



Municipal Upgrading of Water Systems for Local Impact MUWALI LIBYA

May - November 2026

Context

MUWALI is a project that supports Libyan municipalities in strengthening water governance and improving local water systems. It focuses on key areas of growing relevance, including integrated planning, water data management, and the sustainable use of both conventional and unconventional water resources. Through a combination of technical support, capacity building, and practical initiatives, MUWALI aims to help municipalities translate knowledge into concrete local action.

As part of this effort, the MUWALI training programme is designed to strengthen the capacities of local actors involved in water governance, planning, and service management. It equips participants with practical tools to address water challenges, improve coordination among stakeholders, and contribute to more effective and sustainable municipal water management.

Libyan municipalities should play an important role in addressing water service challenges, including supply reliability, infrastructure constraints, data gaps, and coordination between institutions. Strengthening local technical and governance capacities is therefore essential to support more effective and sustainable water management. In this context, training is a key tool for enabling municipalities to plan, coordinate, and implement integrated water solutions.

The training program is designed by the project partners to bridge the gap between fragmented technical knowledge and operational municipal governance, providing the tools necessary for informed decision-making.

General Training Curriculum



Program Overview

The programme is structured around three core pillars of the project designed to strengthen municipal and institutional capacity:

- **Integrated Planning:** Supporting municipalities in developing Municipal IWRM Plans through situation analysis, stakeholder engagement, and pilot implementation activities.
- **Data Management:** Strengthening the collection, management, and use of water-related data to improve decision-making and information exchange between local and national institutions.
- **Innovative Solutions:** Enhancing knowledge and practical application of unconventional water resources through targeted assessments, pilot initiatives, and context-adapted technical solutions.

Programme Objectives

By the end of the training programme, participants will be able to:

- Apply Integrated Water Resources Management (IWRM) principles to analyse and address local water challenges at municipal level
- Strengthen the collection, organisation, and use of water-related data to support evidence-based decision-making and improve coordination between municipal and national institutions
- Identify, assess, and compare feasible technical options for unconventional water resources, adapted to local environmental, institutional, and operational contexts
- Develop initial municipal planning outputs, including a zero draft IWRM Plan, informed by local conditions and stakeholder priorities

Target Participants

The training programme addresses different profiles across the three cycles:

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- Municipal focal points and decision-makers
- Technical staff involved in planning, infrastructure, and service management
- Personnel involved in data collection, monitoring, and water quality
- Operators and specialists in water systems and unconventional resources

Participants are selected in coordination with municipalities and national counterparts.

Training Methodology and Structure

The capacity-building programme is organised into three complementary cycles, each linked to a specific project deliverable (Outputs 1, 2, and 3) and focused on a distinct aspect of municipal water management. Each cycle combines e-learning modules that introduce the theoretical framework, case studies, and key concepts, with in-person training focused on in-depth discussion and applied learning. During the in-person sessions, participants reflect on the online content, exchange perspectives, and develop practical learning outcomes relevant to their municipal context. Each cycle is followed by local application activities within the municipalities to support the transfer of knowledge.

Each of the three cycles includes:

- **Online phase** – 4 modules
- **In-person intensive training week** – 5 modules
- **Local application phase** – post-training activities within municipalities

The local application phase may include internal dissemination sessions to share knowledge with colleagues, as well as Training of Trainers (ToT) activities for selected cycles involving relevant stakeholders.

Municipalities will also be supported in developing and testing pilot actions under the MUWALI project, building on the themes addressed during the training cycles. These may focus on areas such as IWRM planning, data management, or technical solutions

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for non-conventional water resources. Pilot activities are intended to help participants translate training inputs into practical, context-adapted municipal initiatives.

Training Cycles Overview

The table below presents the main areas covered by each training cycle and its target participants.

Cycle 1: Integrated Water Resources Management Plans at the municipal level in Libya	
<p>Main areas covered:</p> <ul style="list-style-type: none"> • IWRM concepts, principles, and policy framework • Municipal water systems, service challenges, and resilience in Libya • Planning governance, stakeholder engagement, and institutional coordination • Analytical tools for municipal planning (situation analysis, GIS, water balance, data systems) • Action-oriented IWRM implementation (option screening, action plans, monitoring, and community engagement) 	<p>Target participants:</p> <p>Municipal staff involved in water governance, planning, and decision-making.</p>
Cycle 2: Enhanced data collection and management capacity of local administrations	
<p>Main areas covered:</p> <ul style="list-style-type: none"> • Institutional framework and role of data in national water strategy • Digital tools for data collection and monitoring (GPS, GIS) • Definition and use of indicators and survey methodologies • Water quality monitoring and reporting protocols • Analysis of municipal data management chains • Use of GIS and databases for operational and planning purposes • Data-driven decision-making and planning • Monitoring and evaluation frameworks 	<p>Target participants:</p> <p>Technical staff working in the water sector, including data management, monitoring, infrastructure, laboratories, and operations.</p>
Cycle 3: Technical Options and Unconventional Water Resources	

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Main areas covered:

- Technical options for improving municipal water services and resilience
- Unconventional water resources in Libya (desalination, treated wastewater reuse, rainwater/stormwater harvesting, other locally relevant options)
- Fit-for-purpose planning and screening of options
- Enabling conditions for implementation (energy, O&M, monitoring, environmental controls, institutional roles, financing, acceptance)
- Risk assessment, operational constraints, and failure modes
- Monitoring, performance review, and adaptive management for technical solutions

Target participants:

Technical staff working in water production and treatment, wastewater management, desalination, laboratories, operations and maintenance, water quality monitoring, municipal technical offices, GCWW local offices, and other specialists relevant to unconventional water sources.

Expected Results

Through the three training cycles, the programme is expected to strengthen the capacities of municipal actors involved in water governance and service delivery. Participants will develop a combination of analytical, strategic, and operational competences that support more effective planning, improved use of data, stronger institutional coordination, and the practical application of solutions adapted to local water challenges.

1. Analytical Competences (Knowledge)

- Water System Diagnosis: Ability to map and analyze municipal water systems, identifying constraints, risks, and opportunities related to both conventional and unconventional resources (wastewater, desalination, rainwater harvesting).
- Data Management Expertises: Proficiency in defining protocols for water data collection and standardization, utilizing digital tools (GIS, GPS) to overcome information fragmentation.
- Technical & Environmental Assessment: Capability to conduct "fit-for-purpose" feasibility studies and risk assessments for innovative and sustainable technological solutions.

2. Strategic Competences (Evaluation)

- Integrated Planning (IWRM): Ability to structure a "zero draft" of a Municipal IWRM Plan, aligning local objectives with institutional mandates and the Libyan national strategy.
- Evidence-Based Decision-Making: Skill in transforming data flows into strategic insights to support administrative decisions and efficient resource allocation.
- Institutional Leadership: Competence in coordinating multi-level stakeholders (local and national), ensuring that water plans are both technically sound and socially legitimate.

3. Operational Competences (Action)

- Project & Goal Management: Ability to implement pilot projects and territorial action plans, monitoring progress through specific performance indicators.
- Knowledge Transfer (ToT): Skill in replicating and disseminating acquired expertise within the municipality, acting as a facilitator for change and internal coordination.
- Operations & Maintenance (O&M) Oversight: Practical competence in managing water quality monitoring cycles and supervising the operational feasibility of non-traditional technical solutions to ensure long-term sustainability.

Course Materials & Resources

To support the learning process, participants will have access to a set of structured training resources designed to facilitate understanding, application, and self-assessment throughout the programme.

Entry & Exit Self-Assessments: At the beginning and end of each training cycle, participants will complete self-assessments to measure individual learning progress, track the development of competencies, and support reflection on professional growth.

On-Demand Video Lessons: High-quality video sessions presenting key concepts, expert insights, and visual explanations. The flexible format allows participants to learn at their own pace, including pausing and reviewing content as needed.

Concept Slides: Concise visual summaries of each lesson, designed to support review, consolidation of learning, and preparation for applied exercises.

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Learning Challenges: Short tests designed to reinforce key concepts and support the application of theory to practice.

Synchronous Online Sessions: Live online meetings designed to complement the learning process by providing a space for discussion, exchange of experiences, and interaction among participants. These sessions also allow direct engagement with trainers and experts to clarify concepts and deepen understanding of key topics.

Extended Resources: A curated selection of readings, case studies, and reference materials aimed at broadening understanding of key topics related to municipal water management and territorial planning.

Indicative Timeline

Cycle 1: May – July 2026

- Online phase: 4 weeks
- In-person training: 1 week in June 2026

Cycle 2: June – August 2026

- Online phase: 4 weeks
- In-person training: 1 week in July 2026

Cycle 3: September - November 2026

- Online phase: 4 weeks
- In-person training: 1 week in November 2026

Access and Technical Requirements

To ensure a smooth start to the learning process, participants are invited to take note of the following administrative and technical information:

Enrollment and Credentials

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Participants in the MUWALI Project will be enrolled automatically. Access details and logistical information are being collected through a registration form. Once processed, each participant will receive personal login credentials (username and password) by email prior to the start of the training.



Note: after installing the learning platform application, participants will be required to enter the platform URL (provided together with the credentials) in order to access the course content and synchronize their account.

Technical Support

To ensure a seamless experience, CCI training officers will provide distance mentoring to assist with platform navigation and technical troubleshooting.