



GLOBAL CENTER OF EXCELLENCE

Arab Countries Water Utilities Association (ACWUA)

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Arab Countries Water Utilities Association

A GLOBAL CENTER OF EXCELLENCE FOR WATER AND WASTEWATER MANAGEMENT AND KNOWHO

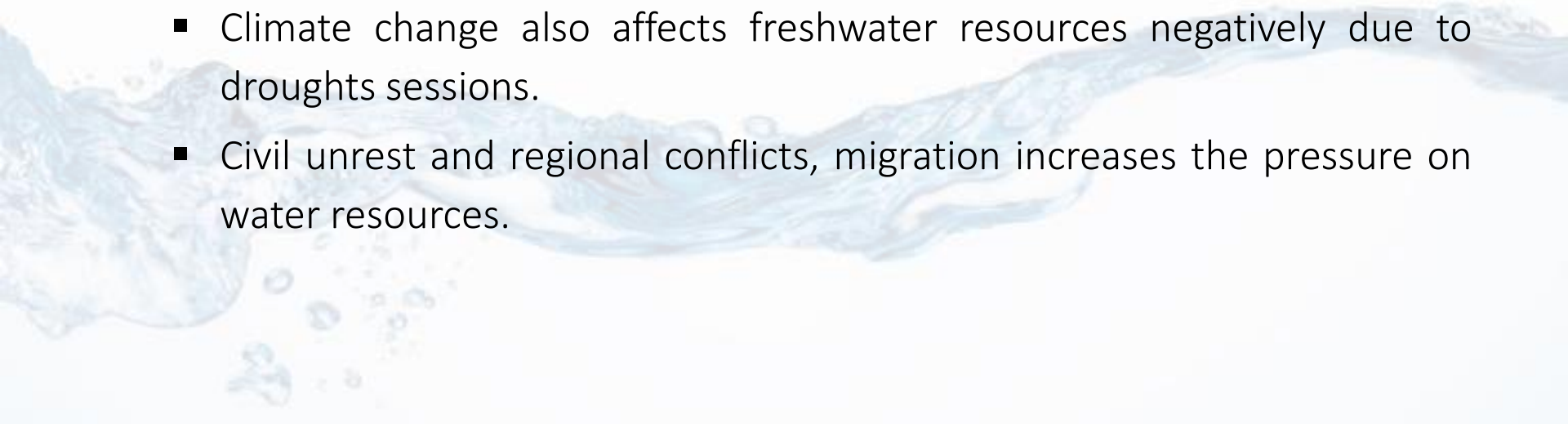
www.acwua.org

Arab Countries Water Utilities Association (ACWUA)

The Arab Countries Water Utilities Association (ACWUA) was found as a result of an initiative by key water utilities experts in the Arab Region.

- ACWUA is hosted by the Jordanian government.
- Agreement was signed between the ministry of water and irrigation presenting the Jordanian government and ACWUA's president in December 2008.
- ACWUA's Headquarter located in Amman (the capital of Jordan).
- Geographical scope: all the Arab countries in cooperation with international organizations and private sector working on the water and wastewater industry.

Water Resources Challenges

- ❖ Water scarcity is one of the greatest challenges of the twenty-first century due to:
 - Limited available conventional water resources where 12 Arab countries are below water poverty line 1000 cm/capita/year for all uses (Domestic water, Agriculture, Tourism and Industry).
 - Population growth, economic development, urbanization and dietary changes.
 - Climate change also affects freshwater resources negatively due to droughts sessions.
 - Civil unrest and regional conflicts, migration increases the pressure on water resources.
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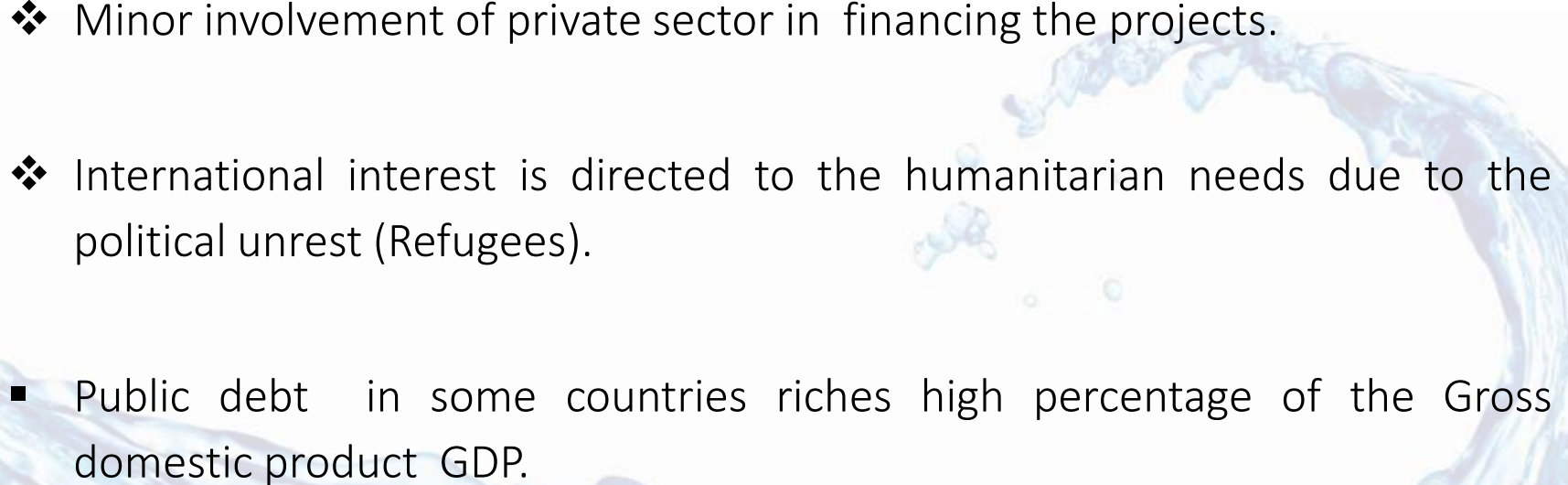
Institutional challenges

- ❖ Lack of master planning for water resources and allocation for different uses.
- ❖ Low efficiency of water utilities:
 - High percentage of NRW.
 - High water production cost (Energy cost, over staffing, inefficient maintenance, lack of asset management strategies).
 - Low tariff structuring.
 - Low cost recovery and revenue collection.
- ❖ Lack of building capacities strategies and brain drain from the public sector specially water and wastewater experts.
- ❖ Lack of experts in WASH to be involved in serving the humanitarian issues in refuges camps.

Legislation challenges

- ❖ Many Arab countries do not have water law to define the role and interfaces of different ministries and stakeholders (Water, Health, Environment, Agriculture, Civil society organizations and water users associations).
- ❖ Weak role of the regulatory bodies in the water sector to monitor the performance of the utilities and private sector involvement

Funding Challenges

- ❖ Mega projects cant be financed from local government budget.
 - ❖ Minor involvement of private sector in financing the projects.
 - ❖ International interest is directed to the humanitarian needs due to the political unrest (Refugees).
 - Public debt in some countries riches high percentage of the Gross domestic product GDP.
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ACWUA's Role in minimizing the effect of the challenges

- ❖ **ACWUA Vision:** Global center of excellence for water and wastewater management and knowhow.
- ❖ **ACWUA Mission:** In partnership with the Arab water and wastewater utilities, ACWUA will provide the necessary knowledge and tools for utilities to be a trusted, efficient and effective in providing safe, affordable water and wastewater services.

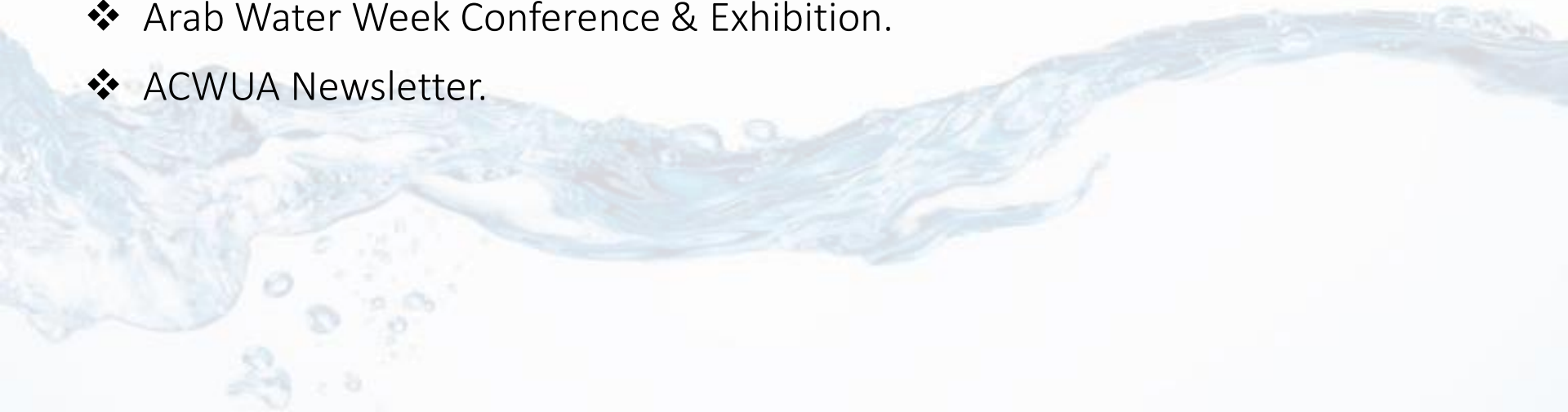


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ACWUA's strategies and tools to achieve the mission statement

- ❖ Technical Working Groups.
 - ❖ Instituting Best Practices.
 - ❖ Projects, studies, researches and consultations.
 - ❖ Capacity Building and Certifications.
 - ❖ E-learning Courses.
 - ❖ ACWUA International Conferences & Exhibitions.
 - ❖ Arab Water Week Conference & Exhibition.
 - ❖ ACWUA Newsletter.
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ACWUA Technical Working Groups (TWG)

Management of Utilities

- Cost Recovery
 - Non Revenue Water
 - Water for the Poor
 - Energy Efficiency
- Asset Management

Management of Water Resources

- Governance
- Master Planning
- Protection of Resources
- Adaptation to Climate Change
- IWRM

Utilities Reform

- Autonomy / Commercialization
- Public-Public Partnership (Twining and matchmaking)
- Private-Public Partnership

Capacity Building & Training

- Training Strategy
- Certification

Water & Health

- Domestic Water Supply
- Waste Water Treatment and Re-use

Quality Management Systems (QMS) Task Forces – Technical Sustainable

Management (TSM Arab)

Benchmarking

Public Awareness

Instituting Best Practices

- ❖ Developing and **implementing NRW** Diagnostic tool to help utilities reducing the NRW in Jordan, Lebanon, Egypt, Tunisia and Algeria through:
 - Developing Non-Revenue Water (NRW) reduction plan for Jordanian utilities and conducting knowledge sharing workshop to present the Non-Revenue Water (NRW) reduction plan for Jordanian utilities and exchange the local and regional experiences in management NRW regional and international levels through Water Management Initiative (WMI) project funded by USAID.
 - Developing certified levels of Non-Revenue Water (NRW) training programs by CAQA and ABC (physical, Commercial, GIS application and strategic planning for NRW).



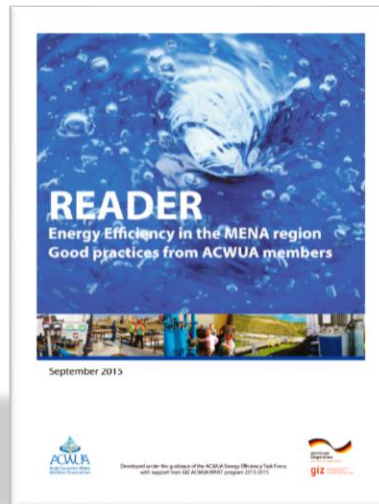
Instituting Best Practices

- ❖ Developing and implementing **NRW** Diagnostic tool to help utilities reducing the NRW in Jordan, Lebanon, Egypt, Tunisia and Algeria through:
 - Participating in **MiyahCon** Consortium Project (funded by EU) to promote Sustainable Management of Water Services and Resources in Countries Affected by the Syrian Crisis. ACWUA implemented NRW Diagnostic Tool and a taskforce Android/Web mobile application during the project in Lebanese water utilities .
 - Participating in SWIM_H2020 Consortium Project (funded by EU) to identify of the Non-Revenue Water (NRW) and intervention for Leakage Reduction in Blaeda – Algeria.
 - Developing O&M mobile application for the 3 Lebanese water Establishment (North, South and Beqaa).

- ❖ Develop Miyahuna 5 years NRW Strategic and Investment Plan 2017-2021.

Instituting Best Practices

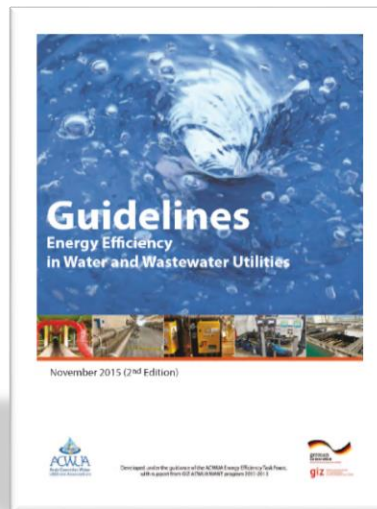
- ❖ **Energy Efficiency** :ACWUA in cooperation with GIZ developed Energy Efficiency Reader and Guidelines for water and wastewater faculties to reduce the energy consumption and energy cost
 - Two pilots were implemented in Wadi AlMujib pump station- Jordan and Jal El Dib pump station- Lebanon (funded by USAID).
 - Trainer of trainers (TOT) was carried and Training programs were developed.



Instituting Best Practices

❖ **TSM Arab:** ACWUA developed TSM Arab in cooperation with GIZ , HCWW in Egypt and DWA :

- Developed manuals about the requirements of Technical Sustainable Management in water and wastewater treatment facilities.
- Experts from different countries were certified to be editors.
- Four facilities were audited and certified for the TSM requirements in Jordan , Egypt and Tunisia.



Instituting Best Practices

- ❖ **Water Tap** : Develop and implement Water Tap Manual (Transparency - Accountability and Participation):
 - The Tap concept was implemented on number of utilities in Jordan, Egypt, Morocco and Tunisia.
- ❖ **Utilities Management and utilities reform:** Project was implemented for Case studies in Utilities Management and utilities reform in 10 Arab Countries and lessons manuals were developed (Lebanon, Palestine, Yemen, Tunisia, Morocco, Jordan, Algeria, Syria, Egypt and Mauritania).



❖ **Public Awareness:** Develop a Reader- Good Practices in Public Awareness experience in the MENA Region: Jordan, Lebanon, Egypt, Palestine, Egypt, Tunisia, Morocco and Yemen.

❖ **Wastewater Reuse:** Conduct needs assessment, develop a training materials, conduct training courses and field trips. In addition to developing and E-learning platform and videos within ReWater MENA Project. [E-learning Platform | ReWater MENA – on reuse of treated wastewater \(elearning-rewatermena.org\)](http://elearning-rewatermena.org)



Projects, studies, researches and consultations

❖ **Financed by German international Cooperation (GIZ)**

- Performance Based Contract for Sewerage Revenue Improvement on Irbid Governorate.
- ACWUA Water Networking and Training (WANT) in the areas of Energy Efficiency, Urban Sanitation, Benchmarking, Quality Management, water utilities Management.
- Water Integrity (WI) in Maghreb, managed by ACWUA (regional trainer pool) in association with ONEE and SONEDE.
- Water Integrity in Near East, managed by ACWUA in association with the Holding Company for Water & Wastewater (HCWW) and Water Authority of Jordan (WAJ).

Projects, studies, researches and consultations

- ❖ **Financed by United States Agency for International Development (USAID)**
 - Developing and Expanding Certification to cover Business Management, and Operational Excellence “DECOE”.
 - Conducting certification (Regional certification program with USAID-ME for 2 Million USD).
 - Non-Revenue Water (Research project on Developing diagnosis and strategies to reduce NRW in the MENA region funded by USAID-FABRI project and in association with AFWA).
 - Improving Water and Sanitation services in the MENA Region Program (IWSMR).
 - Part of Water Management Initiative through Non-Revenue Water (NRW) reduction plan, knowledge sharing workshop and water utility management training in Jordan.
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Projects, studies, researches and consultations

❖ **Financed by Swedish International Cooperation (SIDA)**

- Developing Technical Working Groups to “Utility Management and Utility Reform”.
- Establishing a Regional Mechanism for Improved Monitoring and Reporting on Access to Water Supply and Sanitation Services in the Arab Region) in cooperation with UN-ESCWA (MDG+ Initiative).
- ReWater MENA Project for improving the capacity and spread the knowledge in the Collection, treatment and reuse of the wastewater in the Arab Region.

❖ **Financed by European Bank for Reconstruction and Development (EBRD)**

- Benchmarking water services in Jordan program- Phase I & II including developing software and platform for data and comparison between KPI in the Arab Utilities.



Projects, studies, researches and consultations

- Improving Regulatory Framework for Standards of Wastewater Discharge in Jordan program.
- Jordan: Water Sector Benchmarking - Phase II Regional Programme.

❖ **Financed by World Bank (WB)**

- Conducting an assignment with the International Benchmarking Network-IBNET of the World Bank to implement the Performance Assessment for Water and Sanitation Utilities in the MENA Region.
- Managing Water Utilities through Crisis .



Projects, studies, researches and consultations

❖ Financed by European Union (EU)

- Sustainable Water Integrated Management - Horizon 2020 Support Mechanism “SWIM-H2020 SM”.
- Horizon 2020 Capacity Building/ Mediterranean Environment.
- Sustainable Water Integrated Management “SWIM”.
- Empowering regional Civil Society Networks to take an active role in Integrated Water Resources Management (IWRM) in the Southern Mediterranean Region “ENTIRE Project”.
- Promoting Sustainable Management of Water Services and Resources in Countries Affected by the Syrian Crisis “MiyahCon Consortium Project”.

❖ Financed by UNESCO

- Supporting gender mainstreaming component in Jordanian water sector strategy “2016-2025”.

❖ Financed by UNICEF

- Conducting studies about Water Trucking Impact and Transboundary Water Resources.
- Preparation of a Long Term (2019-2030) Strategic Plan for PWON (Pakistani water service provider).

Capacity Building and Certifications

ACWUA conducted a deep training needs analysis related to water and wastewater sector, in which ,what types and levels ,in which numbers, at what time, and in which priorities trained manpower in water and wastewater sector is required.

Certified 1294
trainees

Uncertified 586
trainees

TOT
136 trainees

ISD
15 trainees

ACWUA Modified Certified Training Programs

- ❖ Developing and updating 35 certification programs

A. Water Systems Certification Programs

1. Water Treatment 4 Levels	2. Water Distribution 4 Levels
3. Water Quality & Laboratories Management 3 Levels	
4. Water Safety Plan (WSP) 3 Levels	5. Non-Revenue Water 4 Levels

B. Wastewater Systems Certification Programs for O&M teams

<p>1. Wastewater Collection systems 3 Levels</p>	<p>2. Wastewater Treatment 4 Levels</p>
<p>3. Industrial Waste Water Management (IWWM) 4 Levels</p>	<p>4. Wastewater Quality & Laboratories Management 3 Levels</p>

Capacity Building and Certifications

These training programs were revised by:

- Technical and Vocational Skills Development Commission (Tvsdc)
- Association of Boards of Certification (ABC)
- Umwelt Bundesamt (UBA)/ Federal office for environment (Germany)
- International expert (IWA and World Bank)



Wastewater Systems Programs for Professionals

Sanitation Safety Plan

Decentralized WWTP



GIS Applications Training Programs

1. Applying local government information model for water utility (Esri standard).

2. How to correct, upgrade customer information and GIS data by conducting comprehensive customer survey project.

3. Facilitate editing GIS water utility data using water network editing tools.

4. GIS introduction and workflows.

5. Using Geographic Information System for Water Networks Maintenance & Operations.

6. Designing Routes using GIS maps for Meters Collectors.

7. Minimize water loss by using GIS.

ACWUA Water Governance Managerial Tools Training Programs

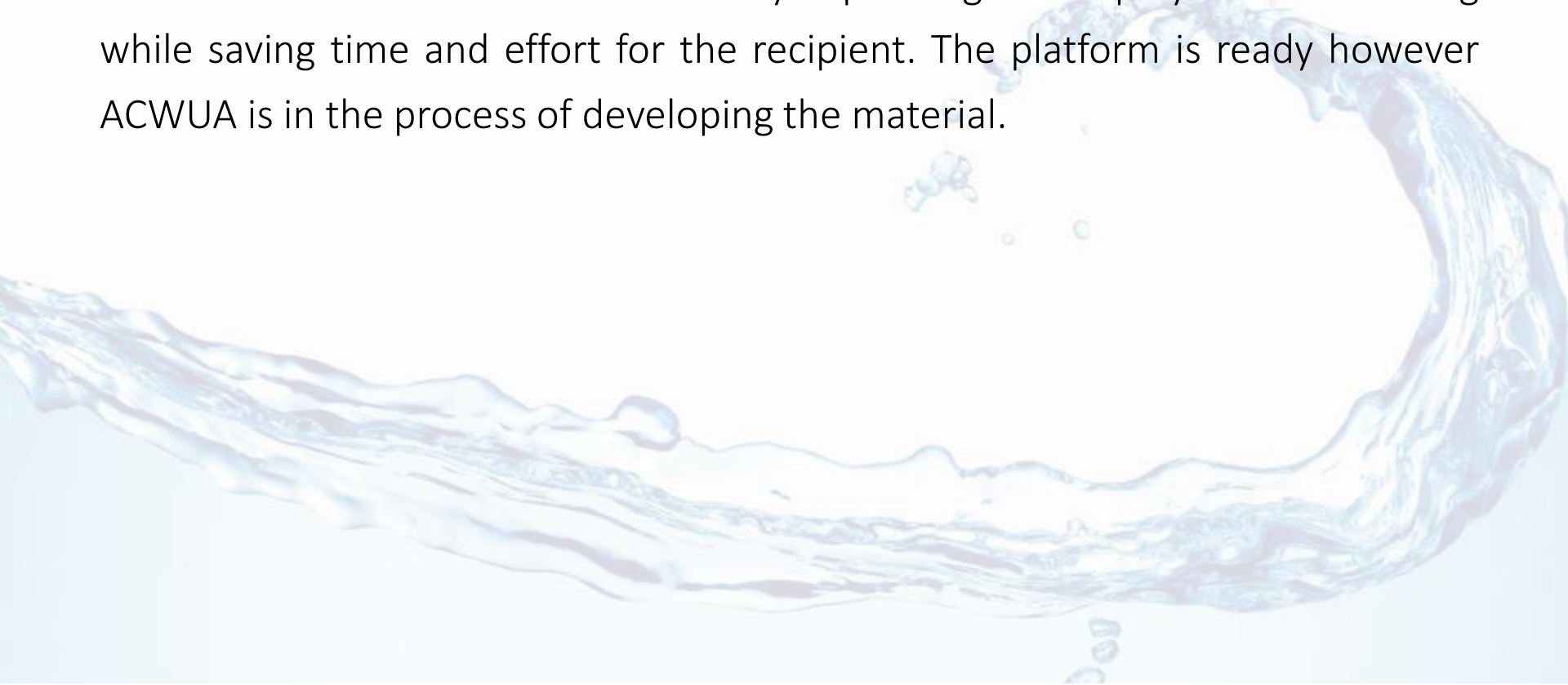
1. Water Governance concept and principles	2. Climate change vulnerability assessment, Adaptation and mitigation
3. Water Allocation	4. Water Accounting
5. WEAP-MODFLOW as a Decision Support System (DSS) for integrated water resources management	
6. Project Management Professional (PMP) Exam preparation	7. Relationship Management
8. Health and Safety	9. Total Safety Management for water and wastewater facilities (TSM Arabia)

Water Utility Leadership Empowerment Training Programs

1. Management of Public Private Partnership (PPP)	2. Financing modalities
3. Strategic Utility Planning	4. Efficient Utility Management
5. Risk Management	

E-learning Courses

ACWUA developed its training services to upper level, by creating ACWUA educational platform and developing the training materials into electronic materials and enhanced them with explanatory videos and 3D animations. It aims to achieve a common interest by expanding the deployment of training while saving time and effort for the recipient. The platform is ready however ACWUA is in the process of developing the material.



ACWUA International Conferences & Exhibitions

❖ Best Practices Conference:

☐ 1st Best practices Conference, Dead sea , Jordan, October 2008

- **Standards Of Operation and Maintenance Procedures in the Arab Region**

☐ 2nd Best Practices Conference, Alexandria, Egypt, November 2010

- **Capacity Development for Water and Sanitation Utilities in the Arab Region**

☐ 3rd Best Practices Conference, Rabat, Morocco, January 2011

- **Non-Revenue Water in the Arab Region: Solutions for Drinking Water Loss Reduction**

☐ 4th Best Practices Conference, Sharm Al Sheikh, Egypt, December 2011

- **Water and Wastewater Utilities Reform: Changes and Challenges**

☐ 5th Best Practices Conference, Muscat, Sultanate of Oman, June 2012

- **Utilities Perspective on Water Resources Management in the Arab Region**

☐ 6th Best Practices Conference, Algiers, Algeria, December 2013

- **Standardization & Certification in Managing Water Utilities in the Arab Region**

Arab Water Week Conference & Exhibition

❖ Arab Water Week:

First Arab Water Week, Amman, Jordan, December 2010
Cost Recover at Water & Wastewater Utilities

Second Arab Water Week, Amman, Jordan, January 2013
New Prospects and Challenges for the Water Sector in the Arab Region

Third Arab Water Week, Dead Sea, Jordan, January 2015
Innovations & Sustainable Solutions for the Water Sector in the Arab Region

Fourth Arab Water Week, Dead Sea, Jordan, March 2017
Managing Water Systems within Fragile Environments in the Arab Region

Fifth Arab Water Week, Dead Sea, Jordan, March 2019
Toward Sustainable Development in Water and Sanitation

ACWUA Newsletter

- **ACWUA** publish semiannual e-newsletter and distribute it to more than 8000 contacts from water and wastewater sectors all over the world and published by all social media channels and [website](#).
- The e-newsletter promote all ACWUA activities, events, trainings, news and projects. As well as ACWUA members profile, activities, advertisements, researches and business opportunities.
- You can register online through the following link: [Newsletter](#)



Achieving ACWUA Strategic Goals

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For more information about ACWUA

- Implementing different projects within the region in the water cluster: [ACWUA Projects](#)
- Certified training courses and capacity building programs: [ACWUA Training](#)
- Managing international and regional events like Arab water week: [ACWUA Events](#)
- ACWUA's business plan 2019-2023, ACWUA booklet ,Publications and Newsletters: [ACWUA Library](#)

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