



# Water and Environment Support

in the ENI Southern Neighbourhood region

## WES in Egypt: Consultations with stakeholders

Cairo Water Week 2023

Wednesday 1 November 2023

Hotel Nile Ritz

Ballroom Abdeen

from 14:00 to 16:45

Part B

“Overview and the way forward at national level for the period 2024-2028”

National Meeting



Funded by the European Union





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# PROGRESS OVERVIEW OF THE WES ACTIVITIES IN EGYPT

**1 November 2023, Cairo Water Week 2023, Egypt**

Presented by:

Professor Michael Scoullos, WES Team Leader

Ms. Suzan TAHA, WES Water Key Expert

Dr. Emad Adly, WES Stakeholders Engagement and Impact Assessment Expert



LDK Consultants Global EEIG



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# WES in a Snapshot



**Water and  
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- WES aims at protecting the environment and improving the management of scarce water resources in the Mediterranean.
- It strives to address the country needs for creating the enabling environment and enhancing the capacities of stakeholders in the Partner Countries (PCs) to tackle problems related to pollution prevention and water use efficiency.
- WES capitalises on previous successful EU funded regional projects (Horizon 2020 CB/MEP; SWIM SM; SWIM-Horizon 2020 SM).



# WES Identity



Water and  
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in the ENI Southern Neighbourhood region



## Partner Countries:

8 Countries in North Africa and the Middle East



**Duration:** May 2019 – November 2024 (66 months)



**Budget:** 9.508.054 Euros



**Team Leader:** Professor Michael Scoullos, [scoullos@wes-med.eu](mailto:scoullos@wes-med.eu)

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**Communication & Networking Expert:** Ms Lisa Papadogeorgaki, [lpa@ldk.gr](mailto:lpa@ldk.gr)

**Stakeholders Engagement Expert:** Dr. Emad Adly, [wes.gc@raednetwork.org](mailto:wes.gc@raednetwork.org)



# WES Identity



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## Our Consortium



**LDK Consultants Global EEIG (Leader)**



**Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE)**



**Arab Network for Environment and Development (RAED)**



**Association of Cities and Regions for Sustainable Resource Management (ACR+)**



**CIHEAM – Mediterranean Agronomic Institute of Bari (CIHEAM Bari)**



**Gopa Infra GmbH**



**MedWaves the UNEP/MAP Regional Activity Centre for SCP**



**Ramboll Denmark A/S**



**Royal HaskoningDHV**



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# Technical Assistance, Capacity Building, Networking of Stakeholders



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## Environment & Water Components

### REGIONAL LEVEL

#### 31 Regional activities:

- Trainings/Workshops
- Study Visits to European and Southern Mediterranean countries
- Webinars
- Peer-to-Peer coached exchanges

#### 9 Horizontal activities:

- Trainings and Peer-to-Peer Exchanges

### NATIONAL LEVEL

#### 36 national activities:

~2 on water and ~2 on environment  
per partner country

**plus**

“National Meetings” as platforms of collaboration,  
to assess progress, plan next steps etc.





# Component 1: Pollution prevention



## Component 1: Pollution prevention topics

- **Topic 1:** Reduce plastic pollution and marine litter
- **Topic 2:** Promotion of mechanisms, tools and conditions for the transition to a circular economy
- **Topic 3:** Prevent and reduce Pollution reaching the Mediterranean from specific industrial sectors
- **Topic 4:** Support for the implementation of integrated environmental management

### Specific Topics for the additional activities on the reduction of plastic pollution:

- Successful approaches on **EPR**
- Policy guidance to **ban plastic polymers** that disrupt the sorting and recycling of plastics
- Separate **collection and plastic waste recycling based on good practices**
- Regulatory and technical measures for the **reduction and gradual elimination of SUPs**
- Preparing material for **public awareness campaigns**





# Regional Environment activities Overview and status



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Activity	Training/ Technical Assistance	Study tour	P2P	Status in 2023
RE-1-REG / RE-1-P2P: Phasing-out single-use plastics in the Mediterranean	x		x	Completed
RE-2-REG: Understanding better microplastics and identifying how to address the issue	x			Completed
RE-3-REG / RE-3-P2P: Innovative Circular Economy Business Models in the Mediterranean region	x	x	x	Completed P2P on-going
RE-4-REG / RE-4- ST/ RE-4-P2P: Management of Construction & Demolition Waste (C&DW)	x	x	x	Completed
RE-5-REG: Supporting countries to implement NAPs (2025-2035)	x			On-going
RE-6-REG/ RE-6-ST / RE-6-P2P: Decentralized management of organic waste	x	x	x	Completed P2P on-going
RE-7-REG: Best practices in achieving waste reduction in the Mediterranean	x			Completed
RE-8-REG: Mediterranean “Champions” of plastic pollution prevention	x			On-going
RE-9-REG: SUPs-free coastal and Marine Protected Areas	x			Planned for 2024
RE-10-REG: Enhancing the number of responsible Tourism and Recreation related businesses in coastal areas	x			Planned for 2024
<b>Sub-total</b>	<b>10</b>	<b>3</b>	<b>4</b>	
<b>Total</b>	<b>17 out of which 11 are completed</b>			



# Regional Horizontal activities Overview and status



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Activity	Training/ Technical Assistance	Study tour	P2P	Status in 2023
<b>HE-1-REG:</b> Regional Stakeholders' Consultation in view of the 2nd UfM Ministerial Conference on Environment and Climate Change	x			Completed
<b>HE-2-REG:</b> Awareness raising and Education for Sustainable Development: Training of Trainers on campaigns for sustainable consumption	x			Completed
<b>HE-2b-REG:</b> Awareness Raising and Education for Sustainable Development (ESD) and campaigns for sustainable consumption – Phase 2	x			On-going
<b>HE-3-REG:</b> Educating for Sustainable Development: focus on WWT for reuse and NCWRs	x			Completed
<b>HE-3b-REG:</b> Educating for Sustainable Development: focus on WWT for reuse and NCWRs - Phase 2	x			On-going
<b>HE-4-REG / HE-4-P2P:</b> Overall environmental governance - promotion of the Aarhus Convention in the whole of the Mediterranean	x		x	On-going
<b>HE-5-REG:</b> Knowledge Management; Science/Policy interface; citizen science	x			Planned for 2024
<b>Sub-total</b>	<b>7</b>		<b>1</b>	
<b>Total</b>	<b>8 out of which 4 are completed</b>			



# Egypt's participation in Regional Environment activities



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RE-1-REG & P2P: Phasing out **single-use plastics** in the Mediterranean

RE-2-REG: Understanding better **microplastics** and identifying how to address the issue

RE-3-REG & P2P: **Innovative Circular Economy Business Models** in the Mediterranean region

RE-4-REG & P2P: Management of **Construction & Demolition Waste (C&DW)**

RE-5-REG: Supporting countries to implement **NAPs (2016-2025)**

RE-6-REG/ST & P2P: Decentralized management of **organic waste**

RE-7-REG: **Best practices in promoting circular economy** and achieving **waste reduction** in the Mediterranean



**3 cases from Egypt out of 20  
from all of the Med**





prevention re-use recycling collection no littering other

The inclusion of the informal sector in the Oum Azza Landfill: the Attawafouk cooperative

Single-use plastic ban by the Red Sea Governorate

Implementing source separation and recycling in Lebanese municipalities with the support of the NGO "Arc-en-Ciel"

"Clean Beaches" programme and Blue Flag label for well-managed beaches to prevent littering

Eco-Lef: a national system for the recovery and recycling of post-consumer packaging that focuses on plastic waste

Prevention of plastic bags: a ban on single-use plastic bags, and the Zero Mika Initiative in Morocco

Landfill and incineration tax with a refund criterion to boost source separation of biowaste

Fee modulation in the French Extended Producer Responsibility scheme for WEEE to promote re-use and recycling

A local NGO implementing an integrated waste management system in the cities of Hurghada and Marsa Alam, Egypt

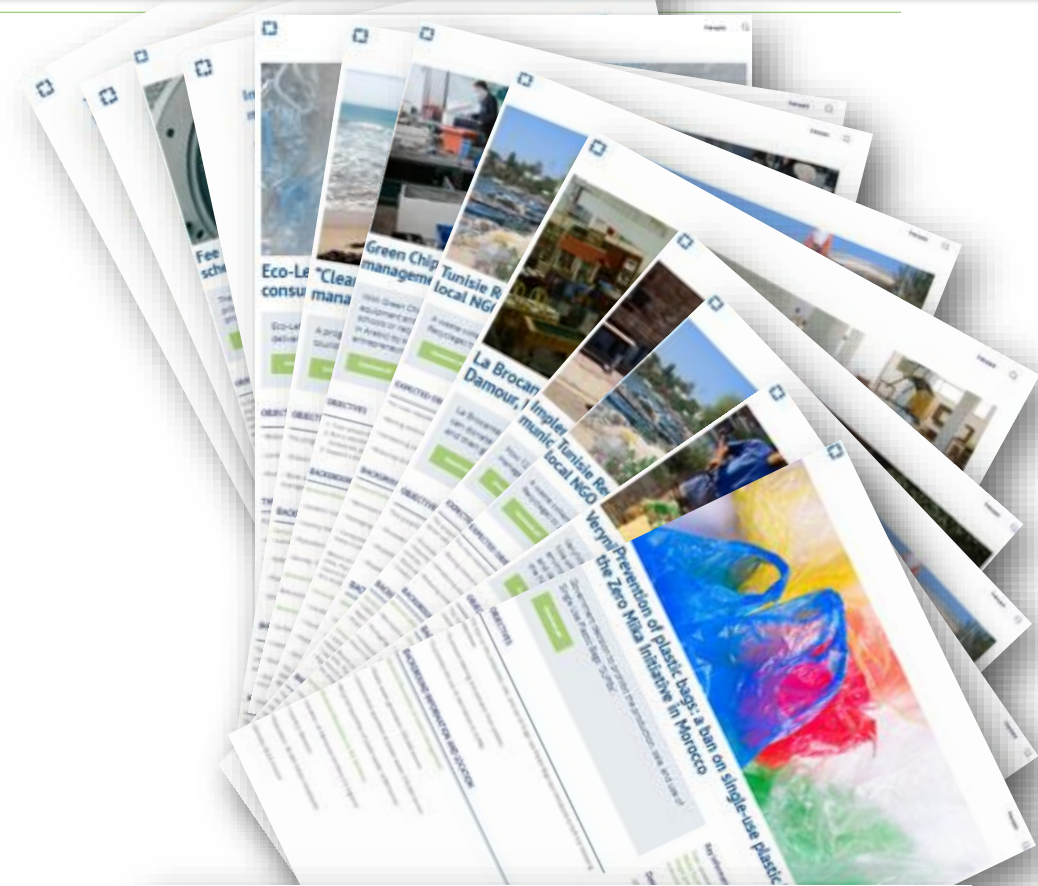
Single-use plastics – Not in my Sea!

La Brocante, a re-use centre for furniture and household items in Damour, Lebanon

Community composting to manage 100% of biowaste in a rural area of Spain

<https://bestpractices-waste-med.net>

Contribution to the UfM's 2030GreenerMed Agenda and very specifically to the launching of a Flagship Initiative of UNEP/MAP's Mediterranean Strategy for Sustainable Development (MSSD 2016-2025).



Union for the Mediterranean  
Union pour la Méditerranée  
الاتحاد من أجل المتوسط

Water and Environment Support  
at the UN Southern Mediterranean region

UNEP environment programme

Mediterranean Action Plan  
Barcelona Convention

The UfM Secretariat is co-funded by the EUROPEAN UNION

Sweden Sverige

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# Egypt's participation in Horizontal Regional activities



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HE-1-REG: Regional Stakeholders' Consultation for the 2nd UfM Ministerial Conference on Env and CC

HE-2-REG: Awareness raising and Education for Sustainable Development: ToT on campaigns for sustainable consumption

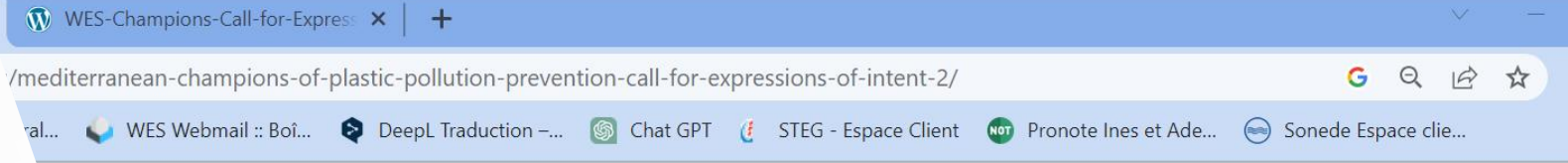
HE-3-REG: Educating for Sustainable Development: focus on Waste Water Treatment for reuse and Non Conventional Water Resources

HE-4-P2P: Overall environmental governance - promotion of the Aarhus Convention in the whole of the Mediterranean





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# Egyptian Candidate Champions for Plastics Prevention

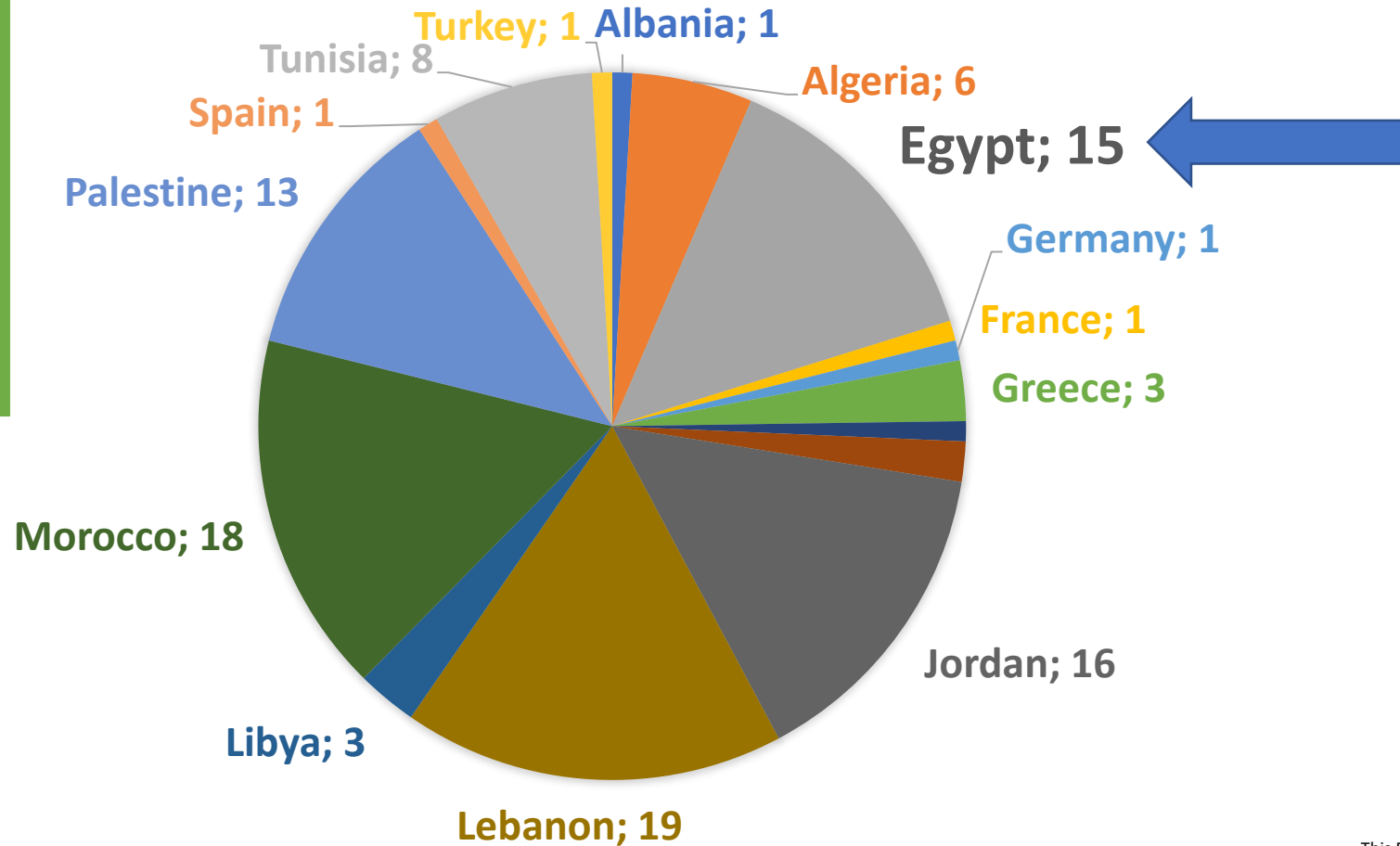


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109 applications

87 Candidate Champions

15 from Egypt



# Egyptian Candidate Champions for Plastics Prevention



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## Egypt - Type of institution







# Component 2: Efficient Water Use



## Component 2: Efficient Water Use

- **Topic 1: Assessment and Estimation of water use (Per Sector)**
- **Topic 2: Investigation and introduction of Water Efficiency Gains at the decentralized level**
  - ✓ 2.1 Non-Conventional Water Resources (NCWR) (5 activities)
  - ✓ 2.2 Non-Revenue Water (NRW) Management (7 activities including EG-1)
  - ✓ 2.3 Water Demand Management (WDM) (6 activities)
  - ✓ 2.5 Wastewater Treatment for reuse (1 activity)
- **Topic 3: Water Resources Valuation, Cost-Recovery and Affordability of water services**
  - ✓ 3.1 Tariffs (1 activity)
  - ✓ 3.2 Water Accounting & Valuation (1 activity)
  - ✓ 3.3 Water Services Cost Recovery (1 activity)
- **Topic 4: Enhancing Water Efficiency and Productivity in agriculture**
  - ✓ 4.1 Agriculture Water Use Efficiency (5 activities including EG-2)
  - ✓ 4.2 Water-Energy-Food-Ecosystems (WEFE) Nexus (1 activity)
- **Horizontal Topic: Legal & regulatory aspects related to the integration of Efficient Water Use into national & regional frameworks**

# Regional & Horizontal Water Activities Overview and status



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Activity	Training/ Capacity Building	Study tour	P2P	Status in 2023
<b>RW-1-REG:</b> 1st Regional Roundtable on WEFE Nexus in the Med (organised by WES and GWP-Med)	x			Completed
<b>RW-2-REG:</b> Training on water accounting	x			Completed
<b>RW-3-REG / RW-3-P2P :</b> Capacity building on Water demand management (WDM)	x		x	Completed
<b>RW-4-REG / RW-4-P2P :</b> CB on NCWR focusing on water harvesting	x		x	Completed
<b>RW-5-REG:</b> CB on WWT for reuse focusing on decentralised wastewater treatment and reuse + supporting manual	x	manual	x	Completed
<b>RW-6-REG / RW-6-ST/RW6-P2P:</b> Training on Non-Revenue Water in addition to a study tour & P2P exchange	x	x	x	Completed P2P on-going
<b>RW-7-REG / RW-7-ST:</b> Study tour and training(s) of WUAs on optimal irrigation management and practices for improved irrigation efficiency and soil fertility	x	x		Completed
<b>HW-1-REG:</b> Capacity building on PPP, green/blue economy entrepreneurship and banking for the water/wastewater sector	x			Planned for 2024
<b>Sub-total</b>	<b>8</b>	<b>2</b>	<b>4</b>	
<b>Total</b>	<b>14 out of which 12 are completed</b>			



# Egypt's participation in Regional Water activities



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## 12 Regional Activities on Water

RW-1-REG: 1<sup>st</sup> Regional Roundtable on WEFE Nexus in the Mediterranean “Promoting innovations, investments and upscaling of solutions”

RW-2-REG: Water Accounting

RW-3-REG & P2P: Water Demand Management

RW-4-REG & P2P: Water Harvesting

RW-5-REG: Capacity Building on Treated Waste Water for reuse

RW-6-REG/ST & P2P: Non-Revenue Water

RW-7-REG/ST: Study Tour and Training(s) of WUAs on optimal irrigation management

Corrective maintenance comprises repair activities necessary to re-establish proper functioning condition or service of equipment. It may be both, planned and/or unplanned. Some equipment at the end of its service life may warrant overhaul. Overhaul means the restoration of an item to a completely serviceable condition as prescribed by maintenance serviceability standards.

O&M is an essential part of asset management to keep the investments into the wastewater systems up and running, or even save money. O&M can help to ensure sustainability and safe working conditions. Through O&M, an in-depth understanding of the function is maintained.



Sludge tanker disposing of liquid waste at a sludge treatment facility

Photos: F. Pogade



includes control unit, hose, pump, bottles and cover.



Cuvettes



Cuvette heater



Pipette



Photometer



BOD<sub>5</sub>



BOD<sub>5</sub>





# WES Water Activities in Egypt



# 1: Strengthen the water utilities capacities to manage/reduce NRW

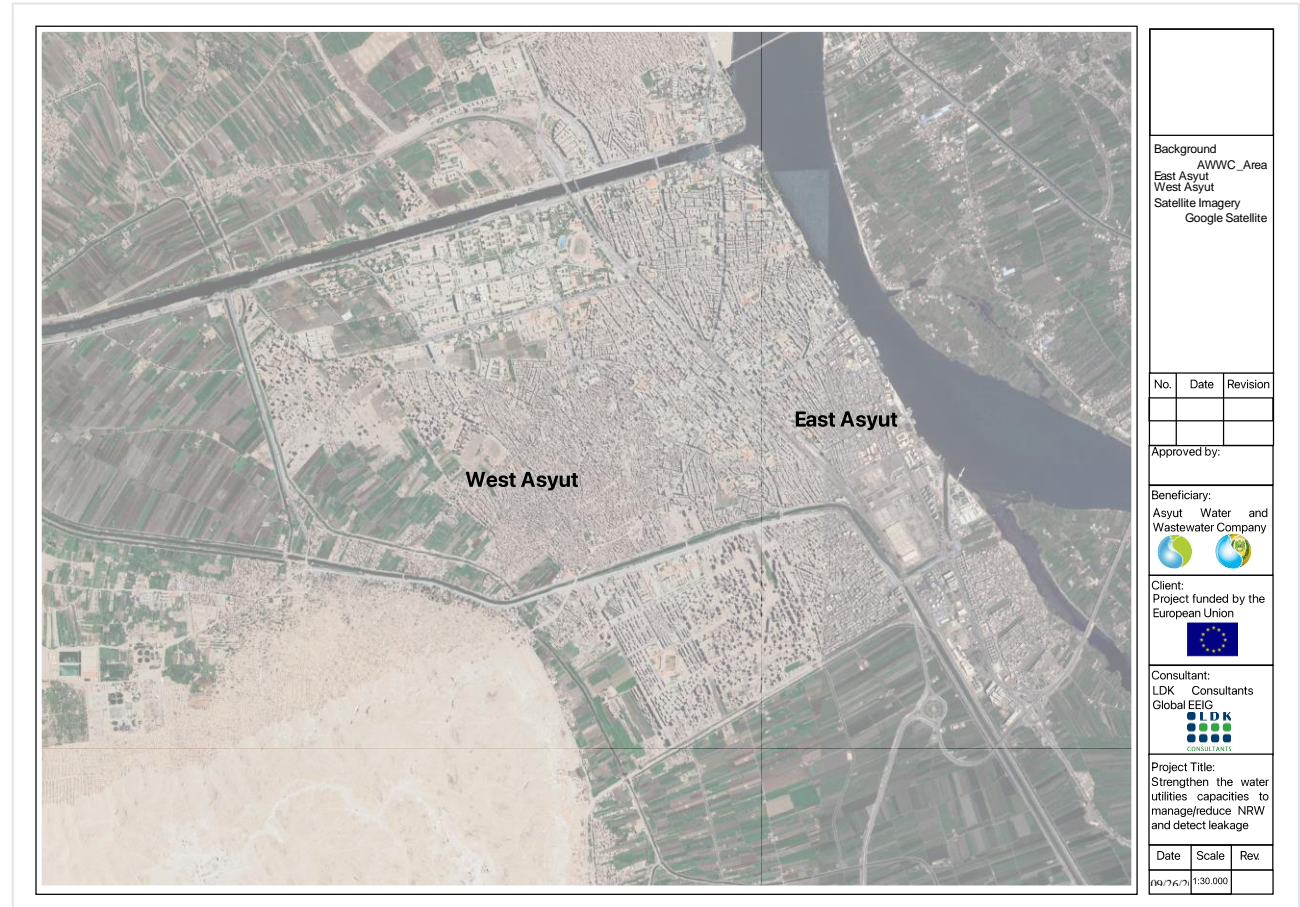


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## Study Area



Asyut City served by  
Asyut Water and  
Wastewater Company



# 1: Strengthen the water utilities capacities to manage/reduce NRW

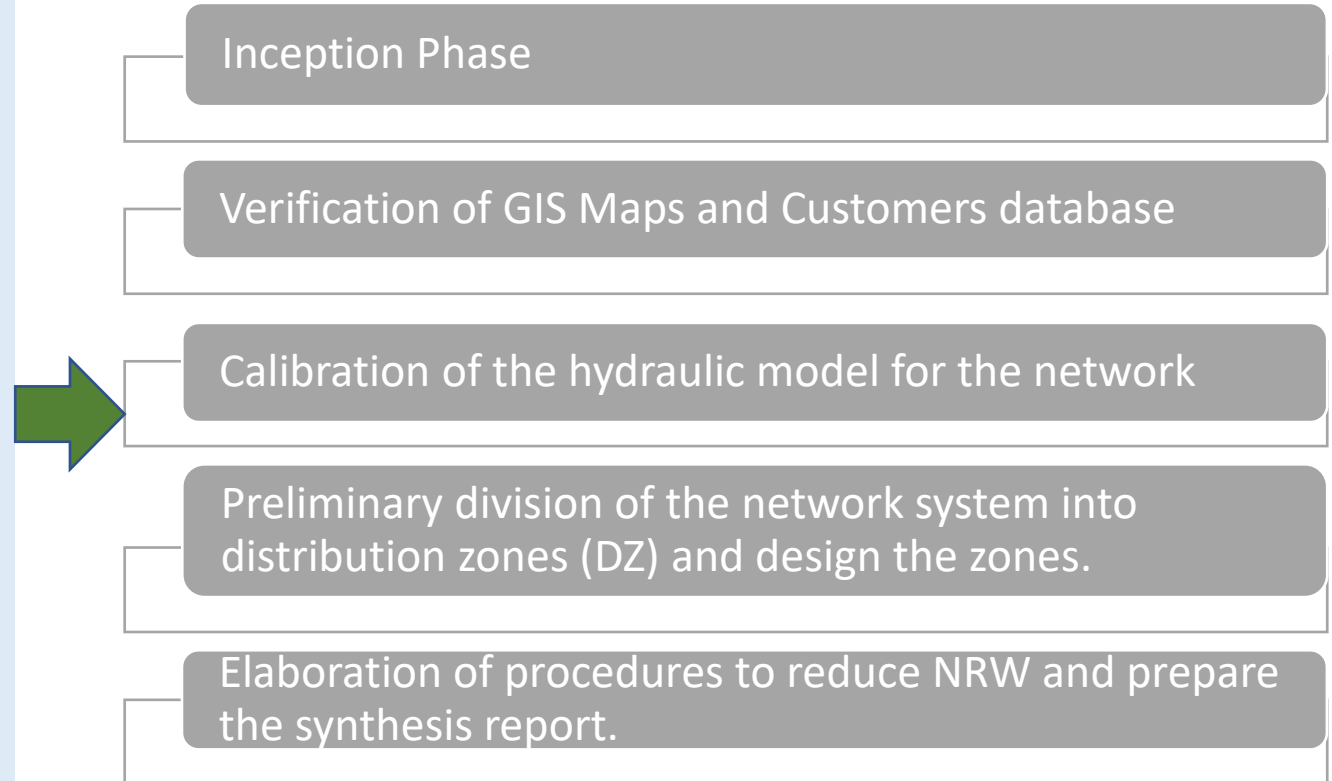


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## Objectives

- Investigate the situation of NRW management in a pilot city served by AWWC and prepare its network to the next stage of implementation of distribution zones (DZs) and their subsequent division into District Metered Areas (DMAs)
- Implement and calibrate a hydraulic model for the network of the pilot city as a tool to provide valid support to move into the design stage and establishment of DMAs
- Introduce internationally recognised best practices (BPs) for improving NRW (e.g. design of DZs & use of GIS to enable analysis of the geographical distribution of leakage).
- Build the capacity of the utility staff involved in the pilot area on the implementation of best practices for the management of NRW
- Develop a manual documenting the proposed procedures for reducing NRW in Asyut city water network.

## Overview of the Tasks





# 1: Strengthen the water utilities capacities to manage/reduce NRW



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## Achievements

- Diagnosis of existing assets in the pilot zone and a review of available data and gaps
- Geo-location of around 85% of the customers by AWWC staff based on the gaps
- Proposals for improvements and changes to the existing DB structure based on the analysis of the AWWC Water Supply System (WSS) GIS DB, which enable improved NRW management in AWWC and the construction of the network hydraulic model.
- Implementation and calibration of the WSS network hydraulic model.
- Initial segmentation of the study area into zones and then provisional segregation into DMAs.
- Proposals for the necessary equipment to be purchased for the implementation of the zones and DMAs
- Preliminary list of priority areas in which to address the first NRW reduction measures
- Manual with a set of procedures to reduce NRW, tailored to the AWWC water network
- Two-days on-job training which discussed all the steps undertaken and the results of the calibration.



# 1: Strengthen the water utilities capacities to manage/reduce NRW



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## Lessons learnt

- More focus on on-job training
- More on-site work
- Importance of engagement of staff in the implementation
- Data sharing problems, work to rely more on on-site work
- Need for clear expectations from the activity and good communication of the roles of local partners for its implementation.



## 2: Assisting Egypt in developing financial mechanisms for the management of water resources at the farm level

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### General objective of the activity :

Assist Egypt in developing a financing mechanism to support farmers in purchasing water-saving equipment and enable investments.



Facilitate improved water network management and resource efficiency at the farm level.

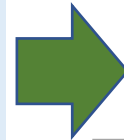


## 2: Assisting Egypt in developing financial mechanisms for the management of water resources at the farm level

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### Specific objectives of the activity:

- A broad review of financing mechanisms for the purchase of on-farm (drip) irrigation equipment – successes and failures analysis.
- Two profound case studies of countries with significant reforms in the sector related to the financing of irrigation investments and equipment.
- Recommend new methods for supporting irrigation investment in the Egyptian agricultural industry.



### Overview of the Tasks

Task 1: Review of existing financing mechanisms and Public-Private Partnership framework in Egypt

Task 2: Review of 2 case studies with significant reforms in the agricultural sector related to financing on-farm irrigation investments (infrastructure) and modernisation of equipment.

Task 3: Conduct a 1-day consultation workshop



## 2: Assisting Egypt in developing financial mechanisms for the management of water resources at the farm level

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### Achievements

- Country benchmarking: Portugal, Morocco and Turkey showed many "basic characteristics" similar to Egypt → selected for further analysis
- Review of the financial reforms applied in the above countries (some already implemented in the Egyptian context on a smaller scale, e.g. PPP arrangements and solar-powered irrigation for agriculture).
- Insight gained on new financing modalities related to irrigation investments and equipment, including advantages and disadvantages and lessons learnt from their application.
- Comparison of these methods to the model applied in Egypt.
- Best practices identified in the analysed countries and applicability in Egypt.
- Recommendations for implementing changes/additions (which include supporting farmers via, e.g. updating criteria for receiving credit and capacity building for financial and technical improvement.



## 2: Assisting Egypt in developing financial mechanisms for the management of water resources at the farm level

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### Lessons Learnt

- More participatory approach is needed
- More time needed for stakeholders participation
- Cooperation with and of the government staff is crucial for a successful implementation
- Equally crucial is the availability, relevance and accuracy of the information from within the concerned government bodies.



# Egypt's participation in National Water activities



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# Stakeholders' Engagement





## Participation from Sept. 2020 till July 2023

- 21 Regional Activities:**  
10 Water & 11 Environment
- 4 Horizontal Activities**
- 2 National Water Activities**

**123 key stakeholders**  
68 men  
55 women

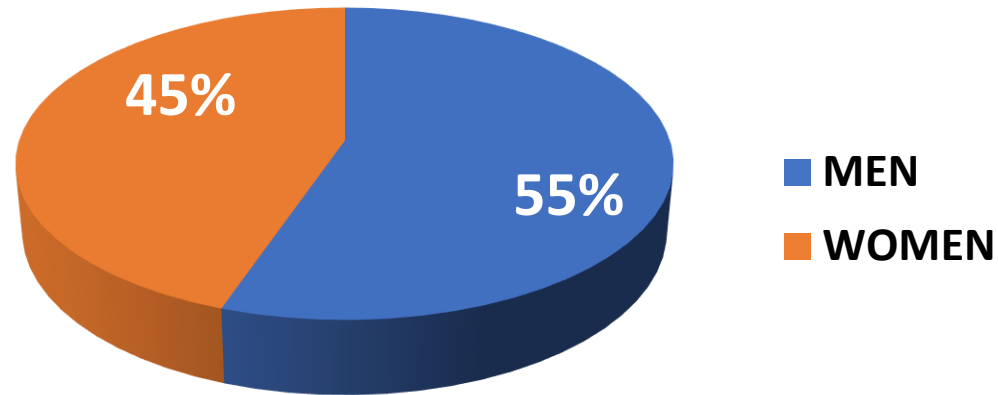


# Egyptian Stakeholders' Engagement

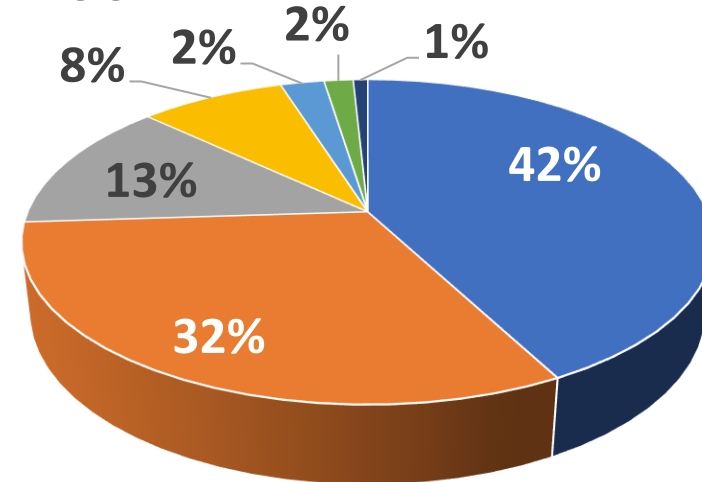


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## Gender



## Type of Institutions



- GOVERNEMENT AGENCIES
- MINISTRY REPRESENTATIVES
- NGOs REPRESENTATIVES
- INTERNATIONAL ORGANISATIONS AND PROGRAMMES
- ACADEMIA AND RESEARCH INSTITUTES
- EUD
- PRIVATE SECTOR





# WES Communication



# WES Communication Objectives & Target Groups



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## Objectives

- Increase awareness on water and environmental issues that are currently under pressure in the Mediterranean;
- Increase the commitment of decision-makers and other stakeholders;
- Mobilise the civil society;
- Ensure the visibility of WES and the EU support for water and environmental issues in the region.

## Target Groups

**4.200 contacts in total**  
**750 Media contacts**

- Media
- Ministries
- Government Authorities
- Local Authorities
- Private Sector
- Universities/ Research Institutions
- NGOs



# WES Communication Tools



**Water and Environment Support**  
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- Press Releases/Announcements
- Newsletters
- Information Bulletins
- Social Media Posts
- Website Posts/Data
- Photos
- Videos

**NEWS**



# WES Communication Results



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## الانشطة الوطنية لمكون البيئة



## الأنشطة الإقليمية لمكون البيئة



## الأنشطة الإقليمية لمكون البيئة



## الأنشطة الإقليمية لمكون المياه



Sept. 2019 – Oct. 2023

1.950 Press Clippings  
from 14 countries  
(MENA and Europe)




This Project is funded  
by the European Union



# WES Video 'Non-Revenue Water and Water Demand'



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-  **The WES video “Help us save a drop”** was prepared as part of the activities for water demand management and non-revenue water.
-  The video offers simple tips for saving water and encourages the public to take small, meaningful, tangible steps to change their daily habits to contribute to this mission.
-  It presents the concepts of water demand management and non-revenue water which are fundamental to improving water efficiency in the southern Mediterranean.  
The video is uploaded into the WES YouTube page and website.



[Video link](#)



# WES Video 'Construction and Demolition Waste Management'



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A WES video was produced on **Construction and Demolition Waste Management (CDWM)** as part of the activities for the promotion of mechanisms, tools and conditions for the transition to a circular economy.



The video presents the key components of sustainable CDWM, as well as highlights from a relevant WES Study Visit that took place in Marseilles with participants from seven Mediterranean countries.



The video emphasizes on regulatory, economic and technical measures, that, if driven by innovation and adapted to local contexts, could encourage a more effective, circular and sustainable management of this waste.

The video is uploaded on the WES YouTube page and website.



[Video link](#)





Thank you  
for your attention  
and keep up with  
our latest news!

WES-MED.EU

