

ARAB WATER COUNCIL  
ACTIVITY  
REPORT

2016  
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PREPARED BY AWC PERMANENT SECRETARIAT

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# Introduction & AWC Approach

# Introduction

Building on the Arab Strategy for Agricultural Development and Food Security (2005-2025) and the Arab Water Security Strategy – Action Plan (AWSS) (2010-2030), and in line with the Arab Water Council (AWC) Work Plan 2016-2018, the Council has identified a number of areas where the expertise and experience of its members can be joined to make a more distinct contribution to overcome the existing threats and challenges in water resources development and management in the Arab region. The Council has been particularly active in contributing to strengthen the means for implementation of the Sustainable Development Goals towards achieving water security in the Arab region.

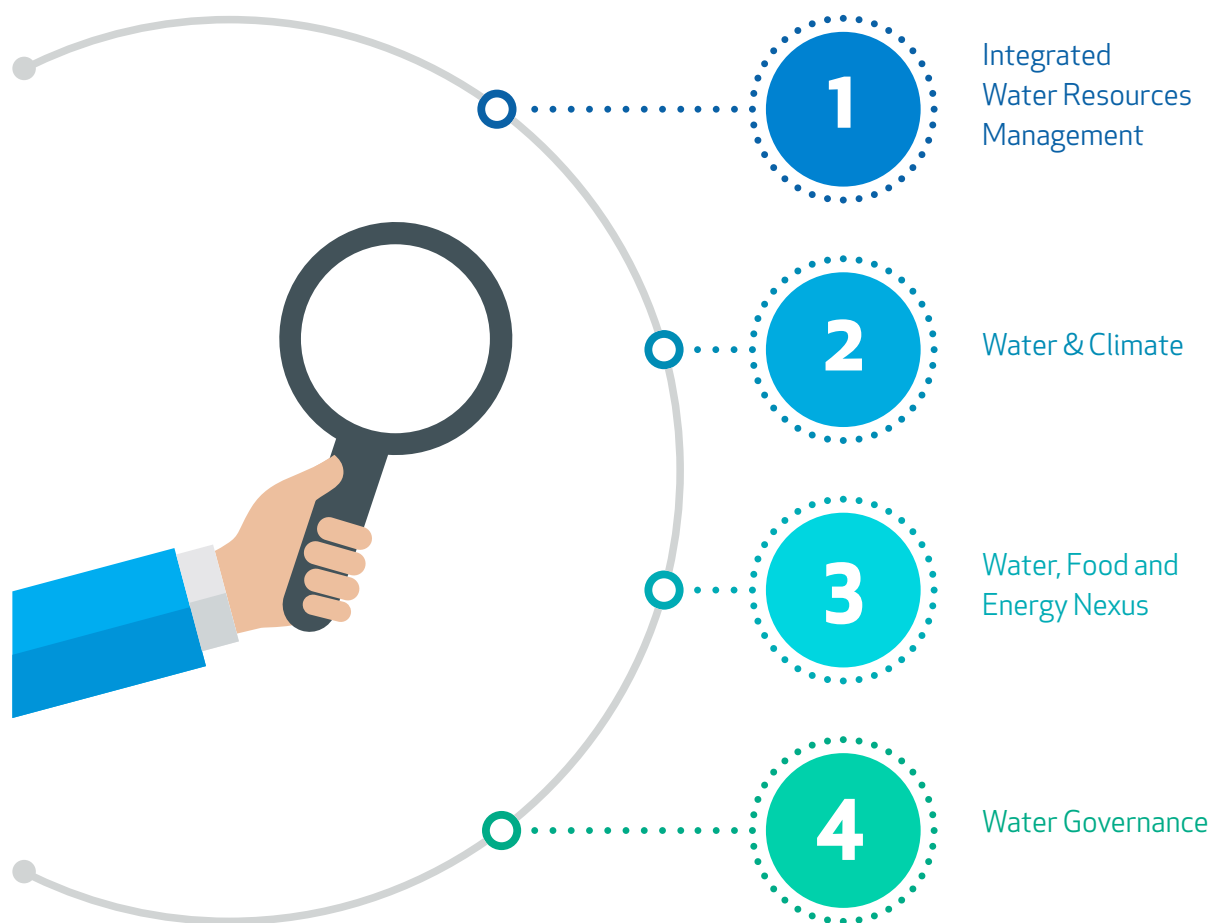
## AWC Approach



# FOCUS AREAS

## FOCUS AREAS

In accordance with AWC strategy and its 2016-2018 Work Plan, the Council embarked on the following activities with special focus on the Sustainable Development Goals (SDGs) and their significant impacts on the regional and national scales:



## Cross Cutting Issues

Capacity Building

Technology Exchange

Stakeholder Involvement

# I. Integrated Water Resources Management (IWRM)

(linked to SDG 6.5)

## A) Non-Conventional Water Resources (Linked to SDG 6.2)

1. Towards Improving Water Quality and Expanding International Cooperation in Water and Sanitation Related Program, AWC has Launched an “Arab Non-Conventional Water Resources Initiative” (ANCWRI) to address water scarcity challenges in cooperation with UNESCO’s Bureau for Science and Technology for the Arab region in Cairo. The Initiative is intended to develop a regional mechanism that could assist the Arab countries in developing their strategies and action plans for the sustainable use of non-conventional water resources by enhancing the policy, institutional and legal framework, while building/strengthening the human and technical capacities and improving public awareness and stakeholder participation in planning and management of such valuable resources. The initiative builds on and complements other regional programs and initiatives, particularly the Action Plan of the Arab Water Scarcity Security and FAO Water Scarcity initiative in the Near East and North Africa.

Within the framework of the ANCWRI, six policy briefs were prepared by water experts from the region. (for details see page 15).

More elaboration on Phase II of the Initiative will take place during the Non-Conventional Water Resources Special Session organized on the occasion of the 4th Arab Water Forum including: scope of work, targets and expected outputs, methodology of implementation, partners and their roles, time frame, windows of financing, and the governance structure of the project.





## 2. Implementation and Technical Coordination of the Regional MENA Project on “Acceleration of Aquifer Storage and Recovery”

The Project aims at building the capacity of MENA national institutions in three beneficiary countries (Jordan, Lebanon and Palestine) to develop non-conventional water resources with an ultimate goal of increasing available water supplies in the MENA region by accelerating the use of ASR technology based on remote sensing and geospatial hydrologic analysis. National water agencies within the region are engaged from the onset so that technology is developed with the involvement of the officials and engineers who will apply it to program management and field applications.

### **B) Strengthening the Role of Scientific Research and Technology in Water Resources Management**

1. After the successful completion of Phase I of the “Regional Coordination on Improved Water Resources Management and Capacity Building Project”, the Word Bank and AWC have jointly launched Phase II of the China/World Bank Partnership Facility (CWPF) on “[Improved Agriculture Water Management by Applying ET Monitoring and Management System](#)” (2017-2019).

The Project objective is to establish national and regional ET measurement, monitoring and management system, by transferring the advanced Chinese ET-Watch System Technology to five beneficiary countries: Egypt, Jordan, Lebanon, Tunisia and Morocco. The project will focus mainly on the improvement of the agricultural water productivity on strengthening the adaptation to climate change and agriculture risk resilience under constraint of agriculture water consumption gaps at the country and regional levels. This will take place by applying quantitative and spatial-based decision-making tools focusing on ET measurement, monitoring and management system, in order to reduce the inefficient agriculture water consumption and to minimize the negative CC impacts on national water and food securities. This support will also foster technical and professional cooperation between China and MENA countries and will support capacity building in improved agriculture water resources management in the MENA region.

To further discuss with all country representatives the detailed project technical and financial implementation plans and agree on the detailed partnership arrangements with the WB and partners, AWC has jointly organized the project [Launching Meeting](#) in May 2017. Based on the workshop deliberations, all 5 countries and the Regional Coordination Management Units were able to reach agreement on the Grant objectives, designed components/activities, detailed coordination and implementation plans, and allocated budget among respective countries and at the regional level with key timeframe. They firmly expressed their commitment to the achievement of the planned output and the outcome target results and project impacts by the project closing date in 2019.



2. [Preparation of the 3rd State of the Arab Water Report, in collaboration with CEDARE](#) within the framework of the Arab Water Security Strategy (AWSS) (2010-2030) and the associated Action Plan of the LAS Arab Water Ministerial Council. The ultimate goal of the report is to shift from a project that assesses the status of water to a permanent program that highlights the trends and alarming issues related to water resources, water services and management in the region. It will also address the financial expenditures for water resources management, infrastructure and water services, to assess the investment level in the water sector. The report monitors the hydro-political developments in the region, given the fact that most of the renewable water resources of the region originate from outside the region.

The 3rd edition of the State of the Arab Water report is intended to generate strategic, policy and service-related indicators to help improve livelihoods of the communities. It will also consider Goal 6 of the Sustainable Development Goals (SDG 6) to Ensure Availability and Sustainable Management of Water and Sanitation for All. The report represents a unique initiative by the Water Sector in the Arab Region on the road to the 2030 Sustainable Development Agenda, to monitor progress and achievement.

3. **Promoting the activities of AGIR Unit:** In response to the challenges and gaps in the field of Climate Change Adaptation, the technical activities under the AWC/LAS partnership were agreed to be implemented by the Arab Geographical Information Room (AGIR) hosted by the Arab Water Council (AWC), and supported by a Unit of Technical Excellence established by virtue of a decision of the LAS Arab Water Ministerial Council in its meeting of May 27, 2015, with the main objective of supporting decision-making and access to information for all Arab Countries.

Through AWC-based AGIR Unit, the following reports have been prepared:

- Mapping the Way towards Achieving Sustainable Development in the Arab Region
- Geographical Information towards Building Resilience in the Arab Region (Water, Food, and Social Vulnerability Nexus)
  - Part I: Assessing and Managing the Risks of Climate Change
  - Part II: Case Studies from several countries
  - Part III: Methodology of Change Detection
- Final Report of the Regional Workshop on “Strengthening the Understanding of Social Vulnerability in the Arab Region” (25-27 Sept. 2016)
- A Regional Review on “Strengthening the Understanding of Social Vulnerability in the Arab Region”



4. **Technical Coordination of 4 small projects to validate Land Information Systems (LIS)** to prove its usability and adequacy for the Egyptian environment through building a strong user community. The National Program includes four projects that utilize the LIS software in various water-related fields. The proposed projects shall use LIS software for:

- Estimating water balance and deep percolation for the entire Nile river basin using NOAH-MP LIS model and comparing it to the obtained results from DPM model.
- Running Weather Research and Forecasting model (WRF) using land information systems to improve the forecasting of severe weather events such as heavy rainfall, dust storms and heat waves, consequently improving the ability of WRF model to forecast the extreme weather events over Egypt.
- Using LIS to calculate the Evaporation and Evapotranspiration losses as well as the Drought Severity Index to validate LIS outputs using observed weather stations network established at the Environment and Climate Research Institute(ECRI).
- Estimation of ET using remote sensing techniques in Egypt, evaluation of ET-Watch model under Egyptian conditions and comparing the ET simple model with the ET-Watch model.

Implementation plans will be developed by multi-disciplinary teams including national universities and research centers that include the following:

- Egypt's Ministry of Agriculture, Agricultural Research Center
- National Authority for Remote Sensing and Space Sciences
- Egyptian Meteorological Authority
- Advanced Research Center
- The National Water Research Center
- Mansoura University.
- Beni-Suef University, Faculty of Agriculture.
- Alexandria University.



## II. Water and Climate (linked to SDG13)

In line with the persistent effort to integrate Water and Climate as priority issue for the Arab Region, LAS/AWC, with the support of key partners, have led the process of launching the [Climate Risk Nexus Initiative \(CRN\)](#) aiming at developing capacities of LAS and member States, as well as the regional and local partners, to address gaps that exist to achieve a more risk-informed development and to help strengthen the resilience of people and countries. The Initiative addresses food security, water scarcity, and social vulnerability to build resilience in the Arab region. Furthermore, the initiative is intended to build bridges among development goals, actors and initiatives, bringing forth added-value from synergies and complementarities. It will serve as a platform for joint programming between LAS and partner agencies to bring about a series of outcomes in the region that engage the complexity of risks, and exemplify resilient-based development solutions. Through this initiative, efforts will be made to strengthen regional cooperation and knowledge networks across disciplines. Four key activity areas have been identified: 1) Science and Data Readiness for Decision-Making; 2) Tools and Technology for Risk-Informed Development; 3) Local Leadership and Capacity Development; and 4) Strategies and Policies for Transformative Change.



International and regional partners involved in the Steering Committee of the LAS Initiative are the key partners in this program, including but not restricted to: WFP, UNDP, UNISDR, AWC, FAO National offices, ESCWA, UNEP/ROWA, ACF, IFPRI, ACSAD, GIZ, University Complutense Madrid Spain, and CEDARE, among others, under the umbrella of LAS.

Under LAS/CRN Initiative, AWC has signed a [Memorandum of Understanding with the World Food Programme \(WFP\)](#) with the purpose of providing a framework of cooperation and facilitating collaboration between interested Parties to provide Advisory service for policy and decision-makers on key trends and critical issues in the Arab region. This includes efforts to highlight near future as well as medium- to longer-term trends related to water scarcity, land degradation, climate change effects, and implications in terms of social vulnerability along with promotion of good practices, exchange of experiences and lessons learned to support policies, plans and capacity building.

One of the significant inputs of AWC/WFP collaboration program is issuing a comprehensive report on climate change impacts, adaptation, and vulnerability entitled “Geographical Information towards Building Resilience in the Arab Region.” The report focuses on and assesses the core elements and identifies the connecting points where the issue of climate change overlaps with or merges into other issues, taking into consideration that the integrative nature of the climate change issue underlies three major new elements: First, the explicit coverage of a larger range of topics to enable deeper assessment in a number of areas; e.g. SDGs, climate change, climate risk, climate resilience and the nexus approach that could deal with multi-diversification of the issue. Second, the focus on climate change as a challenge in managing and reducing risk, as well as capitalizing on opportunities. Third, the emphasis on the inter-connectedness of climate change with risk. Risks of climate change unfold in environments with many interacting processes and stressors.

### III. The Water-Food-Energy Nexus

- a) To promote the implementation of the water-food- energy nexus projects and to maximize productivity while improving water and energy efficiency, AWC is leading the process of “[Establishment of an SDG-Climate Nexus Facility](#)”, a multi-phased program that aims at bringing together partners from regional organizations, governments, UN agencies, private finance sector, civil society and academia, to undertake a series of activities - using a nexus approach - to support bottom-up local actions under SDG13 and the Paris Agreement on climate change to bring about clear co-benefits for core-related SDGs. Throughout the lead role of regional partners at the League of Arab States (LAS) and the Arab Water Council (AWC), and with the technical assistance from participating UN agencies including UN Development Programme (UNDP), UN Environment Program (UNEP), UN Office for Disaster Risk Reduction (UNISDR) and World Food Programme (WFP), the

Facility will support countries integrate climate measures into the broader SDG-affiliated policies and plans while developing national capacities in accessing climate finance towards building resilience and enhancing adaptive capacities of MENA countries to climate risks and natural disasters.



Through this joint UN programme along with regional partners, an initial phase (2017-2020) of the SDG-Climate Nexus Facility will become operational with funding to be mobilized from donors. Expected outcomes include: Mapping, assessments and Agenda Setting; Capacity Development and Country Actions for Climate-Resilient SDGs; Scientific Data and Analysis for Decision-Making; Tools and Technology for Risk-Informed Development; Climate Leadership and Governance for the SDG-Climate Nexus, Sustainable Finance, and country readiness for scaled-up Climate Finance.

## IV. Water Governance [\(linked to SDG 17\)](#)

Water governance has been promoted globally as one of the pillars for achieving sustainable development and enhancing service provision of a very scarce and essential resource, namely Water. Within the framework of developing regional and national capacity and knowledge base to enable setting sound water governance policies and effective institutional arrangements and adapting appropriate technologies for the sustainable use of non-conventional water resources to cope with the escalating water scarcity in Arab Region, AWC has contributed to the following endeavors:

### A) Building Strategic Partnerships

Throughout 2016/2017, the Council continued its role in strengthening the relationships with numerous regional and international organizations in full cooperation and coordination of the joint activities and linking them to the Global SDG Goals:

#### 1. Cooperation with LAS

The mutual collaboration between AWC and the League of Arab States (Arab Water Ministerial Council and its Secretariat) is considered one of the most significant activities, where AWC contributed to the following:

- Formulation of the Arab Water Security Strategy (AWSS) (2010-2030) which is a long-term program and practical mechanism for overcoming known future challenges in water resources development and management in the Arab region. AWSS was prepared by ACSAD and endorsed during the 4th Meeting of the Arab Water Ministerial Council in Iraq in 2012. AWC role was instrumental in developing the first 5-year Action Plan of the Strategy.

- The Climate Risk Nexus Initiative (LAS/CRNI) which aims at developing capacities of LAS and Member States to enact decisions and policies that better manage the growing complexity of risks and support the resilience of people and countries. Four Areas of Work were identified under the LAS/CRNI: 1) Science and Data Readiness for Decision-Making; 2) Tools and Technology for Risk-Informed Development; 3) Local Leadership and Capacity Development; 4) Strategies and Policies for Transformative Change. The initiative is supported by 4 lead agencies: UNDP / WFP / UNISDR / AWC.
- Upgrading the Institutional Capacity and Performance of AWMC: It was deemed necessary to visualize a long-term perception for upgrading the institutional performance of the Arab Water Ministerial Council (AWMC) through developing appropriate implementation mechanisms and introducing necessary amendments for enhancement of the regulations and By-Laws of the Council, meanwhile reviewing the terms of reference and commitments of its work schedule. Towards this end, two meetings were scheduled to discuss this enhancement trend and future outlook, the first of which took place in Beirut, Lebanon, in September 2017, on the occasion of the RICCAR meeting, and the second is scheduled to be held in Cairo, Egypt, in November 2017, on the sidelines of the 4th Arab Water Forum. The outcomes of the two meetings are to be presented in the forthcoming meeting of AWMC Executive Committee in January 2018.
- Upgrading the Negotiation Skills of Arab Countries regarding Transboundary Water Resources shared with Non-Arab Countries: It was decided that the AWMC Technical Secretariat would communicate with ESCWA, GIZ, UNESCO, FAO and AWC to get necessary support for organizing training courses for senior negotiators to upgrade their negotiation skills in the field of shared water with non-Arab countries.



- Developing Guidelines on Shared Water Resources in the Arab Region: An Expert Committee meeting is summoned to be held in Cairo, Egypt, during the period 29-30 November 2017, back-to-back with the 4th Arab Water Forum, in order to discuss and formulate Guidelines and Terms of Reference for mutual cooperation between Arab countries as far as shared water is concerned. A Concept Note has been prepared in this concern.

## **2. Cooperation with Regional and International Organization:**

Full cooperation and coordination with numerous regional and international organizations such as the World Bank, NASA, GEF, USAID, FAO, CEDARE, UNESCO, UNDP, ACSAD, GIZ, ESCWA, ICARDA, IWMI, IFAD, ICBA, IsDB, AfDB, RAED, CIHEAM, WWC, UNEP, ICID, SIWI, OECD, IDRC, SIWW, and REC among others, is initiated and reflected in the numerous Projects and Protocols of Agreement that are on-going.

Examples of AWC current partnership projects/activities include:

- China-WB Partnership Facility (CWPF): ET-Watch Monitoring and Management System at the Irrigation and Farm Levels on the National and Regional Scales (Phase II: 2016-2019).
- Joint AWC/FAO Activity for continuation of the “Guidelines for Brackish Water Use for Agricultural Production in the Near East and North Africa” in a Second Phase. A digital Atlas and a Farmers Guidebook are proposed to be developed.
- AWC/USGS Regional MENA Project on “Accelerating of Aquifer Storage and Recovery” with the main objective of improving water security in the MENA region by using remote sensing and geospatial hydrologic analysis.
- AWC/WFP Collaboration Program
- Other areas of cooperation on the national scale are also evident through links with the Ministries of Irrigation, Environment and Planning of pilot countries in the MENA/Arab region.

### 3. Role of the Arab Water Academy in Capacity building

Through the Arab Water Academy (AWA) - the scientific arm of the Council and a center of excellence and capacity building in water-related issues in the Arab region - a comprehensive training program was proposed to be administered by AWC to include diverse training courses, workshops, scientific seminars, field studies and field visits.

[See Details in Annex \(I\)](#)



#### B) Strengthening the Understanding of Social Vulnerability in the Arab Region:

AWC has Organized a Regional Workshop on the subject under The Climate Risk Nexus (CRN) Initiative jointly with WFP (Sept. 2016). The Workshop was intended to improve the understanding and evaluation of social vulnerability as affected by major sources of risks, particularly poverty, climate change, water scarcity, food insecurity and water-related conflicts. The workshop was a chance to discuss the applicability of these risks to the Arab countries and to identify their adverse effects that are already felt in the region. It also addressed the adaptation of strategies, policies and programs necessary to reduce vulnerabilities and evaluate current efforts.



### **C) Developing Policy Briefs on Non-Conventional Water Resources (NCWR):**

Within the framework of the ANCWR Initiative, six policy briefs outlining the analytical framework of NCWR utilization were prepared to help achieve a common Arab vision on issues of significant priority. This task builds on consolidated recommendations for policy statements on the sustainable development of the NCWR in the Arab Region. The Policy Briefs also provide recommendations on the way forward for consideration by the LAS Arab Water Ministerial Council. The list of related Policy Briefs includes:

1. SUSTAINABLE DEVELOPMENT OF NON-CONVENTIONAL WATER RESOURCES IN THE ARAB REGION
2. INCREASING WATER USE EFFICIENCY
3. DESALINATION PROSPECTIVE IN THE ARAB REGION
4. AGRICULTURAL DRAINAGE WATER REUSE: AN OPPORTUNITY FOR INCREASING WATER USE EFFICIENCY
5. SUSTAINABLE BRACKISH GROUNDWATER USE IN THE ARAB REGION
6. WATER HARVESTING IN THE ARAB REGION

The policy briefs have been endorsed by the Arab Water Ministerial Council during its meeting in Cairo on July 6, 2017, and became available for use by all Arab countries according to their needs and priorities.

**D) Issuing a comprehensive report on “Mapping the Way towards Achieving Sustainable Development in the Arab Region” – with special focus on Food, Water, Climate and Disaster-related SDGs,** targeting better governance on the regional scale. The report summarizes a larger and more in-depth review of key existing regional strategies in the Arab region. It is prepared within the framework of the League of Arab States’ Climate Risk Nexus Initiative, and focuses on how the different sectors can better complement each other in critical ‘nexus areas’ and identifying opportunities for re-thinking implementation in support of the SDGs.

# Conferences/Fora/Events

## Conferences/Fora/Events

One of the principal activities conducted by the Arab Water Council is the organization of the prominent series of tri-annual Arab Water Fora (AWF) which continue to promote a regional platform for engaging AWC members, decision-makers, water resources experts, practitioners and institutions into dialogue on all aspects of water management for growth and sustainable development in the Arab region.

The series of Arab Water Fora is convened under the patronage of the League of Arab States and the Ministry of Water Resources and Irrigation of Egypt.

### 4<sup>th</sup> Arab Water Forum

Along more than one year, AWC has guided the preparatory process for organizing its 4th Arab Water Forum and was keen to involve its members and partners to a greater extent.

A kick-off consultation meeting was conducted in April 2017 with participation of a number of international organizations, partners and stakeholders to discuss and shape the Forum's program and decide on the organizational aspects and arrangements, to finalize and agree on the Forum proposed themes and topics, to highlight the interest and contribution of the partners in the Forum, and to advise on the Forum technical program. All partners mobilized their knowledge, energy and resources to draw a roadmap and initiate actions to make this event successfully happen.

Eventually, the Forum Organizing and Executive Committees were established and helped throughout the preparations of the Forum to set-up work plans and milestones, oversee the preparation process and coordinate the different organizational tasks of scientific review, publications, finance, website administration, registration, venue, IT management and follow-up on the exhibit arrangements of the Arab Water Expo that will be organized on the sidelines of the Forum. A Fine Art Gallery for showcasing the artworks of four water competitions among youth and children under the main theme of the forum is organized.





## Preparations for the 8<sup>th</sup> World Water Forum

In order to be a part of the global dialogue on water, AWC is always keen to participate in the Thematic and Arab Regional Processes of the World Water Forum in its capacity as Regional Coordinator. AWC contribution to the forthcoming WWF8 in Brazil in March 2018 is as follows:

### First: Contribution to the Regional Process

AWC will be the Coordinator for Theme 2 on “PEOPLE,”

Topic a: “Enough Safe Water for All.”

### Second: Contribution to the Thematic Process

In August 2017, AWC submitted to the WWF8 in Brazil an Expression of Interest (EOI) for contributing to the Thematic Sessions. The EOI included the following 3 selected topics in order of priority:

1. Theme 8 on Capacity (Topic b: Science and Technology and Decision/Policy-Making).  
Provisional Title of Keynote Speaker Presentation: “Influence of Science and Technology on Policy Decision-Making.”  
Case studies from the “Regional Coordination on Improved Water Resources Management and Capacity Building Program” (for Morocco, Jordan and Lebanon) will also be presented.
2. Theme 2 on People, (Topic a: Enough Safe Water for All)  
Provisional Title of Keynote Speaker Presentation: “Using Non-conventional Water Resources in the Arab Region: A No-Regret Policy.”  
Case studies on Non-conventional Water in Egypt will also be presented.
3. Theme 1 on Climate (Topic a: Managing Risk under Uncertainty for Resilience and Disaster Preparedness)  
Provisional Title of Keynote Speaker Presentation: “Climate Change Impacts on Social Vulnerability in the Arab Region.”

## AWC has actively participated in:

**1. The Arab Sustainable Development Week** organized by LAS Sustainable Development Department and held in Cairo from the 14th to the 17th of May 2017 in partnership with the World Bank, the United Nations Development Program and the Ministry of Investment and International Cooperation in Egypt (the host country), under the slogan “Towards an Effective Partnership”. AWC contributions to the Week included organization of following two Technical Sessions:

a) “The Role of Modern Technologies for Sustainable Development in the Arab Region” with the objective of highlighting the national and regional experiences in using advanced technologies in the Arab Region. During the session, success stories and lessons learned were presented by different countries to demonstrate the importance of using innovative technologies in sustainable resources management.



b) “Social Vulnerability in the Arab Region – Building Resilience and Advancing Social Protection” with the aim of demonstrating the importance of understanding social vulnerability from a range of sectoral dimensions, as well as regional and national level perspectives, and with special focus on current challenges in social vulnerability assessments in practice. Key drivers and indicators as well as the possible mechanisms and policy directions needed to achieve the Sustainable Development Goals were also discussed.



## 2. 11<sup>th</sup> Water Desalination Conference in the Arab Countries (ARWADEX)

In presence of the most specialized regional gathering to discuss desalination research, technologies and sustainable economies, AWC has participated in ARWADEX Conference (Cairo, 18-19 April, 2017) organized by the Holding Company for Water and Wastewater under the umbrella of the Ministry of Housing, Utilities and Urban Communities.

In the light of the development and support of IWRM plans and the development of conventional and non-traditional water resources and the importance of desalination as a non-conventional water resource to address water scarcity in the Arab region, the Arab Water Council organized a technical session in cooperation with the Ministry of Water Resources and Irrigation, Ministry of Housing, Utilities and Urban Communities and the Holding Company for Water and Wastewater under the title: "Desalination as a Strategic Solution towards Integrated Water Resources Management in the Arab Region". The session was in collaboration with the private sector and NGO representatives. Presentations were given by: AWC President on the topic of non-conventional water resources, including desalination towards sustainable development in the Arab region; Vice President of AWC and Chairman of the Advisory Council of Aqua Holding on the role of the private sector in desalination of seawater to achieve sustainable water security in the Kingdom of Saudi Arabia; and Chairman of Bushnak Group on "Sustainability and Development of Desalination Services and Benefits in the Arab World".





### **3. International Conference on Research and Technology Development for Sustainable Water Resources Management (REDWARM)**

Recognizing the critical role of Water Technology in transforming societies and economies through enhancing efficiency and access to resources and services, the Arab Water Council has taken the lead to organize a special session on “Water Technology towards Sustainable Development in the Arab Region” on the occasion of the NWRC International Conference on Research and Technology Development for Sustainable Water Resources Management (REDWARM) held in Cairo, Egypt in December 4-16, 2016. The session aimed at reviewing how various water technology innovations contribute to sustainable development at the regional arenas. Representatives of different national and regional organizations have been invited to share their expertise and know-how in relevant fields. AWC presentations included:

1. Outcomes regarding assessment of the State of the Water (SOW) in the Arab Region using selected indicators for Monitoring and Evaluation by AWC/CEDARE. Joint AWC/CEDARE efforts in issuing a special series of publications “The State of the Water Reports” (1st edition published in 2004 & 2nd edition in 2012) were also presented.
2. Brief presentation about the AWC/UNESCO/FAO “Arab Non-Conventional Water Initiative,” which is concomitant with The Arab Water Security Strategy (2010-2030) and its action plan. (see details on page ?)
3. The Regional Coordination Program on Improved Water Resources Management and Capacity Building partnered by AWC/WB/NASA/USAID/GEF. The objective of the program is to improve water resources and agricultural management within and across five beneficiary countries (Lebanon, Jordan, Egypt, Tunisia and Morocco) based on quantitative and spatial-based decision-making tools using modern advanced technologies of remote sensing, GIS, data assimilation and modeling techniques. During the session, there was also an opportunity for presenting the activities and achievements of the Arab Network for Water Use Ethics, one of the networks managed by the Arab Water Council.

# Technical Reports and Publications

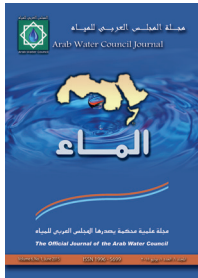
# Technical Reports and Publications

With the aim of sharing knowledge and disseminating information among interested parties, AWC periodically prepares and issues a number of publications, technical reports and newsletters. Examples of 2016/2017 publications are:

## Status & Achievement Reports

2016-2017 Achievements of AWC.

### AWC Scientific Journal “Al-Maa”



Bilingual, Semi-annual (2016 – 2017) (Vol. 7 Nos. 1, 2) (Vol. 8 No. 1) (Index downloadable from AWC website - hard copies of full journal available for members at AWC Headquarters)

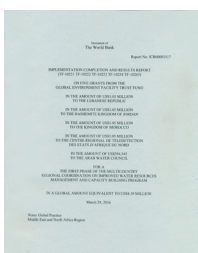
### Project Reports



China-WB Partnership Facility (CWPFP). Project Launching Mission Report on Phase 2 of the “Regional Coordination on Improved Agriculture Water Management by Applying ET Monitoring and Management System” (AWC/WB, 2017).



Final Report of Kick-off Workshop MENA Regional Project on: “Accelerating of Aquifer Storage and Recovery (ASR)” Dead Sea, Jordan, USGS, 2017.

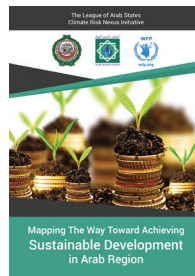


Interim Closing Report (ICR) of the Regional Coordination on Improved Water Resources Management and Capacity Building Program” (WB, 2016)



### Technical Reports

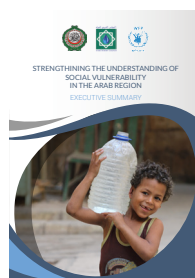
6 Policy Briefs on “The Use of Non-Conventional Water Resources on the Arab Scale.”



Report on “Mapping the Way towards Achieving Sustainable Development in the Arab Region” (AWC / WFP).



Training Manual on Mainstreaming CC Impacts into National Water Strategies and Action Plans (AWC/UNESCO/ GIZ).



A Regional Review Study on “Strengthening the Understanding of Social Vulnerability in the Arab Region” (AWC/WFP).



Briefing Note on “Climate Risk Nexus Initiative: Addressing food security, water scarcity and social vulnerability to build resilience in the Arab Region” (AWC/LAS)



Proposal for SDG-Climate Nexus Facility, within the framework of LAS/CRN Initiative (AWC/ UNDP/WFP).

## **AWC Newsletters**

Quarterly e-Newsletters (2016 - 2017)  
(downloadable from AWC website)

## **Technical Library**

- Update of AWC Technical Library Index

## **AWC Networks**

- Flyer on AWC Youth Network.

# INSTITUTIONAL DEVELOPMENT

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### I. ARAB WATER ACADEMY

In view of the recommendations of AWC Executive Committee and Board of Governors to approve the offer made by the University of Sinai in the Arab Republic of Egypt to host the headquarters of the Arab Water Academy (AWA), the following endeavors have taken place:

- A memorandum of mutual cooperation between the Arab Water Council and the University of Sinai was signed in early 2017. The proposal includes the commitment of the University of Sinai to provide all logistic, administrative, technical and financial support necessary to host and operate the Academy, while complying with all the terms of reference regarding the tasks, objectives, frameworks, operating system and training programs in accordance with the arrangements approved by AWC Board of Governors.
- Formation of AWA affiliated committees including the Executive Committee and the Scientific Committee, (etc.).
- Initiating establishment procedure of the AWA Headquarters. (Completion deadline is December 2017)
- Proposing a package of training programs by AWA Scientific Advisory Committee including diverse training courses, workshops, scientific seminars, field studies and field visits (Please see details in Annex I).

### II. STRENGTHENING HUMAN RESOURCES

As the work program of the Council became progressively more structured over the last three years, and with priorities being better identified, the expertise and professionalism of the staff was enhanced. Three new staff members have joined the Council to reinforce AWC technical capacity. In the same context, AWC focuses on training and building capacities of its employees to cope with and respond to the expanding activities related to the on-going project/programs.

#### **Staff training programs included**

Technical Training:

1. IVLP Training on Climate Change and Renewable Energy for AWC Technical staff in USA. The main themes included: Overview of US Climate Change Policies: Climate Change Policy Initiatives, Energy Research, Innovations in Renewable Energy Sources, Volunteering Opportunities and Assessment of the effects of climate change-driven environmental damage and exploring mitigation.

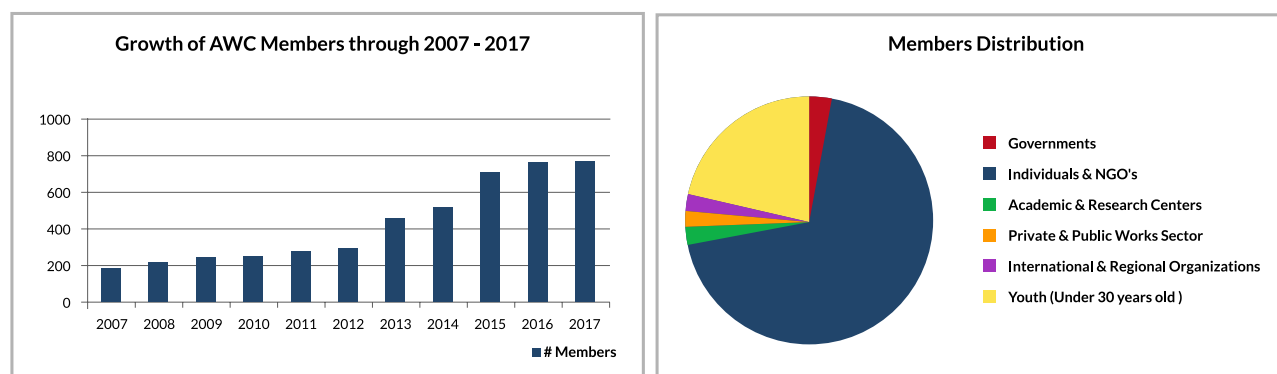


2. Tailored Technical Course on ArcGIS. The Course was designed to provide the staff members with introduction on the Geographic Information Systems (GIS) in general, Remote Sensing principles, and Image Spatial Analysis. In the course exercises, the staff learned how to develop basic software skills by working with ArcGIS Desktop tools to visualize geographic data, create maps, and analyze data using common analysis tools. AWC trainees were also exposed to handling and managing of the geo-spatial data, which will support AWC role of organizing and disseminating the spatial information for the Arab region.
3. Online Training Courses of staff preferences along with their daily tasks during office hours to enhance their skills.

### III. MEMBERSHIP

During the years 2016-2017, the General Secretariat of the Council received a number of applications from new members to be on board to reach an increase of 9%.

AWC Membership is still in need of further support, especially in the Arab countries in view of the importance of revitalizing membership to activate and expand the role of the Arab Council. It worth mentioning that the Council General Secretariat spared no efforts to expand its membership especially from the youth and professionals interested in water issues and sustainable development.



### IV. NETWORKS

#### A) ACTIVATION OF AWC YOUTH NETWORK

In line with its main objectives for increasing water and environmental awareness, building capacities and enhancing participation in water-related activities, the newly established AWC Youth Network undertook the following events and activities throughout 2016/2017:





1. Conducting the Youth Network Kick-off Meeting: to discuss and agree on the network vision, mission activities and roadmap.
2. Organizing the 1st Youth Workshop (Water: Knowledge and Practice): aiming at spreading awareness on major water issues and engaging youth communities in water-related activities.
3. Participation in the "U.S.-Egypt S&T Joint Fund Global Lab to Market Forum – Organized by the US Embassy: the forum main focus was on building an effective lab to market interventions for global competitiveness.
4. Conducting an interactive Student Awareness Workshop (January 2017 at AWC Premises) aiming at raising water awareness for youth The AWC Youth Network hosted a group of undergraduate students from "ROOTS International Schools" to explain and discuss with them the UN SDGs as well as the major water challenges facing the Arab Region with a national perspective on the Water Status in Egypt.
5. Participation in the Leadership Seminar: organized by the Arab Organization for Administrative Development (Arab League) focusing on leadership and means of success and shared thoughts on how to succeed in the work place and overcome major career obstacles.
6. Engaging youth in the preparation and organization process of the Arab Water Fora.
7. Inviting Young Professionals to attend and participate in AWC events.



## B) ACTIVATION OF THE NON-CONVENTIONAL WATER RESOURCES NETWORK

Realizing the importance of using non-conventional water resources (NCWR) for securing water in the Arab region, the Arab Water Council worked actively towards establishing the NCWR Network comprising five components for scientific research and innovations: brackish groundwater, agricultural drainage water, treated wastewater, desalinated water and rainwater harvesting. The aim of the network is to develop and promote technologies that suit the local socio-economic and environmental conditions of the Arab region.

Throughout 2016-2017, the NCWR network embarked on the following activities;

- Establishing a framework for compilation of data on experts, publications, institutions and projects in the field of non-conventional water.
- Work started with the treated wastewater reuse component, the publications baseline data were compiled including: Books, Dissertations, Reports and Technical papers for the years 1980 to date.
- Moreover, a roster of available water experts and organizations was prepared in preliminary form.

The same baseline data compilation is in progress for the desalination component of the network.

A mechanism for networking with all focal points of the Arab countries is being investigated for ensuring easy access to the available information.

## V. AWC NEW BUILDING

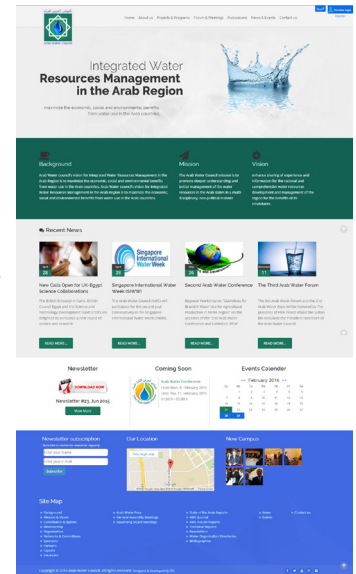
95 percent of the civil works (concrete structure and ceilings) has been implemented

A request to add two or three floors has been submitted to the concerned authorities and the Ministry of Housing and a preliminary approval has been obtained.



## VI. WEBSITE

In an effort to further improve its internal and external networking, AWC launched its newly refurbished website. The interface, the architecture and the design have been modified to render it more user-friendly, to give a clearer picture of the Council's activities and to highlight the current and future regional water-related challenges.



## Highlights on 2018 Work Plan

## Highlights on AWC 2018 Work Plan

### Preparing for the 5th General Assembly (GA) of the Arab Water Council

- Catalyze action for the Next Arab Water GA.
- Assess progress since the 4th GA and adjust plans accordingly.

### Regional Project Coordination

- CWPf Project: The Regional Coordination on Improved Agriculture Water Management by Applying ET Monitoring and Management System
- USGS Project: MENA Regional Project on "Acceleration of Aquifer Storage and Recovery"

### King Mohammed VI International Center for Strategic Water Studies and Research in the Arab Region

- Follow up on completing the legal and logistic procedures and implementation of the training programs

### AWC New Building

- Starting the construction works
- Implementing the exterior works

Finally, the Council will spare no effort to work for recognition of water in all the Global Sustainable Development Goals and towards tangible implementation of the water-related aspects of such goals and targets in the years to come.



# Annexes

## **Annex (I)**

**Arab Water Academy Training Program**

## **Annex (II)**

**Events Calendar 2016-2017 - Conference Participation**

## Arab Water Academy Training Program

1. Shared water and protection of Arab water rights;
2. Enhancing the concept of IWRM implementation, and promoting the concept of sustainable development (SDGs) and mechanisms for achieving them;
3. Capacity building and resilience building to address water challenges, and Raising awareness and participation of civil society in water and environmental issues;
4. Use of modern science and technology in the management of water resources;
5. Strengthening communication and exchange of views to address water issues in the Arab region.

Furthermore, recommendations for priority programs included the following topics:

- Shared water diplomacy and negotiation skills development.
- Modern management and productivity increase at the field level, with the inclusion of smart programs such as Artificial Intelligence (AI) and Decision-Support Systems (DSS).
- Water indicators for monitoring the water sector and preparing water situation reports, meanwhile incorporating of the impact of climate change on water resources into national policies.
- Geographic information systems and remote sensing (GIS & RS) in the management of water resources.
- Interrelationships between energy, water, food and the environment in a Nexus approach.
- Educational courses for parliamentarians, media professionals and civil society on water legislation and water issues.
- Economic, social and environmental assessment as an integrated system approach, with special focus on human resources management and the role of the private sector in the integrated management of urban water.
- A dialogue session for ministers and decision-makers on policies, strategies and water visions up to 2030 (within the context of the Arab Water Security Strategy and the requirements of the international community for achieving the SDGs and linking all topics to them).

## Events Calendar 2016-2017 - Conference Participation





## Events Calendar 2016-2017 - Conference Participation







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Arab Water Council