



الجمهورية التونسية
وزارة الفلاحة والموارد المائية والصيد البحري



The 2nd International Ecohydrology Workshop in North Africa ECOTUN 2

Toward a North African Ecohydrology Demosites

Objectives

Programme

15th -16th May 2025

**Institut National des Sciences
et Technologies de la Mer, INSTM, Tunisia
Atrium, Dar El Hout Museum**





The 2nd International ECOhydrology workshop in TUNisia, ECOTUN 2

Slogan: “Puts science to action for a water secure world, in a changing environment” *IHP's ninth phase (2022-2029)*

Main theme: Toward a North African Ecohydrology Demosites

Organizer: The National Institute of Marine Sciences and Technologies (INSTM), Tunisia

Partners : Institut de Recherche pour le Développement (IRD)
UNESCO-IHP, Ecohydrology (Paris, France)

Date: May 15th – 16th, 2025

Location: The National Institute of Marine Sciences and Technologies, Salammbô
& The Ghar El Melh UNESCO-EH demosite, Tunisia

Conference rationale and objectives

The **Second Ecohydrology Workshop ECOTUN 2** gathers an interdisciplinary scientific team studying the interactions between water and ecological systems. Ecohydrology discipline plays an important role in the Intergovernmental Hydrological Programme IHP 9, UNESCO started in 2022. Among its activities, this program promotes Ecohydrology Demosites implementation; discussion on future activities and strategies (including UNESCO Priority Africa and Gender); dialogue on scientific challenges to achieve the water-related SDGs involving visions from young researchers and professionals. After the successful ECOTUN 1 organization and the classification of the Observatory of Ghar El Melh lagoon as an UNESCO-Ecohydrology demosite, in 2022, the ECOTUN 2 will be focused on the regional scale to disseminate the Ecohydrology concept on the North African sites.

Expected outcomes

1. Highlighting the role of Tunisian EH networks working with ecohydrological solution-oriented approaches for the enhancement of ecosystem services for the benefit of societies in demonstration sites.
2. Identifying EH region priorities and showcasing innovative solutions and adaptation strategies to address water security challenges, including interlinkages with both UNESCO Programmes and other international ones.
3. General strategy to include ecohydrological concepts in national development plans, with priority in Africa.

Scope and goals

The **coastal areas of the North African coasts** in the central Mediterranean basin are among the key areas where natural and anthropogenic drivers are rapidly evolving over the last few decades, causing major changes in the sedimentation processes that affect coastal ecosystem evolution. Since the mid-19th century, coastal ecosystem involving wetland stability has been seriously threaten by agricultural and fishery over-exploitation, pollution, engineering structures and fast-urban development. Change and degradation of the wetland distribution or extent due to climate change and anthropogenic factors have the potential to affect coastal biota and biodiversity equilibrium. Providing information on present coastal evolution, from the yield sources to the sink areas, and relationships with the marine environment, ECOTUN'2 will address the functioning of those ecosystems. In Mediterranean areas, there is an increasing need to protect coastal landscapes, appearing highly dependent to water and soil resources. Given the very high vulnerability of Mediterranean countries to the expected impacts of climate change, it cannot afford inaction on either global, regional, or national scales.

The program of the workshop will focus on the **wetland ecosystem restoration**. Wetlands are carbon-sequestering ecosystems and are among the most important biotope as strategical response to climate change mitigation. Historically, the wetlands were important in providing coastal cities with water during drought periods, but this function has been lost due to urban expansion which damages the wetland ecosystem and increases the coastal erosion, pollution, and biodiversity degradation. Also, wetland plants trap the sediments and fight flood inundation and further strength the coastal

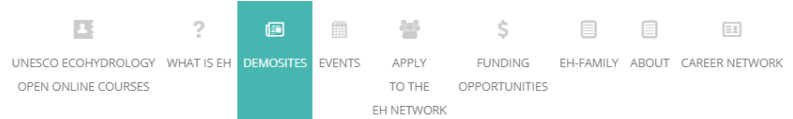
resilience to natural disasters. Urbanization damages the wetland ecosystem and increases the coastal vulnerability. It accelerates salt intrusion in shallow coastal aquifers and soil desiccation and degradation, which manifest in the development of salt lakes and bare soil threatening the food security in affected areas.

The **objectives of the ECOTUN 2 workshop** are

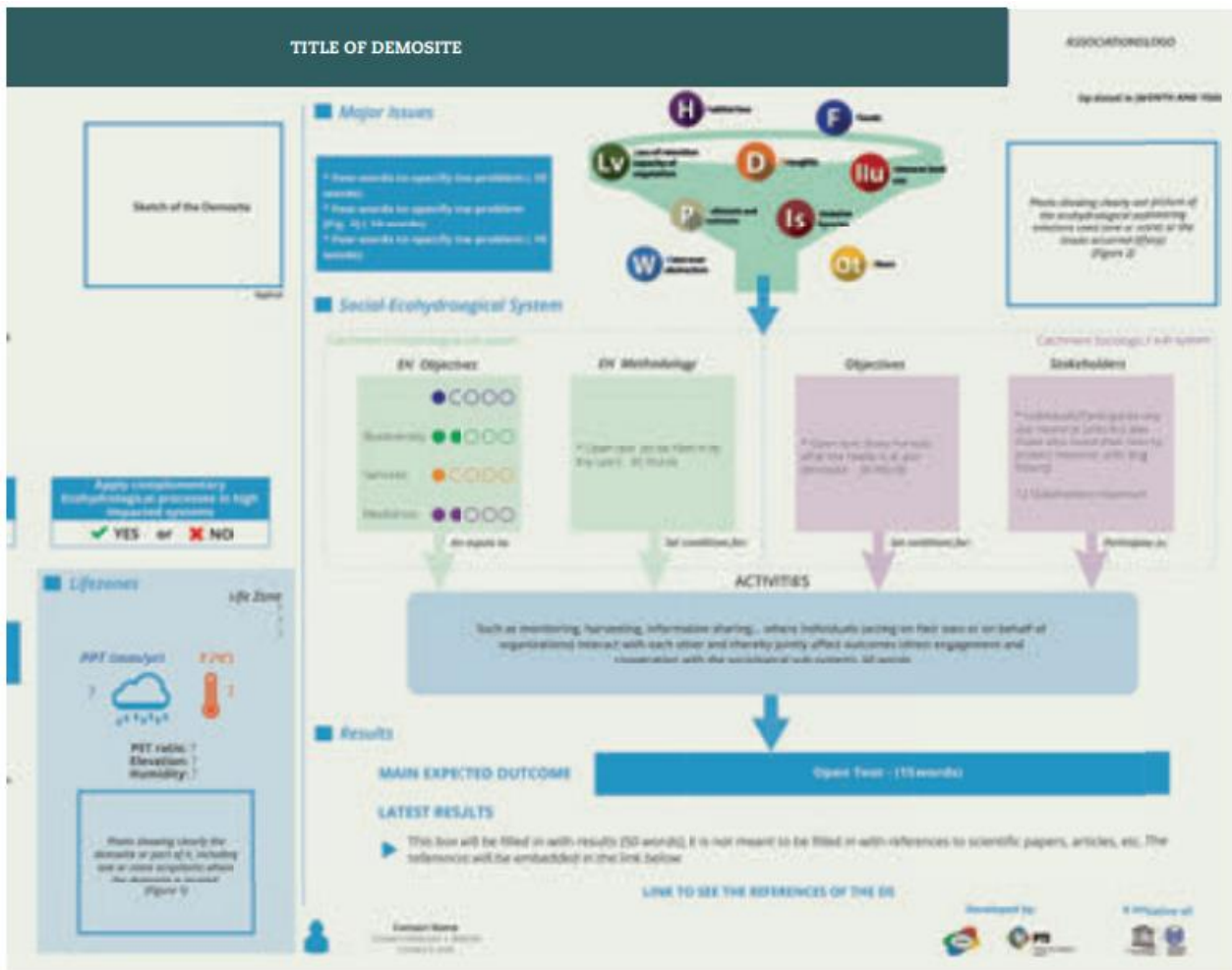
- to share the step-by-step implementation of our Observatory OMELI an UNESCO-Ecohydrology demonstration site
- to share and exchange scientific results and experience focused on Ecosystem-conservation methods, to monitor, preserve and optimize the water resource quality, the preservation of biodiversity, the integrity of the coastal landscapes and the securisation of socio-economic activities, within the River basin coastal areas
- to discuss the opportunity to develop a **Regional Research Committee** and Demosite Network at the scale of North African countries, on the topic of the **Coastal Ecohydrology**.

How to apply to ecohydrology demonstration sites?

ECOHYDROLOGY
WEB PLATFORM



<http://ecohydrology-ihp.org/demosites/ehmoodle>



The screenshot shows a form titled "TITLE OF DEMOSITE" with various sections for data entry:

- Major Issues:** A section with a blue header and a central diagram showing interconnected nodes (H, F, D, I, L, U, W, P, O, T) with arrows indicating relationships.
- Social-Ecological System:** A section with four sub-sections:
 - EN Objectives:** A grid of colored circles representing different objectives.
 - EN Methodology:** A box for describing the methodology used.
 - Objectives:** A box for describing the specific objectives of the demonstration site.
 - Stakeholders:** A box for identifying the stakeholders involved.
- ACTIVITIES:** A large blue box for describing the activities being implemented, such as monitoring, harvesting, or information sharing.
- Results:** A section for reporting the main expected outcome and latest results.
- Life Zones:** A section on the left for describing the life zones, including parameters like PPT, PET, Elevation, and Humidity.
- ASSOCIATION LOGO:** A field for providing the logo of the association.
- APPLY TO THE EH NETWORK:** A section with a "YES" or "NO" selection.
- REFERENCES:** A section for providing references related to the demonstration site.



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