

# FINAL REPORT

**Cairo Water Week 2021**

**Water, Population and Global Changes:  
Challenges and Opportunities**

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### Introduction

Cairo Water Week (CWW) is considered one of the enormous water-related events at the national, regional, and international levels. CWW 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.

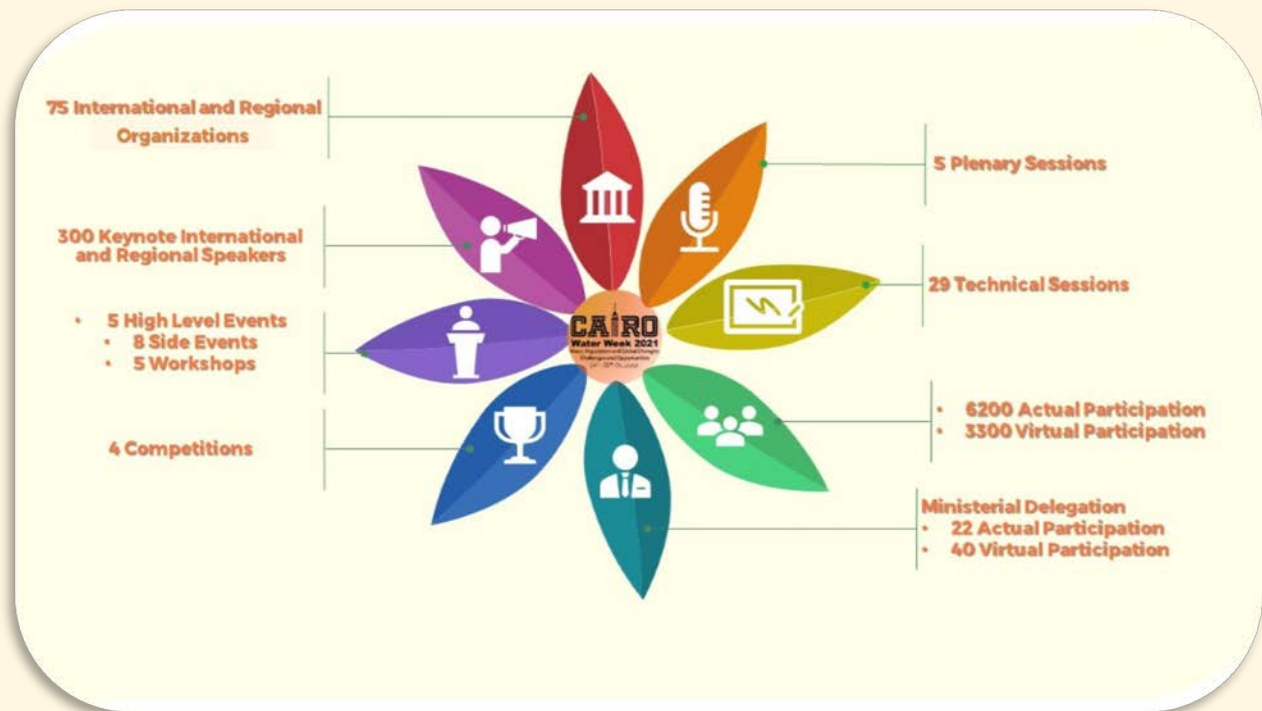
CWW is an exceptional platform for professional engagement to exchange, learn, and share ideas from others. In addition, identify areas for partnerships and collaborations. CWW aims to connect water organizations, industries, regional interests, and communities.

The fourth edition of the CWW from 24<sup>th</sup> to 28<sup>th</sup> October 2021 in Cairo – Egypt, addressed the central theme; Water, Population and Global Change: Challenges and Opportunities. The following five related sub-themes and several sub-topics were addressed during the event through various plenary and technical sessions.

- Water and Global Changes
- Advances in Water Management
- Water and Society
- Regional and Sectoral Cooperation for Water Security
- Innovation in Hydro-Sciences

## Cairo Water Week 2021 In Numbers

- Five plenary sessions and 29 technical sessions were held,
- 6200 actual participation in the sessions,
- 3300 virtual participation,
- 40 virtual participation for ministerial delegation,
- 22 actual participation for ministerial delegation,
- five High-Level Events,
- Eight side events,
- Four Competitions,
- Five Workshops,
- 300 international and regional keynote speakers,
- 75 international and regional organizations.



## Summary of CWW 2021 Event

### 1. Post Conference

- ◆ A Ministerial Declaration was issued to form the CWW Permanent Secretariat from the Ministry's top engineers and employees, and headed by Dr. Eman Sayed, Head of the Planning Sector, MWRI. Over the past ten months, the CWW Permanent Secretariat prepared for the event at the technical and logistical levels.
- ◆ The CWW 2021 Scientific Committee was composed of distinguished professors and researchers from the MWRI and prestigious Egyptian Universities headed by Prof. Dr. Abdel Qawi Khalifa (Professor at the Department of Irrigation and Hydraulics, Faculty of Engineering, Ain Shams University). Dr. Khalifa also 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.
- ◆ The CWW Permanent Secretariat established a web platform for the Scientific Committee to receive and evaluate the research papers transparently. This evaluation involved more than 45 Professors from all over the world. As a result, the accepted research papers will be published in several international scientific journals.
- ◆ The CWW Permanent Secretariat held many coordination meetings with the participated entities, including international and regional organizations, governmental and private universities, and several ministries (Foreign Affairs and Environment)
- ◆ The CWW Permanent Secretariat prepared for the High-level event "Policy Dialogues in Water Scarce Countries for Achieving SDGs, which coordinated at the highest level with the Nile Water relevant authorities and regional organizations such as the United Nations Economic and Social Commission

## Cairo Water Week 2021

for Western Asia (ESCWA), In addition to, Food and Agriculture Organization of the United Nations (FAO), as well as delegations of participating countries from the Netherlands and Sweden.

- ◆ 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.

## 2. CWW Website

The CWW website includes all the relevant information regarding the conference (main themes description, agenda, publications etc.) In addition to secretariat has designed a registration program and a mobile application to follow up with the attendees and register their presence in the conference database.

### 3. CWW Opening Ceremony

The opening ceremony started by welcoming all attendees. Then, the Egyptian Minister of Water Resources and Irrigation, his Excellency Dr. Mohamed Abdel Atti, gave his opening speech. Dr. Abdel Atti emphasized that the achieved success by the previous editions of the Cairo Water Week made it the focus of attention for all experts and decision-makers worldwide.

Several distinguished water leaders gave their statements during the opening ceremony. Including H.E. Mr. Serigne Mbaye Thiam, Minister of Water and Sanitation, Senegal. The minister mentioned that the central theme of Cairo Water Week 2021 is topical and consistent with the priorities of the 9th World Water Forum organized by Senegal and the World Water Council from 21-26 March 2022, in Dakar.

His Excellency Mr. Abd el Hakeem Ragab El Waer, Assistant Director-General and Regional Representative of FAO in the Near East and North Africa region emphasized that the sustainable development agenda is threatened without making any progress in the second and the sixth sustainable development goals.

After that, Hon. Eve Bazaiba Masudi, Minister of Environment & Sustainable Development of the Democratic Republic of Congo, stressed that today water resources management should be subject to several principles to face the upcoming challenges. The best approach to achieving this is integrated water resources management.

H.E. Mr. Áder János, President of the Republic of Hungary, gave a recorded Message declaring “There is now a common belief that the 20th century was the century of oil; the 21st century is the century of water”.

Finally, his Excellency Mr. Abdel Fattah El Sisi, President of the Arab Republic of Egypt, concluded the ceremony with a recorded message. In which, President El Sisi addressed how Egypt succeeded in putting the Cairo Water

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Week in its editions 2021 and 2022 on the UN-Water Action Decade roadmap, aiming to offer broad discussions among the various stakeholders. In addition, the president encouraged the participants to engage constructively and transparently in the multiple activities of the Cairo Water Week 2021.

Ministers, senior officials, and water experts from all over the world attended the opening ceremony.



## 4. Plenary Sessions

### ❖ Regional and Sectoral Cooperation for Water Security

Mr. Bai-Mass Taal moderated this session, Former Executive Secretary of The African Ministers' Council on Water (AMCOW) Special Adviser, Secretariat 9th World Water Forum, Dakar 2022.

Seven distinguished panelists discussed the following topics; The necessity of cooperation to deal with significant issues such as water allocation, upstream and downstream impacts of water pollution and water abstraction, construction, and management of infrastructures such as dams, dealing with illegal stereotypes and overexploitation of surface and groundwater, the financing issues, and improving water-related crisis management.

The session outcomes: Presenting the success stories of cooperation within the framework of the international river's basin,

- Involvement of multilateral and international organizations in an integrated manner to achieve the desired cooperation, and
- Enhance the political desire of governments to jointly benefit from the available opportunities and reduce disputes over water resources.

**CAIRO**  
Water Week 2021  
Water, Prosperity and Global Change  
Challenges and Opportunities

**Plenary session 1**  
Regional and Sectoral  
Cooperation for Water Security

Day 1 - Sunday  
24<sup>th</sup> October 2021

 <b>Mr. Bai-Mass Taal</b> Former Executive Secretary AMCOW Special Adviser, Secretariat 9 <sup>th</sup> World water Forum, Dakar 2022	 <b>Hon. Eve BAZAIBA MASUDI</b> Vice-Prime Minister, and Minister of Environment and Sustainable Development Democratic Republic of Congo	 <b>Prof. Dr. Hesham Bekhit</b> Professor at Cairo University	 <b>Dr. Martina Klimes</b> Advisor - Water & Peace, Transboundary Water Cooperation at Stockholm International Water Institute (SIWI)
 <b>Dr. Hanan Al-Amin Muddathir</b> Consultant and expert in environmental, water of Environmental Initiative for Sustainable Development, Sudan	 <b>Prof. Asit Biswas</b> Professor at Glasgow University	 <b>Mr. Marc Daniel Heintz</b> Executive Manager of International Commission for the Protection of the Rhine (ICPR) - Head of Secretariat	 <b>H.E. Mr. Yerlan A. Baidaut</b> Director General of Islamic Organization for Food Security (IOFS)

## ❖ Advances in Water Management

Mr. William Oliemans, the Regional Manager Latin America and the Caribbean, Deltares, Netherlands, moderated this session.

Six distinguished panelists addressed the gap between water supply and demand that may be mitigated by applying adaptive integrated water management. In addition, they discussed the primary management objective to improve water productivity and increase water use efficiency and the approaches to achieve it in the agricultural sector using intelligent irrigation systems, drainage water reuse, and saline agriculture.

Moreover, the panelists emphasized that a futuristic management approach in the urban water sector is to apply artificial intelligence (AI) for optimization, automation, and decision-making. AI can aid in managing water loss and misuse in real-time, design and implement reliable distribution networks and achieve financial targets.

Dr. Ragab Abdel Azeem, First Undersecretary of MWRI, presented Egypt efforts in the field of developing and modernizing water resources management and irrigation systems at all levels beginning with grand irrigation structures, passing through facilities of monitoring the quantity and quality of water in waterways and ending with the development of field irrigation and intelligent applications to control the required amount of water for irrigation.



### ❖ Water and Society

Mr. Péter Kovács moderated the Water and Society session, Head of Department of the River Basin Management and Water protection, Ministry of Interior, Hungary.

The Egyptian Minister for Water Resources and Irrigation, Dr. Mohamed Abd El Atti, addressed the ministry's improvement projects in irrigation and their positive impact on the farmers' life .

Five distinctive panelists discussed the nature and sources of the global water crisis, which vary regionally across different demand, supply, infrastructure development, and governance pattern. Also, the session addressed understanding the nature of the water crisis and the determinants of water insecurity which prerequisites are to form a good Decision Support System regarding institutional development and infrastructure investment.

Moreover, the panelists presented water security issues and the link between water security, sustainability, and economic growth. Also, they discussed the private sector's role in providing community services to raise living standards and curbing the environmental problems related to water. Therefore, it will mitigate the epidemics spread, especially in overpopulated regions. Finally, draw lessons learned from efforts to overcome the Corona pandemic at the domestic and international levels.



❖ Water and Global Changes

The Water and Global Changes session was moderated by Prof. Eelco van Beek, an integrated water resources management (IWRM), Deltares. Seven distinctive panelists discussed the Growing populations, urbanization, land-use changes, climate change, increasing demand for water, water stress, and water scarcity.

The session addressed various adaptation measures dealing with global change, climate variability, methods of optimizing land, and water management practices to create resilience to global warming and climate change.

During the session, The Minister of Water Resources and Irrigation for South Sudan, Hon. Manawa Peter Gatkuoth elaborated on the impact of climate changes on the Southern Sudan and the urgent need for infrastructure facilities planned on an environmental and economic basis to control flood risks, the most important of which is the construction of multi-purpose dams. Also, the Jonglei Canal project. Moreover, Masdar, an Emarati Company, reviewed the latest renewable energy technology in water desalination. Furthermore, the international experts explained the latest scientific findings in planning and managing water resources to confront global changes.

Finally, the Ministry of Water Resources and Irrigation presented their achievements in protecting the Egyptian shores as one of the adaptation measures to global changes. Egypt pays excellent attention to these measures, which require broad international participation at the technical and financial levels for such projects.



### ❖ Innovation in Hydro Sciences

During the session, Dr. Mohamed Abd ElAtti, discussed the Ministry's interest in scientific water research and its contribution to maximizing water management in the presence of Dr. Khaled Abd ElGaffar, the Egyptian Minister of Higher Education. Prof. Dr. Hani Sewilam moderated this session, Professor, RWTH Rector's Delegate for Cooperation with African Countries, Managing Director- UNESCO Chair in Hydrological Changes and Water Resources Management, and Deputy Director, Department of Engineering Hydrology, RWTH Aachen University, Germany.

Six distinct panelists discussed the innovations from various disciplines related to water resources and demands and the environment in terms of sustainability, management, and predicting the effects of engineering and technological interventions on social and economic backgrounds.

It is noteworthy that the session presented an international research paper that discussed the earth displacement at the Grand Ethiopian Renaissance Dam site using radar rays, as a technology used for the first time to assess the dam's facilities conditions. The paper used this method to ensure dam safety, which directly affects the lives of millions of people. Also, it evaluated the first filling stage and its impact on the main body of the dam. Accordingly, significant recommendations have been issued regarding the urgency of reviewing the dam's structural system situation and the filling program to ensure its safety and reduce the declared capacity according to a careful review.

### 5. High-Level Events

#### ❖ Policy Dialogues in Water-Scarce Countries for Achieving Sustainable Development Goals (SDGs)

On behalf of the Egyptian Government, the Egyptian Ministry of Water Resources and Irrigation started in 2018 the Cairo Water Week (CWW) as an annual event, among many other activities, to solve local, regional, and global water challenges. The CWW is now one of the most popular water-related events that take place in Africa and the Middle East. As this event brings together a broad range of high-level officials, experts, and other stakeholders to discuss the most recent trends related to water. The event is one of the most adequate platforms for both developing and water-scarce countries to present their views and discuss the particular challenges they face and potential solutions.

Egypt attaches great importance to the UN Decade for Action on Water and Sustainable Development (2018-2028) and the UN Mid-term Review conference in 2023, the first UN Conference on Water since 1977. This importance emanates from the indispensability of water to human life, as human beings have no source but water for life, food, and agriculture. In addition, water plays a significant role in sustainable development and regional integration, among other things. Therefore, the lead-up to the 2023 Conference, the Conference itself, and its follow-up are crucial in building political momentum towards achieving SDG 6 and other water-related goals and targets. In this context, the Government of the Arab Republic of Egypt included Cairo Water Week's two sessions of October 2021 and upcoming October 2022 within the framework of the preparatory meetings towards the 2023 Mid-term Review Conference in order to contribute to building consensus ahead of the Conference and providing substantive inputs.

#### **Objectives**

On behalf of the Egyptian Government, the Egyptian Ministry of Water Resources and Irrigation took the initiative and pledged a full day for a high-level segment

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during the 2021 Cairo Water Week titled “Policy dialogues in water-scarce countries for achieving SDGs.” This high-level segment comprised focused sessions on:

1. The Situation of Water Scarce Regions.
2. Water & Climate Cooperation: Best Practices and Success Stories.
3. Finance: Challenges vs. Opportunities.
4. Innovation tools for sustainable water management.
5. These discussions seek to turn the tide on cross-sectoral implementation of the water-related goals and targets of the 2030 Agenda for Sustainable Development.

The High-Level Segment of CWW 2021 discussed these national and regional challenges and defined critical areas of action and potential cooperation. It also presented several key messages to support policy recommendations to enhance the implementation of water-related SDGs as an important contribution to the 2023 UN Mid-term Review Conference.

### **Venue and Format**

The hybrid High-level segment took place on October 24<sup>th</sup>, 2021 in Cairo. The segment offered both physical and virtual platform for government and non-government experts to express their support to the agreed policy key messages; which were mainly focused on; finance availability, technology and innovation, regional and sectoral cooperation, capacity building, and decision support tools. The UN Member States, and the countries and institutions, were invited to the event, which was broadcasted to the public.

### **Participants**

The participants were from government representatives, international and regional entities, multidisciplinary organizations, and High-level experts from all over the world.

### ❖ **Launch Arabic Edition of World Water Development Report 2021(Valuing Water)**

Under the Umbrella of CWW 2021, the Arabic Edition of World Water Development Report (WWDR) 2021 “Valuing Water” were Launched in the presence of his excellency deputy Minister of Water, Saudi Arabia, and Regional Director, UNESCO office, and a cohort of experts from the Arabic region.

The United Nations WWDR is an annual and thematic report that focuses on different water strategic issues and aims to provide the decision-makers with the right tools to ensure sustainable use of water resources.

It is worth mentioning that CWW has previously hosted the launching of the 2017 WWDR Arabic Edition Report “Wastewater,” which denotes the excellent reputation of the CWW event.

### ❖ **Special Event on the Egyptian National Climate Change Strategy (NCCS)**

This session aimed to inform the national, regional, and international organizations of the initial output of the NCCS and its framework. In addition, this will promote exchange and dialogue among researchers, policymakers, and the international community.

Eng. Sherif Abd Elreheem, Head of the Central Department of Climate Change, Egyptian Environmental Affairs Agency (EEAA), and Dr. Eman Sayed, Head of Planning Sector, Ministry of Water Resources and Irrigation, chaired this session. While Dr. Mohamed Bayoumi - Environment Specialist- UNDP moderated the session.

At this event, Egypt showcased the national efforts that have been completed and will be implemented over the coming decades. Consequently, it will mobilize the national bodies towards climate change and the international community to allocate efficient resources to implement national priorities and needs in the context of climate change.



### ❖ Meeting of the High-level Joint Committee of Agriculture and Water in the Arab Region (FAO, LAS)

This meeting was organized by the League of Arab States and the Arab Organization for Agricultural Development (AOAD), collaborating with FAO and ESCWA. The High-level Joint Water-Agriculture Technical Committee (HLJTC) is the Joint Water-Agriculture Ministerial Council of the League of Arab States. The High-level Joint Technical Committee was established by the resolution of the joint Water-Agriculture Ministerial meeting on 4 April 2019, which led to the adoption of the 2019 Cairo Declaration.

The first meeting of the HLJTC was held in October 2019 and requested partner organizations, FAO and UNESCWA, to assist in (i) operationalizing the 2019 Cairo Declaration by developing a plan of action for the period 2021-2025 and (ii) developing guidelines for sustainable allocation of water resources for agriculture. The second meeting of the HLJTC was held virtually in October 2020, whereby a draft plan of action to implement the 2019 Cairo Declaration was presented and discussed with member countries. The HLJTC requested the joint secretariat and partner organizations to consolidate the countries' feedback on the action plan and prepare a revised version to be reviewed in this meeting.

### ❖ Building Resilient Water Systems: Learning from Best Practices

The Building Resilient Water System: Learning from Best Practices session was organized by the Ministry of Foreign Affairs, in collaboration with the Ministry of Environment. The session showcased a framework to inform and support decisions and actions among stakeholders to ensure both short- and long-term water system resilience. In addition, this session focused on the international best practices in building coastal resilience from Bangladesh and Egypt and engaging in a critical discussion on how to mobilize public and private finance for resilient water infrastructure. In addition, with input from global finance experts and Egypt's experience in mobilizing finance. Finally, this interactive session allowed audience to question, both online and in-person.

### ❖ The Establishment of a Navigational Line between Lake Victoria and the Mediterranean Sea “VICMED” Project Feasibility Study (Phase 2) Donors' Round Table, Convened by: MWRI

- ◆ A roundtable session for donors was held on October 25, 2021, on the sidelines of CWW 2021. The session gathered development partners, donors, and stakeholders from footprint countries to explain the importance of the project, the implementation status, the most critical activities, future activities, and the cost required to implement them. The main aim of this session was to mobilize resources for the Feasibility Study Phase 2 (FS2) and promote the VICMED project.
- ◆ The session witnessed a wide attendance, where the Egyptian Minister of Transport Lieutenant General Kamel Al Wazir and the Minister of Water Resources and Irrigation participated. Also, ministers from the Nile Basin countries (South Sudan - Uganda - Burundi - Congo), in addition to representatives of Common Market for Eastern and Southern Africa "COMESA," New Partnership for Africa's Development "NEPAD," and the Danube River Basin Organization.
- ◆ Participated donors; African Bank - World Bank - Representative of the Embassy of Spain - IFAD -FAO - UN-Habitat - USAID - European Bank - SIWI -JICA.
- ◆ Also, the project steering committee members attended the session virtually. Besides, the Project Management Unit members, The Project National Committee members, and the African delegations were attending physically
- ◆ Egypt's transportation Minister Lieutenant General / Kamel el Wazir opened the session. He expressed the importance of the project as it is considered a qualitative shift in trade and tourism exchange. Also, he mentioned that Egypt had started the canal rehabilitation with the local fund. However, the project is massive and requires -sponsors support to achieve its goals.
- ◆ Dr. Mohamed Abdel Atti, pointed out that the project aims to turn the Nile River into a navigational artery linking Nile basin countries. Also, it is considered as one of the most promising regional projects to advance the development and improve the economic and social conditions of all participating States.

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- ♦ Messrs. Manawa Peter - Minister of Water Resources and Irrigation of South Sudan, Dr. Deo-Guide Rurema - Burundian Minister of Environment and Agriculture, Dr. Sam Shaptors - Ugandan Minister of Water and Environment and Ms. Eve Baziba Masoudi, Deputy Prime Minister and Minister The environment and sustainable development in the Democratic Republic of the Congo, stressed in their words, on the economic and social importance of the project in the Nile basin countries. Also, they reaffirmed that the study of the project must be accelerated and unify the efforts to facilitate the project's implementation process. Furthermore, the representative of the African Bank announced that the Bank would provide a grant of \$2 million to start the second phase of feasibility studies.

### 6. Side Events

#### ❖ The Center of Excellence for Water

The Center of Excellence for Water is a major project funded by the USAID, which has started in 2019 addressing critical water challenges in Egypt. This project is consistent with Egypt's Vision 2030, which could be traced in the Egyptian Sustainable Development Strategy 2030. It is worth mentioning that the American University in Cairo (AUC) manages the project with multiple partnerships and stakeholders (Universities, Public Institutions, and Industries). The project's duration is five years (2019 – 2024), with a total budget of 30 million USD. The main goal of the session was to present the current activities and outcomes of the Center of Excellence and explore all future opportunities and activities.

#### ❖ The 2021 EU-UfM Water Investment Policy Forum

In 2021, the EU and the UfM had re-committed to jointly organize an annual regional forum to discuss water investment issues in the Southern Mediterranean in the framework of Cairo Water Week on 25<sup>th</sup> October 2021. The event objectives were:

- To identify ways to enhance the integration of water investments in post-COVID19 recovery packages and development support programs.
- To share lessons learned in the development and implementation of large water investment plans in the context of climate change, with a focus on desalination investments.
- To start develop a regional roadmap for improving water investment policies by discussing regional priorities and how different stakeholders can achieve them.

#### ❖ The 4<sup>th</sup> African Young Water Professional Forum

Owing the success of all the previous African Young Water Professionals Forum (Af-YWPF), the network of Young Water Professionals in the African Working Group (AFRWG) of the International Commission for Irrigation and Drainage (ICID) has grown to attract more than 5000 members from all African countries. Thus, the

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Forum is becoming an essential platform in the African continent for the capacity building of Africa's future leaders in the water and agriculture sectors.

In this year, there was 154 youth participant from 31 African countries (Morocco - Nigeria - Tunisia - Kenya - Ghana - Egypt - Uganda - South Africa - Burkina Faso - Malawi - Sudan - Cameroon - Algeria - Chad - Mauritania - Botswana - Cameroon - Zambia - Zimbabwe - Somalia - Rwanda - Congo - Central Africa - Benin - Senegal - Mali - Namibia - Madagascar - Ethiopia - Côte d'Ivoire - Niger).

The Forum has become an annual event convened with this prestigious conference. The Forum was held on the sidelines of CWW 2021 from 25th -27th October 2021.

### ❖ Finnish Egyptian Water Evening

The target of the Finnish Egyptian Water evening seminar's was to strengthen the relationship between Finnish Water companies and Egyptian partners. During the workshop, Finnish Water companies showcased their solutions and technologies.

The seminar brought together relevant decision-makers from Egyptian authorities and key industry representatives from private and international development sectors.

### ❖ Joint Cooperation in Applied Research (JCAR) Program – Water. Egypt and the Netherlands

This session was convened by the Deltares. Dr. Ragab Abd El Azim, the First Undersecretary, Ministry of Water Resources and Irrigation, and Mr. Harm Duel, Research Manager at Deltares, chaired this session.

During the JCAR launch event, the program was introduced by officials of the Netherlands and Egypt. Moreover, this event intended to establish connections with the knowledge clients, IFIs, and donors. The opening session was followed by interactive discussion sessions focusing on knowledge priorities to support the implementation of the National Water Resources Plan (NWRP) and funding opportunities for projects in the water sector in Egypt.

### Regular Meeting of the Joint Authority of the Nubian Sandstone Aquifer System (NSAS JA)

The National Water Research Center (NWRC), MWRI, convened this session. The mandate of the NSAS Joint Authority is to collaborate and develop cooperative activities for the sustainable mutual development of the NSAS, including monitoring the status of utilization of the Aquifer and evaluation of the progress and actions enacted on the regional and national levels. The Egyptian Minister for Water Resources and Irrigation, Dr. Mohamed Abd El Atti, opened the session. His Excellency stressed the importance of joint integration and coordination in research fields regarding the reservoir and its resources.

### ❖ EU-AFDB Water Investment Forum

This high-level event was organized in cooperation between the EU and AFDB. Dr. Moahmed Abd El Atti opened the forum by stressing the importance of providing the necessary funds for the VICMED project. As it is considered one of the most critical projects driving development.

The event aimed to present the EU and AFDB's vision. In addition to, the planned achievement of the sustainable finance and development in Egypt's water infrastructure and strengthening the regional cooperation on water resources management and development.

The event also addressed the water food nexus. Finally, the forum presented the EU External Investment Plan (EIP), the European Fund for Sustainable Development (EFSD), and the AFRICA-EUROPE Alliance on Sustainable Investment and jobs that focuses on the water sector

### ❖ Towards a Common Path for Sustainable Agriculture Management in Egypt

The session was divided into four sub-sessions as follows;

- i) The Role of the EU in Advancing the SDGs agenda in Egypt: The case of the DeVilag project,
- ii) ii) Challenges of Sustainable Agriculture Development in Egypt,
- iii) iii) Education for Sustainable Development, and

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iv) iv) Opportunities for Sustainable Agriculture Development.

During the session, her excellency Ambassador Nabila Makram Abdel Shaheed, Minister of Emigration and Egyptian Expatriates Affairs tackled, that the Ministry supports the efforts of the Egyptian state regarding transferring Knowledge through the Expatriate Nationals.

The session included a representative from the EU delegation and the Erasmus National Coordinator. Each of which sheds light on how the EU is helping advance the SDG agenda in Egypt through different projects. Specifically focused on the Devilag project's objectives, achievements, and outputs.

## 7. Workshops

### ❖ **Enhancing Climate Change Adaptation in the North Coast and Nile Delta Regions in Egypt Project (ECCADP), Convened by Green Climate Fund, MWRI**

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

### ❖ **Project ATLANTIS - Sewage Treatment Plants as a Resource for Water, Energy, and Nutrients, Convened by Technical University Berlin, German Water Partnership**

The workshop aimed to demonstrate the potential for zero-energy wastewater treatment plants, besides showing the intelligent solutions and best practice examples from energy consumption to energy production by focusing on biological treatment, sludge management, and plant control and operation.

### ❖ **Governance & Strategic Planning, Convened by Washington State University**

During this workshop, participants have actively participated to discuss the following topics:

1. Develop the AWR-CoE mission statement,
2. Discuss administrative, staffing needs, policies, procedures to pursue the Center's mission successfully, and sustainably,
3. Identify critical elements required for a solid short- and long-term strategic plan,
4. Exchange ideas, tools, methods for governing centers, and pursuing collaborative research and education projects, and
5. Develop agreements for partner institution cooperation, resource sharing, and shared governance.



### ❖ Financing Water Projects: Challenges and Opportunities

The European Investment Bank organized the Financing Water Projects: Challenges and Opportunities workshop. This workshop was divided into two roundtables.

#### **Roundtable 1: Sustainable Financing for Water and Wastewater.**

The roundtable tackled the issue of:

- Considering enormous investment needs linked to National Water Resources Plan (2017-2037),
- There is a need for financing the water and wastewater sector in upcoming years and the role of IFI's/Donors,
- Strategy and extension plan in water, wastewater, and irrigation. In addition to sovereign financing and PPPs, and
- Ensuring the durability of the infrastructure while taking into consideration the social price of water and wastewater.

#### **Roundtable 2: Circular Economy and Integrated Water and Wastewater Resources.**

The second-round table discussion included:

- Status of the joint sector approach geared to improve the efficiency of the implementation of the NWRP by harmonizing the investment planning and strengthening the donor coordination,
- The current situation of the integrated water resources management in Egypt and the region,
- The best institutional setup to improve the efficiency of water distribution, and
- How climate change considerations are integrated into the decision-making in water and wastewater in Egypt and the region?

### ❖ Water Joint Programming Initiative Workshop - Strengthening EU-Africa Cooperation in Water Research, Development, and Innovation (RDI): Opportunities and Challenges

This session was held under the umbrella of the Water Joint Programming Initiative (JPI) in conjunction with the Partnership for Research & Innovation in the Mediterranean Area and the Academy of Scientific Research and Technology. The JPI workshop aimed to explore opportunities for collaboration between Europe and Africa in water research, development, and Innovation, RDI. It mainly targeted development banks, research funding agencies, international organizations dealing with water management capacity development, and research operators. The workshop was structured around two high-level panel discussions, as follows:

1. Alignment of RDI programs between Africa and EU and
2. Social innovation: the social debate on competing water use in some regions of Africa, and how to increase capacity development and stakeholders and private sector participation in water RDI.

### ❖ Dam Safety and Risk Management

The National Water Research Center (NWRC) organized this workshop. The workshop discussed the dam safety issues and measures to monitor the dam performance to avoid any unexpected damage. This by demonstrating the significant progress in setting up the foundation for standard dam safety practice and reducing the risk of dam failure. and continued economic performance.

## 8. Technical Sessions

### ❖ Water Resources Management as a Tool to Cope with Water Scarcity

The National Water Research Center (NWRC) convened this session. NWRC research arm of the Egyptian Ministry of Water Resources and Irrigation (MWRI), has conducted numerous researches in this field to manage the water resources in such a way to reduce the impact of water scarcity in Egypt. In this regard, four research papers were presented, which demonstrated the research carried out to increase the water use efficiency and maintain the water quality in good condition.

### ❖ Innovative Research on Water Resources

The NWRC convened the Innovative Research on Water Resources session. NWRC extensively carries out innovative research to deal with water resources shortage in Egypt. Some of these researches focus on new techniques for low-cost wastewater treatment and maintaining the sustainability of water resources. In this regard, four research papers were also presented. These papers showed the latest techniques used for wastewater treatment to preserve the watercourses from contaminants spills if they occurred.

### ❖ ReWater MENA Project Presented Achievements and Way Forward to Mainstream Reuse of Treated Wastewater in the MENA Region.

ReWater MENA project was initiated to address the challenges that currently limit opportunities to upscale the expansion of wastewater reuse across the MENA region. ReWater Mena is considered a multi-partner implemented project led by the International Water Management Institute (IWMI) and supported by the Swedish International Development Cooperation (SIDA).

The main objectives of this session were:

- Present the achievements of ReWater MENA project on the regional and national levels (in Jordan and Egypt) to other countries in the region and regional and international organizations and partners.
- Identify gaps and lessons learned from ReWater MENA project.

- Discuss the way forward for changing the region on mainstreaming the reuse of treated wastewater.

### ❖ Regional and Sectoral Cooperation for Water Security

Ministry of Water Resources and Irrigation has convened the Regional and Sectoral Cooperation for Water Security session. Prof. Dr. Hussein Alatyf, Secretary-General of the Arab Water Council and former Minister of Water Resources and Irrigation, chaired the session. This session was moderated by Dr. Ahmed Algendy, Head of the Environmental Engineering Program, AUC.

The session highlighted the expected danger on water and food sustainability along the Nile River from changes in river morphology through artificial structures such as dams. In addition to assessing the impacts of artificial structures, on different water-related aspects, like hydropower. Moreover, the session sheds light on bilateral technical cooperation in the Nile Basin countries. Along with focusing on the Danube river basin and highlighting the challenges raised by Transboundary Rivers.

### ❖ Action for Empowering Women in Water Diplomacy in the MENA Region

Global Water Partnership – Mediterranean, Geneva Water Hub convened the session. This interactive session discussed tangible ways to empower women in water diplomacy in the Middle East and North Africa (MENA) region. The session also involved a keynote speech by a prominent female figure from the region, sharing insights on the challenges to attaining more women decision-makers in water diplomacy and transboundary water cooperation settings in the MENA region and suggestions on overcoming those challenges. On the other hand, the session included a panel of female practitioners from the region, at different stages of their careers, exchanging experiences and lessons learned.

### ❖ The Impact of Increased Flash Flood Frequency and their Corresponding Sedimentation on the Water Supply Intakes

The UNESCO Cairo office convened this session. The main objective of this session was to discuss and analyze the different problems facing drinking water intakes along the Nile River towards identifying and recommending approaches to alleviate sedimentation problems as these approaches will improve the reliability of water supplies that may be impacted by damage and sediment clogging. The session also discussed the impact of such recommendations on decreasing purification requirements.

### ❖ Advances in Water Management

MWRI convened this session. It was divided into two sub-sessions that tackled the advances in water management. The sessions discussed the tools for utilizing Artificial intelligence (AI) techniques, big data to pave the road to Sustainable Development Goals, and a Sustainable water future. Also, the sub-session discussed Innovative techniques to save water and energy, such as Precision Irrigation. In addition to addressing the Flash flood as a non-conventional source of freshwater and Riverbank Filtration techniques.

### ❖ Wastewater Reuse and Water Recycling for Agriculture in Egypt

The African Development Bank (AfDB) convened this session. The scope of the session was to freely discuss the status of non-conventional water resources in Egypt and the legal framework affecting the water reuse to verify if it enables policy implementation adequately. In addition, it highlighted the overall assessment of laws, codes, regulations, decrees, institutional framework, and other legal instruments. Speakers briefly described the government policies and strategies concerning the development of the water supply & sanitation sector and wastewater reuse, desalination, and other sources. Successful case studies in Egypt were gaps and challenges were presented.

### ❖ Join us "On the Road to the 9th World Water Forum in Dakar, 2022",

The World Water Council convened this session. During this event, the co-organizers of the 9<sup>th</sup> World Water Forum presented the state of progress of the preparatory process of the Forum. The presenter particular focused on the results of the working groups, practical information on the mobilization of stakeholders, the provisional program, and the logistical information on the 9th World Water Forum to be held in Dakar, Senegal, from 21 to 26 March 2022, under the theme of "Water Security for Peace and Development."

### ❖ Regional Executive Dialogue on Watering Nationally determined contributions (NDCs): Enhancing Water Component in Climate Policy and Practice in the Arab States

The UNESCO Cairo office convened this session. This session aimed to present a deep-dive analysis of the status of water in current in Arab NDCs. The session also explored recent tools and principles designed and tested to help countries revise their NDCs to enhance water (resilience and sustainability) in the process of editing, implementing, reporting on NDCs, and accessing climate finance. The session featured both a technical presentation and a high-level panel discussion aimed to initiate a regional executive dialogue on "Watering NDCs in the Arab States" to set the stage for a more substantial alignment of climate and water policies and communities in the Arab Region to contribute to COP 27 that will take place in Egypt in 2023.

### ❖ Enabling Intelligent Water Systems with GIS

ESRI NA convenes this session. This session explored the latest advances of ArcGIS technology and a complete GIS for intelligent water systems. In addition,, how to build a water resources foundation that empowers other business practices with the GIS capabilities to visualize and analyze real-time information to predict water supply-demand, manage water loss, identify water quality issues, and more.

### ❖ The Global Observatory on Water and Peace: A Global Platform for Water Cooperation

Geneva Water Hub convened this session. This session encouraged further engagement with the Global Observatory on Water and Peace and advanced the

water-peace agenda globally and regionally. The joining of the University of Cairo promises to give other evidence to the value of water as an instrument of peace, not only in the Nile Basin and the African continent per se but to transboundary water resources globally.

### ❖ **Water and Society**

From the Faculty of Engineering, Ain Shams University, Prof. Dr. Hoda Sousa, Prof. of Water Resources, chaired this session, while Prof. Dr. Ashraf Almostafa, Prof. of Hydrology, moderated the session. Dr. Mohamed Abd El Atti, presented Egypt's water position and challenges. The session discussed water management for sustainable development through water governance, mitigation measures for coastal areas, and the Water - Energy - Food Nexus addressed for land reclamation and restoration options. In addition, the session presented advances in drinking, irrigation, and wastewater treatment with low-cost and environmentally friendly techniques.

### ❖ **Water Conservation Awareness at Rural Areas for the use of Modern Water Resources Management Techniques Including Modern Irrigation**

The Ministry of Water Resources and Irrigation collaborated with the UNESCO Regional Bureau for Science in the Arab States (UNESCO Cairo Office) to organize this session. The Egyptian Minister for Water Resources and Irrigation moderates a dialogue with some farmers using modern irrigation systems and they explained the benefits gained as a result of using these irrigations. This session presented an Intergovernmental Hydrological Programme (IHP) relevant activity undertaken by the UNESCO Bureau for Science in the Arab States in support of the Water Conservation Strategy of the Ministry of Water Resources and Irrigation in Egypt (MWRI). A significant component of this activity focuses on promoting the modernization of irrigation practices in Egypt through both demonstration and stakeholder engagement.

### ❖ **The National Drainage Programme 3**

In the context of the Joint Integrated Sector Approach in the Irrigation Sector (NDP3/JISA), the project, funded by the European Union, the German Federal Ministry for Economic Cooperation and Development (BMZ) through KfW, and the Government of Egypt, and Implemented by the Egyptian Ministry of Water

Resources and Irrigation, is composed of two Work Packages: (WP1) the National Drainage Programme Phase III (NDP3), and (WP2) the Joint Integrated Sector Approach (JISA), Phase 3. The session also addressed the overall objective of JISA3, which is supporting the MWRI Planning Sector in adopting and implementing the investment planning and monitoring methodology as developed in the previous JISA phases and to improve coordination between the various implementing agencies (contracting entities) within the MWRI.

### ❖ Nile Basin Capacity Building Network Foundation Organized Session Namely Innovative Networks in the Nile Basin

Regional E-Collaborative Platforms for Capacity Development Innovation should be about tools and approaches. This session aimed to explore the aspects of capacity development approaches knowledge and capacity to tackle the inter-linkages developed in all sectors and on all levels. The session also highlighted examples of e-collaborative platforms and innovative programs that support research, education, and training introduced by local, regional, and international networks and partner organizations.

### ❖ Strengthening the Science-Policy Interface for Improved Integrated Water Resources Management

The Cologne University of Applied Sciences (TH Köln, University) organized this session in collaboration with Ain Shams University. The session aimed to share experiences and solutions for strengthening the science-policy interface to achieve water security in Egypt, the Middle East, and North Africa (MENA) region. Given these opportunities and the importance of finding interdisciplinary solutions to this issue, it will be necessary to educate and engage a new generation that can shape the future and provide holistic solutions to the complex and chronic water challenges as well as policy areas including, Integrated Water Resource Management, Water, Sanitation, and Hygiene (WASH), Water, Energy, and Food (WEF) nexus, and climate-resilient development.

### ❖ Shoreline Management and Protection

The National Water Research Center (NWRC) organized this session. Four research papers were presented, including the setback line investigation for the Red Sea coastal zone and modeling the offshore coastal structures using



physical models and setup of oil spill warning system for Suez Gulf, one of the bustling waterways used by oil tankers.

### ❖ **Water Accounting and Auditing in Practice: Sharing Lessons and Proposing a Protocol for Informing Sustainable Water Use**

The outcomes of this session were:

- Learning from practical experiences from across the MENA region on implementing water accounting and auditing,
- Understanding the need to complete water accounting with water governance analysis to reach working solutions, and
- Learning about the operation protocols/guidelines on water accounting to facilitate implementation.

### ❖ **Water Productivity Improvement in Practice from Remote Sensing Data at Multiple Geographical Scales**

The session explored a range of water productivity indicators for possible improvement at various geographical scales based on remote sensing data. At the country level, gross biomass water productivity

indicators were compared to actual and referenced evapotranspiration, sourced from remote sensing water data for ten years (2009-2019) for 20 countries of the League of Arab States from the FAO WaPOR portal. This analysis highlights that half of the countries have increased their water productivity and biomass production in irrigated areas. However, this is mainly done at the expense of increasing water use. At the irrigation scheme level, water productivity monitoring through the real-time water data (temporal resolution of 10 days) enables a practical addition to agricultural production and reduced water consumption. Specific smartphone applications can be built to propose advice directly to farmers, not only for irrigated agriculture but a more comprehensive range of farming systems. Priorities of phase 2 of the WaPOR project, started in January 2021, will report the identified practical solutions, which have been prioritized for Egypt, one of the ten countries of the project.

### ❖ Early Lessons from Ongoing WES DEMO Projects

The water and Environment Support (WES) project in the ENI Neighborhood South Region held this session. The demo projects on Efficient Use of Water provide a unique opportunity to demonstrate concrete, practical methods, approaches, and tools that are effective, useful, applicable, and replicable. At the same time will also play a pivotal role in providing exemplary practices and disseminating knowledge.

The demonstration projects put much emphasis on three critical issues:

- The efficient water uses in agriculture/irrigation, which is the primary,
- Water consumer in the region (in most PCs ranging between 75-85%),
- The badly needed reduction of water losses in distribution networks and operations, and
- The support of water resilience in vulnerable communities.

### ❖ Water and Global Changes

The Water and Global Changes was organized by the Ministry of Water Resources and Irrigation. Global water demand is increasing at an approximate rate of 1% per year. As a result, more than 1.1 billion people worldwide lack access to water, and a total of 2.7 billion find water scarce for at least one month of the year. Global change is a complex process; many interconnected factors can be regarded as causes or consequences.

The session discussed some of these factors through presented papers. The session also tackled the climate change, adaptation, measures studies, and flood management. In addition to the impact of urbanization on water resources management, developing new evaluation tools and indices for water scares cities. Moreover, it addressed several frameworks assessing river reactions downstream of dams and how these approaches may vary in their quantitative and qualitative predictions.

It is noteworthy that Dr. Noha Donia, Dean of the Institute of Environmental Studies and Research, Ain Shams University, chaired this session while Dr. Peter Sobhy, Professor at Ain Shams University, moderated it.

### ❖ **Just Climate Adaptation for Resilience in Agriculture and Food Security in a Transboundary Perspective**

The session highlighted the need to just transition lens on climate adaptation for resilient future agricultural production in Africa and trans-continental. For this purpose, agricultural productivity needs to increase. In climate- and water-stressed basins and regions, including the Nile River basin, trade of agricultural products between basin states will be essential to ensure transition when investments for climate-resilient food production are made. It is noteworthy that this session was held under the umbrella of the International Centre for Water Cooperation (ICWC), Stockholm International Water Institute (SIWI), and Stockholm Environment Institute (SEI).

### ❖ **Remote Sensing Determination of Evapotranspiration: Outcomes from the FAO Webinar Series**

The Food and Agriculture Organization of the United Nations convened this session. The session aimed to address:

i) Updating the knowledge regarding RS ET determination, from the most common and adopted models to the latest advances,

(ii) Providing more clarity on the assessment of RS ET uncertainty and related acceptable limits for their field of application, and

(iii) Building awareness on the strengths, limitations, and fits-for-the purpose for the range of RS ET models and Databases are available.

### ❖ **Household Water Insecurity Experiences (HWISE) Way Forward for Applications in the Arab region**

This session was held under the auspices of UNESCO. The presenter introduced the Household Water Insecurity Experience (HWISE) index, a cross-culturally validated way of assessing water security and insecurity at the household scale. The HWISE index enables scientists, program developers, and community leaders to

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determine the magnitude of water insecurity, track its change over time, measure the effectiveness of various interventions, and inform the development and implementation of effective policies and programs, particularly for vulnerable communities.

This index has been applied to more than 30,000 households in 20 countries in Africa, the Middle East, North Africa, South America, and the Asia Pacific. It is increasingly being used as a tool for program effectiveness review by WaSH NGOs, including Oxfam, Water Witness International, and Water Harvest. The construction of the HWISE tool, its applications, and the support available for adopters were discussed through the session.

### ❖ Innovation in Hydro-Sciences

The Ministry of Water Resources and Irrigation organized the session. The session covered innovations in different hydro-science disciplines by presenting the advances in hydraulic modeling and analysis and studies on the numerical hydrodynamic modeling of the Nile River. During this session, advances in desalination technology were by discussing solar energy in reverse osmosis and innovations in water treatment and removing nitrate from drinking water.

Dr. Eman Mahmoud, Vice President of Students Affairs, 6<sup>th</sup> of October University, chaired this session while Professor Dr. Yehia Emad Hamdi, Assistant Professor, Environment Program at Zewail University, moderated the session.

❖ **Measured and Remote Sensing-Based ET determinations: Results, learning, and applications**

The outcomes of this technical session included:

- (i) providing a shared understanding and methodology for the field vs. RS ET testing;
- (ii) (ii) increasing awareness of the uncertainties related to the methodology adopted; and (iii) drawing preliminary inferences on the accuracies of the RS ET model adopted and RS ET databases tested. It is noteworthy that ICARDA convened this session.

## 9. Competitions

### ❖ Best Graduation Project

The Scientific Committee evaluated twenty-nine graduation projects from national and private universities (six public and five private universities) with graduation projects related to water management and related fields.

The European Investment Bank (EIB) and the National Bank of Egypt presented financial awards to the first three winners. The awards were 30,000 for the first winner, 20,000 for the Second, and 10,000 for the Third.

Minister of Water Resources and Irrigation awarded the top three winners during the closing ceremony of the week:

- ◆ The first winner was from Cairo University with a project title “Integrated Water Resources Management Case Study: East of Portsaid” ,
- ◆ The second winner was from Zewail City of Science and Technology with a project title “Design of a Water Quality Management System for a Recreational Lake in Merryland Park”.
- ◆ The Second replicator was the “Water resources and wet utilities of Siwa”, from Ain Shams University,
- ◆ The third winner was from October University for Modern Sciences and ArtsMSA University, with a project titled” Banlastic awareness campaign and Rebranding”.
- ◆ The third replicator was from Faculty of Fine Arts- Helwan University with a project titled “IVY - Green Academy”.

### ❖ Young Water Inventors STEM Schools

The competition was held during the CWW 2021 activities in cooperation with the Ministry of Education. It aimed to encourage youth enthusiasm for water issues. The CWW2021 received more than 60 projects from different governorates in Egypt. However, only the top 10 competitors presented their projects during the week. It is worth mentioning that The European Investment Bank (EIB) and the National Bank of Egypt sponsored this competition.

### ❖ Three Minute Thesis “3MT.”

On the sidelines of CWW 2021, the Ministry of Water Resources and Irrigation organized this competition in collaboration with the European Investment Bank (EIB) and the National Bank of Egypt.

During the session, eleven masters and doctoral students presented a compelling talk on their Thesis/Dissertation topic and its significance to a non-specialist audience just in three minutes. The winners were honored at the closing ceremony of the CWW2021

The arbitration committee chose the following top three presenters:

1. Eng. Samar Mohamed Abdou Gomaa, Impact of Groundwater Extraction on the Coastal Aquifers Due to Seawater Intrusion (Case Study of Moghra Aquifer), M.Sc. (Menoufia University).
2. Eng. Mohamed Ramah Mohamed Ramah, Evaluation of the Nubian Sandstone Aquifer using Electrical Resistivity and Electromagnetic Methods at North West Nasser Lake Area, Aswan, Egypt M.Sc. (Helwan University)
3. Eng. Amr Reda Refaiy Basuouny, Modeling the effect of DS drain geometry on seepage through earth dam, M.Sc. (Ain Shams University)

### ❖ The National Water Conservation Farmers competition

The competition was held for the fourth consecutive year under the patronage of the Ministry of Water Resources and Irrigation. It's one of the tools for promoting and raising awareness of water conservation and improving its efficiency. Thus, it is conducted with a critical target group that can significantly contribute to achieving such targets, farmers, since they consume the highest amount of water in the agriculture sector.

Compared to previous years, the competition has gained more significant popularity this year, which indicates its success in raising farmers' awareness. This year 267 farmers applied from different regions of the country. The top-ranked ten farmers were awarded tools of smart irrigation to use within their farm.

### 10.Exhibition

CWW2021 Expo was organized on the sidelines of the Cairo Water Week activities from October 24<sup>th</sup> – 28<sup>th</sup>, 2021, at the same venue of the conference.

The exhibition included diamond, golden, and silver exhibitors as follows.

- ◆ Diamond Exhibitors: National Organization for Military Production, Bahadii Group (Nijhuis Water Technology B.V), Technical Erection & Construction Company (Tec-Com) & Sigmainvest Czech Republic, October University for Modern Sciences and Arts (MSA), Comet for Trading and Engineering Works (COMET) Co., National Egyptian Drilling & Petroleum Services Co. (DASCO), Lewaa El Hamd For Constructions & Trading.
- ◆ Golden Exhibitors: Sky Light for Agricultural Investment and General Contracting, National Water Research Center, GIZA SYSTEMS CO., Maadi foreign Trade Co., TANQIA ENVIRONMENT Co., Arab Organization for Industrialization.
- ◆ Silver Exhibitor: Home Pure Co., Danaher Water Quality Platform Co., (STEM Schools) & (Water Engineering &Environment), WIKA Near East Ltd Co., Esri North Africa Co., Nile Basin Capacity Building Network Foundation (NBCBN-Foundation), Permanent Joint Technical Commission for Nile Waters (PJTC), GIGA SYSTEMS CO., National Bank of Egypt and Banque Misr.

CWW exhibition is considered as a unique opportunity for all public and private institutions in the water sector and related businesses & industries to display their activities, programs, and products and present modern ideas & advanced technologies in the water-related fields such as desalination, renewable energy, wastewater treatment, and water conservation technologies.



### 11. Technical Tours

- ◆ A high-level delegation from Namibia visited the Nile Forecasting Center, Planning Sector, at MWRI. The center's working group presented its activities, including producing weather and flood forecast reports and its role as an early warning unit to support decision-makers.
- ◆ Some of the participants visited the Enhancing Climate Change Adaptation in the North Coast and Nile Delta Regions in Egypt Project (ECCADP)
- ◆ The Gabonese Minister of Water and Energy, Mr. Alain-Claude, and Mr. Gee Rojeh Nazieh, the Gabonese Ambassador in Egypt, visited Afla Garden and the National Water Research center. Also, an Iraqi and Saudi high-level delegation visited the center on the sidelines of CWW 2021.
- ◆ Several participating ministers and delegations visited Bahr El Baqar Water Treatment Plant.

### 12. Back-to-Back Events

#### ❖ Martyr Zakaria Kamal's Cup for Sailboats

Observing October 6<sup>th</sup> as the day of Victory, the Cairo Yacht Club organized a tournament in the memory of the martyred pilot Zakaria Kamal, who was martyred in the first aviation fight during the war.

More than 50 women and men represented ancient yacht clubs at the tournament, and they were from the Egyptian Yacht Club in Alexandria, the Suez Canal Authority Club in Ismailia, the Maadi Yacht Club, the Egyptian Rowing Club, and the Arab Contractors. This tournament added a new page to the story of our immortal river, emphasizing its importance as a lifeline to Egypt over thousands of years.

#### ❖ Gala Dinner

The CWW's Gala Dinner was held at the National Museum of Egyptian Civilization. The museum is surrounded by many historic places, such as Coptic churches and monasteries, the Coptic Museum, the Ibn Ezra Temple, and the first mosque in Egypt, the Amr Ibn Al-Aas Mosque.

### **13. Bilateral Meetings**

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

- Minister of Water of Iraq,
- Minister of Water of South Sudan,
- Minister of Water of Uganda,
- Minister of Water of Burundi,
- Lebanese Minister of Water and Energy,
- Saudi Deputy Minister of Water, Environment, and Agriculture,
- Senegalese Minister of Water,
- Somali Minister of Agriculture,
- Deputy Prime Minister for Sustainable Development and Minister of Environment of the Democratic Republic of the Congo,
- Jordanian Minister of Water,
- Minister of Water and Energy of Gabon,
- Namibian Minister of Water and Land Reclamation,
- President of the World Water Council,
- Director General of the Islamic Organization for Food and Security,
- Commissioner for Neighborhood and Enlargement of the European Union,
- The delegation of the Islamic Network of the Organization of Islamic Cooperation,
- Regional Director of the Food and Agriculture Organization (FAO), and
- Executive Secretary of ESCWA

## 14. Bilateral Agreements

- ❖ **Memorandum of Understanding between the Government of the Arab Republic of Egypt and South Sudan for Implementation of Clearing of Aquatic Weed in Bahr El-Ghazal and Development Project in Jonglei State in the Republic of South Sudan**

Based on the good bilateral relations between the Governments and people of the Arab Republic of Egypt and the Republic of South Sudan, which has reached high levels of mutual understanding, friendship, and cooperation, In addition to the request of H.E, the Minister of Water Resources and Irrigation of the Republic of South Sudan, to implement several development projects such as groundwater stations and rainwater harvesting in Jonglei State for water management and flood mitigation. Accordingly, the Government of the Arab Republic of Egypt, represented by the Ministry of Water Resources and Irrigation, and the Republic of South Sudan, represented by the Ministry of Water Resources and Irrigation, signed the memorandum of understanding For Implementation of Clearing of Aquatic Weed in Bahr El-Ghazal & Development Project in Jonglei State in the Republic of South Sudan.

- ❖ **Memorandum of Understanding between the Government of the Arab Republic of Egypt and Senegal in the Prestigious Water Events and Technical Assistance**

The two countries agreed on mutual ties and understanding to solidify close cooperation on the sustainable development and use of water resources. This MoU was based on mutual understanding, respect, and interest to encourage water cooperation activities for the two countries; the 9<sup>th</sup> World Water Forum and Cairo Water Weeks.

- ❖ **Discussing areas of cooperation between Egypt and Namibia**

In the control and operation of underground wells, rainwater harvesting, and smart irrigation

### 15. Media Coverage

CWW 2021 has received regional and international media momentum. Many websites reported the statements of delegations and high levels in addition to outcomes of the technical sessions. Forty-two interviews were covered, and 300,000 persons visited the week's website. In addition, several non-Egyptian satellite channels covered the event such as; Iraqiya News, Hashemite Kingdom, Al Ghad, Al Arabia, and Yemen.

### 16. The Closing Ceremony

The closing ceremony started by a song for the protocol between the Government of the Arab Republic of Egypt and South Sudan in water resources management and flood control.

Then, Dr. Eman Sayed, Head of the Cairo Water Week Organizing Committee, presented a summary of the week's activities; the week gathered five high-level events, five plenary sessions, 29 technical sessions, five workshops, and eight side events convened by more than seventy international, regional, and national organizations. More than three hundred global and regional speakers have participated in CWW2021 and about 6000 thousand participants worldwide.

Furthermore, Dr. Mohamed Abdel Attii, Minister of Water Resources and Irrigation, honored the winners of the week's competitions, the ministry's leadership, and pensioners.

H.E Ambassador Christian Berger, Head of the European Union Delegation to Egypt, congratulated the Egyptian government for the week's success.

Finally, Dr. Atti gave the closing speech in which he thanked all the participating countries and the state entities for their collaboration over the past ten months.

## 17. Summary and Recommendations

- ❖ H.E. Mr. President Abdel Fatah El-Sisi recorded message gave a global momentum. He highlighted the week's significance and emphasized the importance of putting the water on the top of the worldwide agenda. The president also stressed the necessity of a legally binding agreement to fill and operate the Grand Ethiopian Renaissance Dam.
- ❖ The National and International organizations have shown their interest in the participation of Dr. Mustafa Madbouli, the Egyptian Prime Minister, in which he emphasized the efforts of Egypt to achieve the water-related sustainable development goals.
- ❖ Mr. Liu ZHENMIN, Under-Secretary-General for Economic and Social Affairs United Nations, mentioned that Cairo Water Week is expected to provide original variable inputs from Africa and the Middle East to the United Nations 2023 conference.
- ❖ Mr. Gilbert F. Houngbo, Chair of UN-Water, President of the International Fund for Agriculture Development, emphasized that Egypt sits at the crossroads of two continents with some of the highest levels of water stress in the world. The policies developed in water-scarce countries can drive results that will guide and Inspire decision-makers around the globe.
- ❖ H.E Oliver Varhelyi, Commissioner, Neighborhood and Enlargement, the EU, stressed that EU would support Egypt's efforts to combat climate change, protect the environment and ensure sustainable food systems.
- ❖ Mr. Loïc Fauchon, President of the World Water Council, focused on his word on the water sector challenges in Egypt, and he praised the Egyptian efforts in water management. Also, he called for the necessity of supporting Egypt in these challenges.

### ❖ The Main Points Emphasized by CWW2021:

- The importance of using intelligent technology is to enhance water management and the need to expand in using remote sensing technology that will help obtain the needed data, which may be challenging to get.
- Taking into consideration the significant factors affecting the future of the water sector (population growth and climate change). Besides, putting the water sector on the top of the global agenda as one of the most affected sectors by climate change.
- Water is a fundamental right for all. We must give particular attention to the most vulnerable communities, especially rural communities. Also, there is a need to provide clean water and sanitation services to maintain public health (Corona Virus, for example)
- There is a necessity to expand using modern and smart irrigation systems and attract the private sector to invest in these systems. As well as raise the farmers' capacity to deal with these technologies by developing institutional frameworks. Also, set a new low-cost technology in seawater desalination, contributing sustainably to water scarcity.
- There is an importance of promoting the policy dialogue, water diplomacy, and technical cooperation in shared water resources management and developing a framework to prevent conflicts and build cooperation opportunities.

## 18. Way forward

- ❖ The Egyptian government will continue drafting the recommendation as part of the Midterm Review of the Water Action Decade's report.
- ❖ The necessity of integrating water and adaptation issues in the national and global climate agenda.
- ❖ It is important to continue the international cooperation to support the water sector in coping with climate change to obtain a sustainable green fund for the water resources infrastructures.
- ❖ Emphasizing the necessity of including the water sector as the main focus in the 27<sup>th</sup> session of the Conference of the Parties (COP 27).
- ❖ Organize the CWW 2022 under the central theme "Water at the Heart of Climate Action" as a preparatory event for the Conference of the Parties (COP 27).
- ❖ Strengthening the Egyptian African relations by signing more memorandums.
- ❖ Prepare papers that address one vision for water-scarce countries to accelerate achieving water-related SDG, which includes water resources challenges in these regions and how to cope with them. This paper will be presented during the 9<sup>th</sup> World Water Forum in Dakar, Senegal, from 21 to 26 March 2022, under the theme of "Water Security for Peace and Development."
- ❖ CWW will continue the organization of CWW annual competitions; Best Graduation Project, Young Water Inventors STEM Schools, Three Minute Thesis "3MT", and The National Water Conservation Farmers competition.

## 19. List of Speakers

### ❖ Policy Dialogues in Water-Scarce Countries for Achieving Sustainable Development Goals (SDGs)

Paving the Way to Accelerated Implementation of Water Related SDGs	
	Ms. Maria Selin, Head of Regional Development Cooperation MENA, Sweden
	Mr. Loïc Fauchon, President of World Water Council
	HRH Princess Sumaya bint El Hassan, UNESCO Goodwill Ambassador for Science for Peace and President of the Royal Scientific Society of Jordan <span style="float: right;">Online</span>
	Mr. Gilbert F.Houngbo, Chair of UN-Water Chair, President of the International Fund For Agriculture Development <span style="float: right;">Video (3:00)</span>
<b>11:00-2:00</b>	Mr. Abdulhakim Elwaer, Assistant Director-General and Regional Representative of FAO, the Near East and North Africa region
	Dr. Rola Dashti, Under-Secretary-General, Executive Secretary, United Nations Economic & Social Commission for Western Asia (ESCWA)
	Mr. Liu ZHENMIN, Under-Secretary-General for Economic and Social Affairs, United Nations <span style="float: right;">Video (6:50)</span>
	H.E Mr. Olivér Várhelyi, commissioner, Neighborhood and Enlargement
	H.E Dr. Mostafa MADBOULI, Prime Minister of Egypt <b>(Segment Chair)</b> <span style="float: right;">Video (9:05)</span>
<b>12:00-2:25</b>	<b>The Egyptian Strategies to Achieve SDGs: Interview</b> H.E Dr. Mohamed Abdel-Atti, Minister of Water Resources and Irrigation, Egypt; on behalf of the Egyptian Prime Minister and the Segment Chair
<b>12:25-2:30</b>	A thematic introduction for the next 4 panel sessions
<b>12:30-2:45</b>	<b>Break</b>
<b>12:45-3:30</b>	<b>Panel Session 1: The Situation in Water Scarce Regions</b>



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	<p><b>Mr. Jamal El-Din Jaballah</b>, Under-Secretary-General, Director of the Department of Environment, Housing and Water Resources in the Economic Sector of the League of Arab States</p>	
	<p><b>H.E Eng. Mohammed Al Najjar</b>, Minister of Water and Irrigation, Hashemite Kingdom of Jordan</p>	
	<p><b>H.E Dr. Abdulaziz Alshaibani</b>, Deputy Minister for Water, Saudi Arabia</p>	
	<p><b>H.E. Mr. Yerlan A. Baidalet</b> Director General of Islamic Organization for Food Security (IOFS), Kazakhstan</p>	
	<p><b>Dr. Naser Edin Obeid</b>, Director General, The Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD)</p>	
	<p><b>Ms. Catarina de Albuquerque</b>, Chief Executive Officer, Sanitation and Water for All (SWA)</p>	<p>Video (5:15)</p>
	<p><b>Panel Session 2: Water &amp; Climate Cooperation: Best Practices and Success Stories</b> (Moderator: <a href="#">Prof. Hani Sweliem</a>)</p>	
	<p><b>H.E. Carl Hermann Gustav Schlettwein</b>, Minister for Agriculture, Water and Land Reform Republic of Namibia, (AMCOW) President</p>	
	<p><b>H.E. Eng. Mahdi Rashid Al-Hamdani</b>, Minister of Water Resources, Iraq</p>	
	<p><b>H.E Manawa peter GATKUOT</b>, Minister of Water Resources and Irrigation, South Sudan.</p>	
<b>13:3 -14:15</b>	<p><b>H.E. Said Hussein Iid</b>, Minister of Agriculture &amp; Rural Development of Federal Republic of Somalia</p>	
	<p><b>Mr. Ivan ZAVADSKY</b>, The International Commission for the Protection of the Danube River Basin</p>	<p>Online</p>
	<p><b>H.E Ambassador. Sherif Issa</b>, Assistant Minister of foreign affairs for African affairs, Representing H.E Sameh Shoukry the Minister of Foreign Affairs, Egypt</p>	
	<p><b>Prof. Owen McIntyre</b>, Professor at the School of Law, University College Cork, Ireland</p>	
<b>14:15-5:15</b>	<p><b>Lunch</b></p>	

## Cairo Water Week 2021

	<b>Panel Session 3: Finance: Challenges vs Opportunities</b>	
<b>15:15-6:00</b>	H.E. Sam Cheptoris, Minister of Water and Environment, Republic of Uganda	
	H.E Dr. Eng. Walid Fayyad, Minister of Energy and Water, Lebanon.	
	Mr. Khaled Nofal, Assistant Minister of Finance, Egypt	
	Mr.Philip Mikos, Head of Cooperation with North Africa, Neighborhood Policy and Enlargement, European Union	
	Mr. Alfredo Abad, Head of the Regional Representation for the Near East European Investment Bank, EIB	
	Pro.Saad Nassar, Adviser to the Minister of Agriculture and Land Reclamation, Egypt	
	<b>Panel Session 4: Innovation tools for sustainable water management</b>	
<b>16:00-6:45</b>	H.E. Deo-Guide Rure, Minister of Environment and Agriculture, Burundi	
	Mr. Nasser Kamel, Secretary General of the Union for the Mediterranean (UFM)	
	Prof. Dr. Ragab Ragab, UKCEH Fellow, Hydrologist and Water Resources Management Specialist, President of the International Commission on Irrigation & Drainage, ICID	Online
	H.E. Mr. Senzo Mchunu, Minister of Water and Sanitation, South Africa.	Video (6:15)
	H.E Mr. Mazen Ghoneim, Head of the Water Authority, Palestine	Video (6:15)
	H.E .Dr. Amy Khor Lean Suan, Senior Minister of State, Ministry of Sustainability and the Environment Ministry of Transport, Singapore	Video (9:15)
	Dr. Henk WJ Ovink, Special Envoy for International Water Affairs, Dutch Government, Netherlands	Video (7:20)
<b>16:45-7:15</b>	<b>OUTCOME DOCUMENT</b>	

### ❖ Launch Arabic Edition of WWDR2021 (Valuing Water)

1. Dr. Bisher Imam, Officer-in-Charge, UNESCO Cairo Office
2. Dr. Mohamed Abdel-Ati, Minister of Water Resources and Irrigation of Egypt
3. Dr. Abdulaziz bin Muhareb Al-Shaibani, Deputy Minister for Water Affairs, Ministry of Environment, Water and Agriculture of the Kingdom of Saudi Arabia
4. Dr. Abdul Aziz Al Magushi, Assistant Director General for Media and Cultural Affairs, Sultan bin Abdulaziz Al-Saud Foundation of the Kingdom of Saudi Arabia
5. Mr. Engin Koncagül, Senior Programme Officer, UNESCO World Water Assessment Programme
6. Mr. Jean-Marc, Faures Regional Programme Leader, FAO
7. Mr. Sylvain Merlen, Deputy Resident Representative and Officer in Charge, UNDP
8. Mr. Ziad Khayat, First Economic Affairs Officer, UN ESCWA
9. Mr. Pedro Arrojo-Agudo, Special Rapporteur on the human rights to safe drinking water and sanitation OHCHR
10. Dr. Hammou Laamrani, Senior Expert, the League of Arab States

### ❖ **Special Event on The Egyptian National Climate Change Strategy (NCCS)**

1. Dr. Mohamed Bayoumi, Assistant Resident Representative and Environment Team Leader in UNDP Egypt
2. Eng. Sherif Abd El Rahim, Head of Climate Change Central Department, Egyptian Environmental Affairs Agency-EEAA, National Focal point to UNFCCC, National Focal point to IPCC, Ministry of Environment Arab Republic of Egypt
3. Dr. Eman Sayed, Head of Planning Sector, Ministry of Water Resources and Irrigation, Egypt
4. Ms. Patricia Espinosa, Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC) Video message
5. Ms. Elena Panova, UN Resident Coordinator in the Special Event on the Egyptian National Climate Change Strategy.
6. Ms. Marina Wes, World Bank, Country Director for Egypt, Yemen and Djibouti. "World Bank's Egypt Country Climate and Development Report"
7. Dr. Amr Abdel-Aziz, Advisor to the Minister of Environment for Climate Change – "National Climate Change Strategy"
8. Mr. Khalid Hamza, Deputy Director, European Bank for Reconstruction in Egypt.

### ❖ **Building Resilient Water Systems: Learning from Best Practices**

1. Dr. Rumbaitis del Rio Cristina, World Resources Institute.
2. Dr. John Matthews, Alliance for Global Water Adaptation
3. Mr. Carlos Sanchez, Coalition for Climate Resilient Investment
4. Dr. Mona Chhabra Anand, Coalition for Disaster Resilient Infrastructure
5. Mr. Andrew Jackson, Representative of the UK Co-Chair of the AAC; UK Foreign, Commonwealth & Development Office

**❖ The Establishment of a Navigational Line between Lake Victoria and the Mediterranean Sea “VICMED” Project Feasibility Study (Phase 2) Donors' Round Table, Convened by: MWRI**

1. H.E. Lieutenant General Eng. Kamel El Wazer -Minister of Transport (Egypt)
2. H.E. Dr. Mohamed Abdel Atti - Minister of Water Resources and Irrigation (Egypt)
3. H.E. Ambassador. Mohamed Abdel Gawad on behalf of H.E Dr. Rania A. Al-Mashat Minister of International Cooperation (Egypt)
4. The Minister of Water Resources and Irrigation for South Sudan, Hon. Manawa Peter Gatkuoth
5. Dr. Deo-Guide Rurema, Burundian Minister of Environment and Agriculture
6. Mr. Sam Chaptors - Ugandan Minister of Water and Environment
7. Ms. Eve Baziba Masudi, Deputy Prime Minister and Minister of Environment and Sustainable Development of the Democratic Republic of the Congo
8. Dr. Ibrahim Assane Mayaki - Executive Director of NEPAD
9. Mr. Dr. Batiste Mutbazi - Director of Infrastructure Projects at COMESA
10. Mr. Abderahmane Diao - Representative of the African Development Bank
11. Mr. Dr. Ivan Zavadsky - Executive Director of the International Danube River Commission
12. Dr. Tahani Moustafa Sileet- Project Regional Coordinator