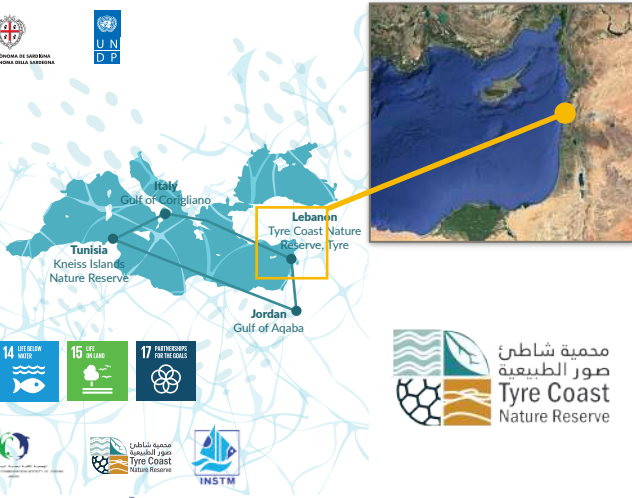




MED4EBM

# Mediterranean Forum For Applied Ecosystem-Based Management



# MEDITERRANEAN FORUM FOR APPLIED ECOSYSTEM-BASED MANAGEMENT

## MULTI-STAKEHOLDERS COORDINATION PLATFORM: TYRE COAST NATURE RESERVE - LEBANON

TCNR extends over 3,8 km<sup>2</sup> on land and 113 km<sup>2</sup> in the sea; the land section is divided into three main zones: public sandy beach, high conservation-scientific zone, and the agricultural zone of Ras El Ain. Its wetland is designated a Ramsar Site, rich in flora and fauna, and it is also an important hotspot for migratory birds and a nesting site for avifauna and sea turtles (*Caretta caretta*). The reserve hosts the most beautiful and largest sandy beach in Lebanon and its springs of Ras El Ain provide clean water for the city of Tyre and for irrigation.



The TCNR is the richest nature reserve in Lebanon with ecosystems, including: Wetland Ecosystem (Ramsar site), Sand Dunes Ecosystem (*Caretta caretta* nesting site & IBA), Agricultural Ecosystem (Ras El Ain) and Marine Ecosystem (SPAMI). This Eco-diversity reflected in a variety of uses and stakeholders: Tourists – Farmers – Fishermen – Scientists and Ecologists. Hence the need to manage TCNR based on an EBM approach.

The reserve strives to offset the impact of invasive plant and fish species, as well as to shift agricultural practices towards sustainable agriculture, and touristic practices towards ecotourism. Sea turtles are threatened by anthropogenic impact (littering, marine pollution, by-catch, noise and light pollution). Illegal fishing is somehow under control.

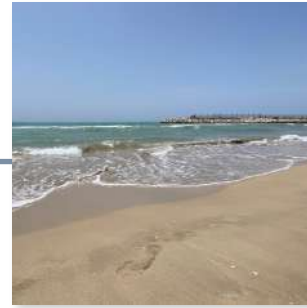
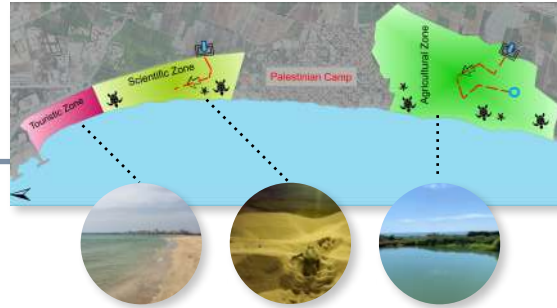


**DR.NAHED MSAYLEB**  
Director of TCNR  
Ph.D. Sustainable Agriculture  
M.Sc.Environmental Engineering

“A long journey is yet to make, to mitigate the consequences of environmental degradation from anthropogenic source and climate change, through the adoption and implementation of ICZM principles and Ec-Ap paradigm”



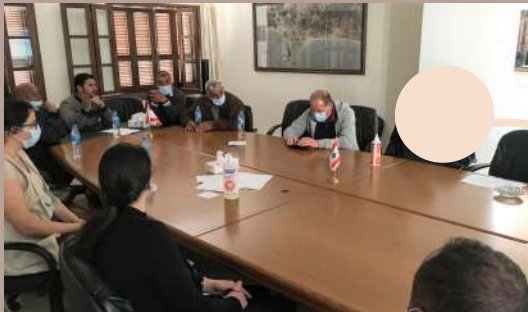
FRAGILE FLORA ECOSYSTEM



TOURISM

### Ecosystem-Based Integrated Coastal Zone Management Local Key Stakeholders Meeting at Tyre's Municipality

Multi-Stakeholders Working Group, First Workshop: March 19<sup>th</sup>, 2021



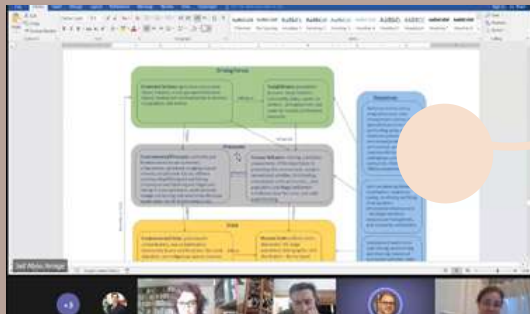
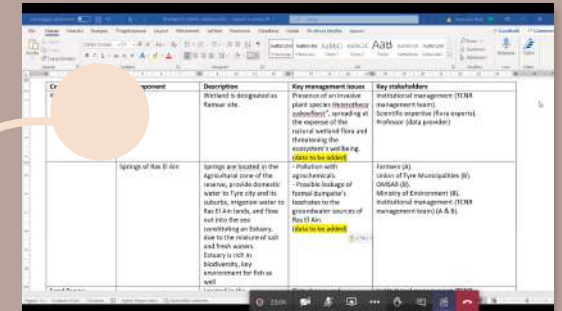
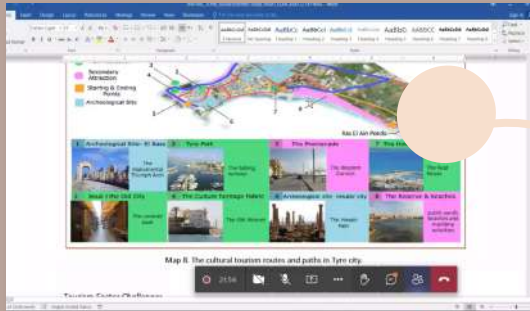
The meeting was attended by representatives from the local stakeholders: farmers community, fishermen and representatives from the tourism sector: summer beach huts, hotels and Airbnb hosts.

The participants shared data related to their practices that were defined for the EB-ICZM-DSS application.



## Online Experts Plenary Workshop for Decision Support System Application

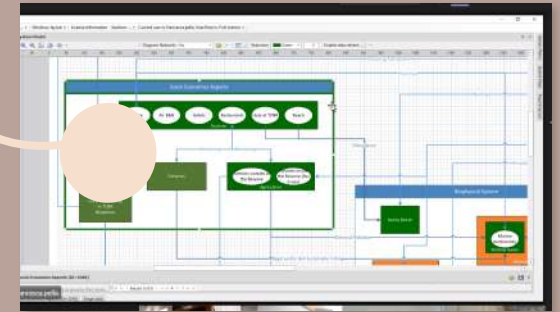
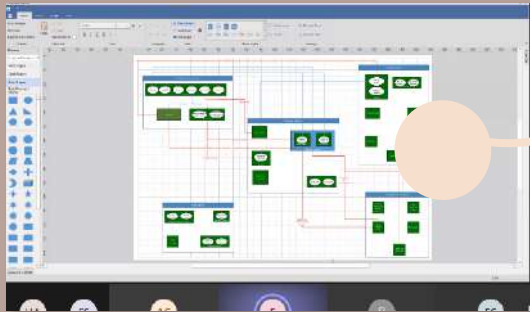
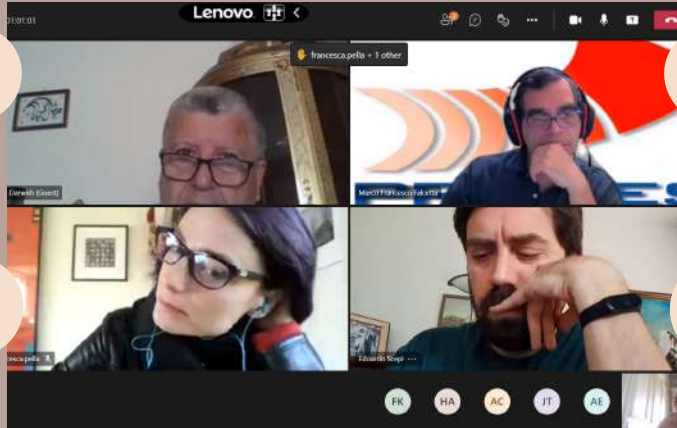
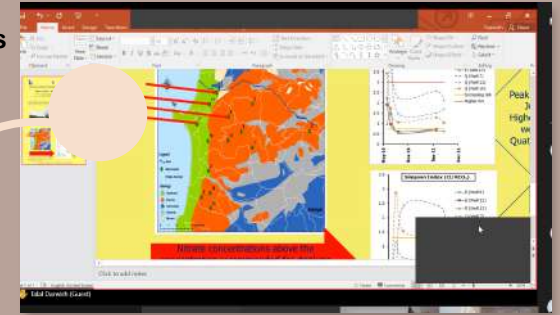
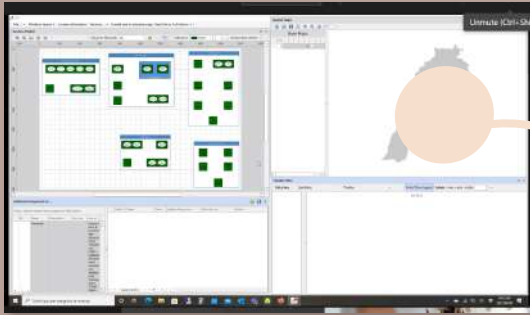
Multi-Stakeholders Working Group, Second Workshop: March 23<sup>rd</sup>, 2021



The workshop was attended by national ecological experts and researchers, aiming to start implementing the ecological data provided by them on the ISP EB-ICZM-DSS application software.

## Decision Support System application System Diagrams and Components

Multi-Stakeholders Working Group, Third Workshop:  
April 8<sup>th</sup> - 9<sup>th</sup>, 2021 / May 17<sup>th</sup> -26<sup>th</sup>, 2021



Set of diagrams were created on EB-ICZM-DSS application, then expert stakeholders identified the relations and Interactions between the components of the system, then defined the Indicators of these interactions: ecosystems, biodiversity, socio-economic aspects & infrastructures.



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