strengthen cooperation on water management and climate resilience. Among these was a discussion with Zimbabwe's Minister of Water and Climate, South Africa's Minister of Water and Sanitation, and Saudi Arabia's Deputy Minister of Environment, Water, and Agriculture. These meetings underscored Egypt's commitment to tackling shared water challenges and building regional resilience against climate change.

In a focused dialogue with **H.E. Mr. Theodoros Skylakakis, Greece's Minister of Environment and Energy,** Prof. Dr. Sewilam addressed urgent Mediterranean issues, particularly the impacts of climate change and extreme weather events. The two ministers agreed to draft a Memorandum of Understanding (MoU) to formalize cooperation in areas such as water desalination, water reuse, and climate adaptation, paving the way for expertise exchange and joint training initiatives.

Additionally, Prof. Dr. Sewilam discussed Egypt's "Climate Resilience through Agricultural and Food Transformation" project with **Mr. Stefan G. Rimbert, World Bank Director for Egypt**. This project aims to modernize irrigation practices and bolster Water User Associations in key governorates. Progress on the "Suez Canal Water Management Study," focused on improving regional water distribution, was also reviewed.

Strengthening ties with African partners, Prof. Dr. Sewilam met with **Senegal's Minister of Water and Sanitation, H.E. Mr. Serigne Mbaye Thiam**. The two ministers discussed renewing their MoU and praised the Senegal River Basin Development Organization as a successful model of transboundary water cooperation. Representing Egypt as the current leader of the African Ministers' Council on Water (AMCOW), Dr. Sewilam expressed Egypt's willingness to support Senegal and the UAE in organizing the 2026 UN Water Conference.

Exploring partnerships in water and renewable energy, Dr. Sewilam met with **representatives from the Flanders Organization**, focusing on the Water-Energy-Food-Ecosystems (WEFE) Nexus. Key topics included the importance of desalination for food security and innovative approaches to reduce energy costs in agricultural water management.

In a parallel meeting, Dr. Sewilam engaged with **Kenya's Minister of Water, Sanitation, and Irrigation, H.E. Mr. Erick Mureeithi Muja**, reaffirming the robust relationship between Egypt and Kenya. The ministers agreed to draft a new MoU that would enhance collaboration in areas such as groundwater management and irrigation, continuing Egypt's long-standing support for Kenya's water sector.

Prof. Dr. Sewilam also conferred with **Ms. Shannon McCarthy, Executive Director of the International Desalination Association**, to discuss Egypt's role in international desalination projects. Their conversation covered potential participation in research studies and pilot initiatives, leveraging global experiences in water technology.

Dr. Sewilam's meeting with **Dr. Amgad El Mahdi, Regional Director of the Green Climate Fund (GCF)**, centered on developing climate-resilient irrigation systems. The GCF's Readiness Fund offers promising support for Egypt's flood management, hydrological modeling, and seawater intrusion projects, aimed at bolstering resilience in vulnerable areas.

In further strengthening ties with African nations, Dr. Sewilam met with **Somalia's Deputy Minister of Energy and Water Resources, Mr. Mohamed Ibrahim Ali.** They discussed preparing an MoU focusing on water management and capacity building, with Egypt inviting Somali specialists to training programs at the African Water and Climate Adaptation Training Center (PACWA).

In a promising collaboration, Dr. Sewilam **and Mr. Mark Smith, Director General of the International Water Management Institute (IWMI),** discussed finalizing an MoU to support the AWARe initiative, aiming to integrate water management into global climate action through research and knowledge sharing.

Dr. Sewilam also met with **representatives from the United Nations Development Programme (UNDP)**, the International Development Research Centre (IDRC) of Canada, and the International Desalination and Water Reuse Association to discuss a regional desalination project for large-scale food production in the Middle East and North Africa. Recognizing that 13 of the world's 17 most water-scarce countries are in this region, Dr. Sewilam highlighted lessons from successful desalination initiatives in Jordan, Morocco, and Spain.

Finally, in a productive meeting with **Mr. Ahmed Rizk, Egypt's Country Director for UN-Habitat**, They explored collaboration opportunities under the AWARe initiative, particularly in addressing urban water challenges.

Dr. Sewilam also met with **Mr. George W. K. Yaringo, Executive Director of Liberia's National Water and Sanitation Commission**, discussing Liberia's potential membership in the AWARe initiative, which could facilitate funding and project development for climate adaptation in Liberia.

Memorandums of Understanding

During Cairo Water Week 2024, three Memorandums of Understanding (MoUs) were signed, marking significant steps toward strengthening international collaboration in water management and climate resilience. These agreements, involving key stakeholders from various countries and organizations, aim to enhance knowledge exchange, joint research, and capacity-building efforts to address shared water challenges and promote sustainable water practices across regions.

- The signing of an MoU between **Egypt's Ministry of Water Resources and Irrigation and the Dutch Ministry of Foreign Affairs**. This agreement aims to strengthen collaboration on water management and climate adaptation, further solidifying the long-standing partnership between the two countries.
- A significant agreement was reached between **Egypt and Nigeria** as Prof. Dr. Hani Sewilam and Nigeria's Minister of Water Resources and Sanitation, Engineer Joseph Utsev, signed an MoU to enhance cooperation in water resource management. This collaboration underscores Egypt's ongoing commitment to strengthening water security across Africa.
- The signing of an MoU between **the Ministry of Water Resources and Irrigation and the International Center for Agricultural Research in the Dry Areas (ICARDA)**. This agreement focuses on enhancing collaboration in scientific research, human capacity building, and the development of water-saving innovations.

Extra Interactions and Highlights

- **New Milestone in Egypt-EU Cooperation**
  At the 2nd EU-Egypt Water Business Forum, H.E Prof. Dr. Hani Sewilam witnessed the signing of the European Green Facility initiative by H.E. Dr. Rania Al-Mashat and EU Ambassador Christian Berger under the Team Europe Initiative. This collaboration marks a new chapter in Egypt-EU relations, focusing on critical water and agricultural challenges. Prof. Sewilam underscored the importance of this partnership in driving sustainable development and addressing the growing need for resource management in Egypt.
- **Announcing the Egypt-EU Water Partnership Work Program for 2024-2025**
- The launch of the **"Ala El Ad" water conservation campaign**, attended by **Dr. Ali Gomaa**, Chairman of the Misr El Kheir Foundation. The campaign aims to raise awareness about water conservation across all segments of Egyptian society, from farmers to youth. The event also saw the signing of cooperation protocols with **Misr El Kheir Foundation** and **Egyptian Radio** to support the campaign's outreach.

The Closing Ceremony

CWW 2024 ended with a powerful closing ceremony that showcased the week's achievements and the collective efforts of participants from around the world. **H.E. Prof. Dr. Hani Sewilam**, Minister of Water Resources and Irrigation of Egypt and President of the African Ministers' Council on Water (AMCOW), led the ceremony with a heartfelt tribute to **President Abdel Fattah el-Sisi**, thanking him for his unwavering support and his impactful opening speech that set the tone for the entire event. He also extended his appreciation to **Prime Minister Dr. Mostafa Madbouly**, whose presence and opening remarks highlighted the importance of the week's discussions.

The ceremony began with remarks from **Mr. Nelson Gomonda**, AMCOW's Director of Programs, who spoke on behalf of **Dr. Rashid Mabazira**, AMCOW's Executive Secretary. He emphasized the significance of regional cooperation in addressing shared water challenges, stressing the need for coordinated efforts across Africa. Following that, **Dr. Tahani Sileet**, Chair of AMCOW's Technical Advisory Committee, delivered the **Declaration of the 9th Africa Water Week**, which underscored the importance of finding practical, actionable solutions to the continent's water crises in alignment with **Africa's Agenda 2063**.

A key highlight of the event was a **short film** that captured the most memorable moments and achievements of CWW 2024. Following the film, **Mr. Christian Berger**, Ambassador and Head of the European Union Delegation to Egypt, reaffirmed the **EU's strong commitment** to supporting Egypt and Africa in addressing water sustainability challenges. His remarks echoed the collaborative spirit that had characterized the entire week.

In his closing speech, **Prof. Dr. Sewilam** noted that CWW has grown into an essential platform for addressing global water challenges, particularly those affecting Africa. He stressed that climate change's impacts on water resources had been a central focus throughout the week's sessions. The diversity of the program which featured **five high-level events, five plenary sessions, 94 technical and scientific sessions, 27 side events, 13 workshops**, and **five competitions** provided ample opportunities for experts, officials, and participants to exchange insights and solutions.

Prof. Dr. Sewilam also highlighted the **important partnerships** established during the week, including key Memorandums of Understanding signed with Nigeria, the Netherlands, and the international organization **ICARDA**. Additionally, he pointed to notable initiatives such as the **European Green Facility Initiative** and the **"Ala El Ad" water conservation awareness campaign**, which will help drive Egypt's efforts toward sustainable water management.

The ceremony concluded with a series of **awards**, recognizing the outstanding contributions of participants throughout the week. **Ambassador Christian Berger**, senior ministry officials, and **young innovators** who excelled in various competitions were honored. Special recognition was also given to the **volunteers** whose dedication and hard work were integral to the success of CWW 2024.

Key Takeaways from the Week

- **Conducive cooperation and inclusive governance in shared basins**: compliance with international law principles.
- **Water Sector Financing and Community Engagement**: financing mechanisms, including public private partnerships, multilateral donors' role
- **Innovative Water Management:** integrating innovative practices, along with advanced technologies in modelling and monitoring
- **The WEFE Nexus:** the promising future model for developing strategies that can lead to more effective climate change adaptation and create resilient communities.
- **Strong support from regional and international community:** in addressing climate change impacts
- **Need for strengthening partnerships and advancing joint forces.**
- **Enhancing capacity building and knowledge-sharing:** capacity building activities and scale cross-Continental knowledge sharing
- **Socioeconomic benefits of hydrological monitoring/data/predictions:** effectiveness of hydrological data/prediction and demonstrate the value across various sectors.
- **Plan to organize the next editions of the African Hydrological Conference**