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Training Concept Note

Regional training on Water Demand Management

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WATER AND ENVIRONMENT SUPPORT (WES) IN THE ENI SOUTHERN NEIGHBOURHOOD REGION

The "Water and Environment Support (WES) in the ENI Neighborhood South Region" project is a regional technical support project funded by the European Neighbourhood Instrument (ENI South). WES aims to protect the natural resources in the Mediterranean context and to improve the management of scarce water resources in the region. WES mainly aims to solve the problems linked to the pollution prevention and the rational use of water.

WES builds on previous similar regional projects funded by the European Union (Horizon 2020 CB/MEP, SWIM SM, SWIM-H2020 SM) and strives to create a supportive environment and increase capacity all stakeholders in the partner countries (PCs).

The WES Partner Countries (PCs) are in alphabetical order Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, and Tunisia. However, to ensure the coherence and effectiveness of EU funding or to promote regional cooperation, the eligibility of specific actions can be extended to neighbouring countries in the Southern Neighborhood region.

DISCLAIMER

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ABBREVIATIONS

CB/MEP	Capacity Building/Mediterranean Environment Programme
ENI	European Neighbourhood Instrument
EU	European Union
EC	European Commission
IFI	International Financing Institution
NGO	Non-Governmental Organisation
NKE	Non-Key Expert
PCs	Partner Countries
P2P	Peer-to-Peer
SWIM	Sustainable Water Integrated Management
SWIM-Horizon2020 SM	Sustainable Water Integrated Management – Support Mechanism Project
UNEP-MAP	United Nations Environment Program - Mediterranean Action Plan
UfM	Union for the Mediterranean
WDM	Water Demand Management
WCE	Water Conservation and Efficiency
WES	Water and Environment Support



1 INTRODUCTION

As part of the WES project workplan a Regional On-line Training as well as a Peer-to-Peer (P2P) exchange focusing on Water Demand Management (WDM) are being organised. The Peer-to-Peer exchange will start with a Kick-Off Meeting on December 13, 2021 and will last up to and including November 2022. The regional training is to be carried out along five sessions of a total of 15 hours, that are to be held weekly for five weeks during January and February 2022. The training will be carried out as a virtual training. Envisaged start date is Thursday, January 20, 2022.

This Training Concept Note details the Regional On-line Training on Water Demand Management (RW-3-REG).



2 OBJECTIVES AND EXPECTED OUTCOMES

2.1 AIM OF THE TRAINING

The aim of this Regional On-line Training is to build the capacity of the WES project countries on water demand management as a mean to influence the water demand and usage of water to meet any of the following objectives: economic efficiency, social development, social equity, and environmental protection, sustainability of water supply and services, and political acceptability.

Water demand management (WDM) as a policy and strategic option for water resources management have gained prominence with the occurrence of the paradigm shift from water resources development to Integrated Water Resources Management (IWRM). It is, therefore, imperative to locate water demand management within the context of IWRM to fully appreciate the contribution WDM can make towards sustainable water resources management.

2.2 FOCUS OF THE TRAINING

The training will focus on the customers' water demand management targeting the residential, tourism/commercial, and industrial sectors. Please be aware that water in the agricultural and institutional sectors are excluded. Furthermore, leakage management as an option for water demand management is excluded. Leakage management is considered a very beneficial intervention that will be addressed in the WES project workplan as a separate project. Leaks on the end use side of the water distribution system are briefly included in this project.

Throughout the regional training, participants will have the opportunity to:

1. Get introduced to applicable water demand management interventions and measures in the residential, tourism/commercial, and industrial sectors.
2. Learn about the costs and benefits of water demand management interventions.
3. Explore the risks and constraints related to water demand management.
4. Get familiar with the best practices for managing sectorial water demand/consumption all along the water supply chain with special focus on end users, e.g., residential, and commercial buildings, large consumers such as hotels, schools, hospitals, landscape, etc.
5. Explore the range of water efficiency measures that can be considered for the industrial sector accounting for the specific processes common to the WES partner countries, thereby also considering the large diversity in conditions and processes in the industrial sector.
6. Get introduced to data-driven water demand forecasting.
7. Review data needs and requirements in support of water demand management interventions with a view to water demand forecasting and analysis, water audits, impact monitoring, and reporting.
8. Learn about the process of developing and implementing (indoor and outdoor) water efficiency measures.
9. Learn about the institutional responsibilities for water demand management.

10. Learn about the instruments, tools and calculators for water conservation and efficiency (water metering and auditing, cost-benefit analysis of options, economic policy instruments).
11. Implement rapid exercises in addressing practical problems.
12. Discuss with practitioners about the real situations in their own countries where water demand management interventions can be implemented.

Other objectives include promotion of north to south and south to south exchange and experience sharing through:

1. Presenting practical examples also from a European context, as needed.
2. Facilitating the exchange of experiences between participating practitioners.

Relevant practical examples from Australia, the Netherlands, and the UK will be presented, and these examples from a European context will be discussed and put into the Mediterranean context. Case studies from the South Mediterranean region will also be presented. The regional training will facilitate the exchange of experiences with water demand management interventions and efficiency measures between instructors and all the participants.

3 TRAINING PROGRAMME

The regional training is to be carried out along five sessions of approximately three (3) hours each. The overarching topic of each session is:

- Session 1: Understanding water demand.
- Session 2: Water demand forecasting.
- Session 3: Best practice water demand management interventions and measures.
- Session 4: Implementing water demand management interventions and measures (Part I).
- Session 5: Implementing water demand management interventions and measures (Part II).

3.1 SESSION 1: UNDERSTANDING WATER DEMAND

The selected topics of this session are:

- Current sectorial water demand; quantity requirements, quality standards, potable, and potentially non-potable water demand.
- Sectorial water security requirements; economic, social, legal, and environmental impacts of e.g., water scarcity and droughts, and potential other extreme events.
- Overview of water demand interventions.

Examples of water demand management interventions and measures that will be discussed and detailed during the sessions are:

- Improved water accounting through end use metering options, e.g.:
 - universal metering
 - meter installation or replacement upon change of occupier
 - incentivised metering
 - passive metering, etc.
- Water efficiency measures (e.g., incentivised, passive, instituted, etc.) both indoor and outdoor (landscaping).
- Financial measures, e.g.:
 - tariffs
 - rate structure with i.e., block rates, seasonal rates, water budget-based rates and/or drought surcharges
 - monthly utility bills with information as outreach tool for educating customers
- Policy and regulatory measures, e.g.:
 - temporary use bans or hands-off flow limits
 - partial or full restriction on landscaping
 - ordinary or emergency drought order, etc.
- Media campaigns, awareness-raising, and communication.

- Overview of costs and benefits of water demand management interventions, including risks and constraints.

3.2 SESSION 2: WATER DEMAND FORECASTING

The selected topics of this session are:

- Proven water demand forecasting approaches: how water demand management interventions are included in such approaches.
- Strategic horizon scan; predictions about the future; scenarios.
- Tools, models, and internal and external data input requirements.
- Implementing low, base, and high forecasts; uncertainty modelling; model parameterization; impact assessment of successful water demand management per sector.
- Case study presentations on currently applied water demand forecasting and their applicability to South Mediterranean countries.

3.3 SESSION 3: BEST PRACTICE WDM INTERVENTIONS

The selected topics of this session are:

- Sectorial water demand management interventions and measures focusing on end users in the residential, tourism/commercial, and industrial sector.
- Water security and efficiency planning; definition of the roles and various responsibilities of stakeholders incl. the (general) public; institutional responsibilities.
- Potential enablers, partial enablers, or hurdles for successful implementation of water demand management interventions at national level; willingness and affordability to pay.
- Case study presentation by Andrew Tucker on water demand management interventions at the UK water utility Anglian Water.
- Short presentation by Seta Tutundjian on the methodology used for instituting water demand management in Jordan and the thinking behind it.
- Cost/ benefit analysis of water demand management interventions and water efficiency measures.

3.4 SESSION 4: IMPLEMENTING WDM INTERVENTIONS (PART I)

The selected topics of this session are:

- Best practice sectoral approaches on water demand management programme development. Incl. case study presentation on stakeholder management relating to water demand management.
- Stakeholder management; legislation and regulations development; economic policy and/or tariff structure development.
- Case study presentation by Thomas Barden on stakeholder management regarding water resource management at the UK water utility Severn Trent Water.

- Institutional and organisational development; data collection, analysis, impact monitoring, and quality assurance; water audits; benchmarking.
- Understanding the role and value of education, awareness-raising, and communication.

3.5 SESSION 5: IMPLEMENTING WDM INTERVENTIONS (PART II)

The selected topics of this session are:

- Design and implementation of water demand management education, awareness-raising, and communication programs to achieve behavioural change (Maha Dirgham).
- Tailoring best practice sectoral approaches on water demand management to specific approaches for South Mediterranean countries; understanding, recognising, and respecting cultural/social considerations and particular national circumstances.
- Case study presentations from South Mediterranean countries and presentation of related WES activities at the national level in Algeria and Morocco.

3.6 CROSS-CUTTING: EXERCISES

Each session will include at least one exercise. This exercise can be based on a virtual country case study to facilitate common understanding as well as to provide a structured example of using the best practice water demand management interventions and measures to a country specific context.

4 PROPOSED DATES

The training will be implemented by Rambøll Danmark A/S involving Non-Key Experts (NKE) listed below under the supervision of the Water Key Expert (KE) of the WES project, Ms Suzan Taha.

The regional training is to be carried out along five sessions of a total of 15 hours, that are to be held weekly for five weeks during January and February 2022. The proposed dates are:

- Thursday, January 20, 2022
- Thursday, January 26, 2022
- Thursday, February 3, 2022
- Thursday, February 10, 2022
- Thursday, February 17, 2022

Each session will be approx. three (3) hours.

Envisaged start time of each session will be 8:00 AM CET. This will be discussed and agreed with the participants.

Apart from **the first day** when participants will be requested to connect at **half hour before the start time**, all participants will be required to connect **15 minutes to test their equipment on the remaining days.**



5 INSTRUCTORS OF THE TRAINING

The Non-Key Experts (NKEs) providing the training are:

- NKE1: Cor Merks, Ramboll Netherlands BV.
- NKE2: Antony Gibson, Ramboll Australia Pty Ltd.
- NKE3: Pool of Experts:
 - Andrew Tucker, Senior Expert on Water Efficiency at the UK water utility Anglian Water.
 - Thomas Barden, Senior Expert on Stakeholder Management regarding Water Resource Management at the UK water utility Severn Trent Water.
- Invited Speakers to date:
 - Maha Dergham: design and implementation of social behavior change communication programmes including institutional change management interventions
 - Seta Tutundjian, Global Thinker and Director of Programs at the International Center for Biosaline Agriculture (ICBA). Renowned for having designed the USAID WDM program in Jordan (2002-2013);
 - Others (TBD)



6 TARGET PARTICIPANTS

The targeted participants of this Regional On-line Training include:

- Senior staff of all key stakeholder groups on groundwater, surface water, water resource management, and river basin management.
- Water planners, managers, business developers, and decision makers at all levels within the organisation of policy makers, regulators, environmental agencies, municipalities, water authorities and utilities, the tourism/commercial sector, and the industrial sector.
- Organisations that implement projects in these policy domains are welcome also:
 - International Financing Institutions (IFIs).
 - Media organisations and communication agencies.
 - Non-Governmental Organisations (NGOs). Note that NGOs will be invited and selected through the Bluegreen project and its network.

Each partner country is invited to **nominate four (4) participants (whose CVs will be reviewed to ensure its adequacy for the training), in addition to the peers** designated by the partner countries to participate in the peer to peer process addressing the same topics of the regional training.

The H2020 National Focal points from the Western Balkan and from Turkey (**a total of 4**) are also invited and will be given the option to invite participants with relevant experience to participate in the training (up to two (2) per country)

To take full advantage of the training, the following profiles are suggested:

- Experience in hydrology, water resources engineering, water resources management, environmental management,
- Representing, as much as possible, different stakeholders: ministries of Water, river basins authorities, regulators, water authorities/utilities, environmental agencies, municipalities, industries, and the tourism sector and NGOs. Organisations that finance projects in these policy domains are also welcome.
- Involvement in the development, and implementation of Water Demand Management (WDM) and Water Conservation and Efficiency (WCE) measures as part of plans and programmes aiming to safeguard groundwater and surface water in the PCs..
- Computer literacy (in particular MS-Excel file)
- Familiarity with national and local water policies
- Fluency in English or French with adequate English reading skills¹

Participation of national experts with good knowledge in water demand management and water conservation efficiency measures is encouraged, in order to strengthen the exchange of experiences with the other participants of the group and enhance capitalisation on work already developed at national level.

¹ Understanding written English will be necessary as most of existing background material will be in English

7 REQUIREMENTS FROM THE PARTICIPANTS

Participants must have the equipment and connection necessary:

- PC with good Internet connection (cable connection is preferred to wireless)
- Microphone headset

Each participant must be in a quiet environment during the training sessions.

For the 1st session, participants will be invited to connect 30 minutes before the start in order to test their connection and equipment.



8 ON-LINE TRAINING PLATFORM

WES Project has selected a provider for a tailored on-line platform allowing:

- About 60 participants in video mode joining from different remote locations (home/office)
- Hosting 6 to 9 panellists
- Possibility to share training material during the session
- Possibility for all participants to take the floor and share their screens
- Simultaneous interpretation running in parallel within the same platform (EN-FR and FR-EN)
- Two (2) parallel breakout sessions (with interpretation)
- Running polls/ surveys and presentation of results live during the sessions (export of poll results as well)
- Possibility for Q&As
- Chat privately or for all the group
- Recording of sessions (MP4)
- Security and confidentiality of all data exchanged
- Automatic export of the list of participants (for each module per session and per breakout session).

The platform to be used will ensure security and confidentiality of data exchanged. Technical support will be provided during the sessions and a training of the experts to use the main functions of the tool will be organised before the actual training workshop. A test meeting with the participants and speakers before the first session will limit the time spent to resolve any arising issues during the actual training workshop.

9 GENERAL PRINCIPLES

- **Short sessions:** The programme has to be divided in sessions of maximum 3 hours by day, including focus group discussions and exercises.
- **1 day per week**, to provide time for trainees to prepare themselves for the next sessions and read background documents.
- **Overall duration is up to 4 weeks**, programmes and dates is to be defined well in advance to make sure that (most of) participants will be available for all the defined timeslots.
- **Background material provided in advance**, highlighting the most important parts of the sessions to avoid spending too much time on details during the sessions.
- **Strict time keeping:** To keep the training dynamic, **timing will be reminded at the beginning of the session and before each sub-session**. Speakers and participants will be reminded by the facilitator or timekeeper.
- **Good coordination team:** For each session, the role of the team members has to be defined in advance: session facilitator, speakers, timekeeper, chat box manager, breakout sessions facilitators.
- **Presentations maximum 45 mins with questions: Making references to the background materials**, focusing on the understanding of key concepts and introducing breakout sessions.
- **Breakout sessions maximum 45 mins:** Organised around role games, exercises, and discussions with feedback to the plenary session when relevant.
- **Short polls after/during presentation** to keep the attention of participants and get direct feed-back (using tools such as Mentimeter, Slido, etc.),
- **Quiz at the beginning and end of the training (after all sessions have ended):** A general “baseline” quiz for all sessions - to check if concepts are familiar to the participants and/or well understood - will be performed **prior to the start of the training and another quiz after all sessions are completed** allowing to check the progress in knowledge acquisition through the educational/training interventions
- **Building a community:** it is important to develop relationships between participants, from the same country for future development of WCE/WDM and from different countries to allow exchange of experiences during, between and after the sessions (e.g. with a forum on WES website).
- **Training duration:** About 15 hours on line (equivalent to the original 2 days of face to face training), about 15 sessions with duration of 45 minutes to 1:15 hours each including questions and answers, grouped by 2 sessions by day plus case study presentations.
- **Material provided** for each session in pdf version of slides, hands-out for breakout sessions, workbooks and background documents (organised with session numbering)