ENI CBCMED
Cooperating across borders in the Mediterranean

Project funded by the EUROPEAN UNION

REGIONE AUTÒNOMA DE SARDIGNA
REGIONE AUTONOMA DELLA SARDEGNA

UNDP

MED4EBM

Mediterranean Forum For Applied Ecosystem-Based Management

MED4EBM Identified Management and Monitoring Protocols
Case study: Kneiss Islands

DB and GIS expert Ghada Souilah

21st September 2023

Regency Gammarth, Tunis

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AMICI della TERRA

الجمعية الملكية لحماية البيئة البحرية
THE ROYAL MARINE CONSERVATION SOCIETY OF JORDAN
JREDS

TYRE COAST NATURE RESERVE
محمية شاطئ صور الطبيعية

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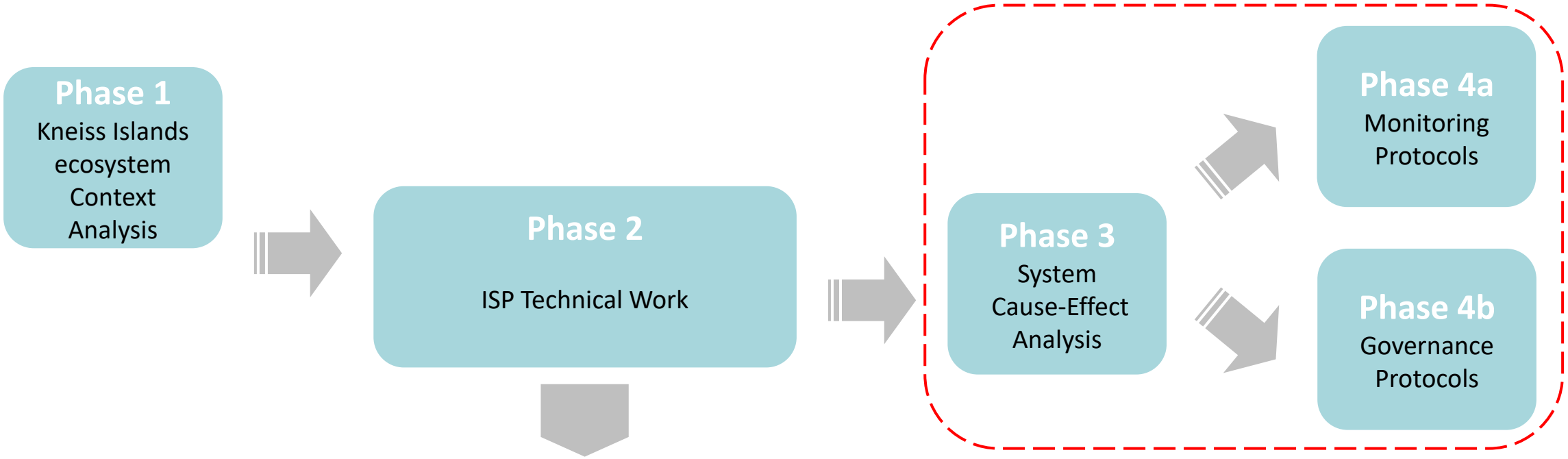
Decision making process



-Outputs:
Databse for Kneiss Islands
Data presented in graphs and maps for the stakeholder inside ISP

Data analysis reports

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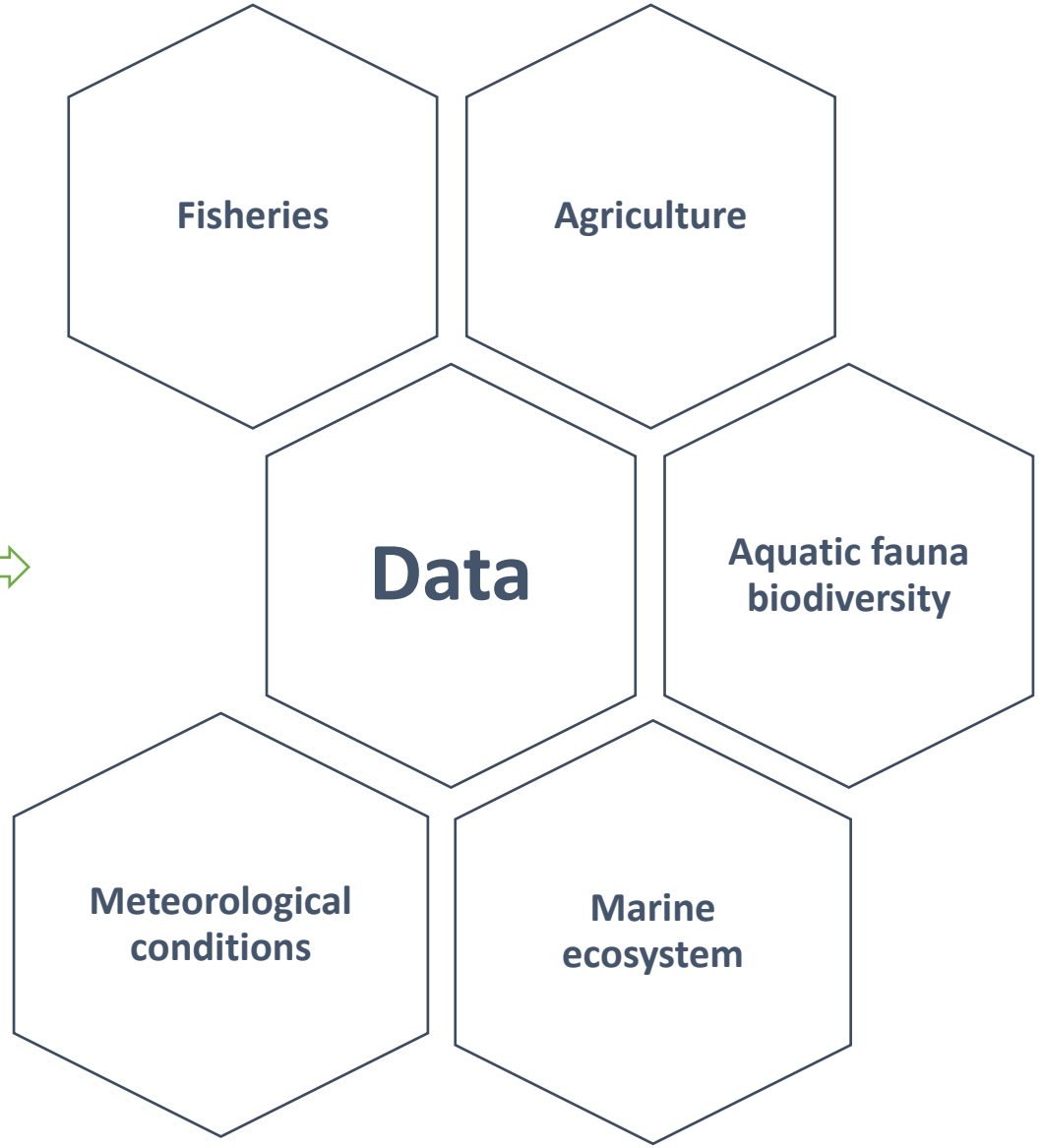
Decision making process

ISP feeding with data



Cause/Effect analysis
-Data analysis
-Analysis of the interactions

Management solutions and plans

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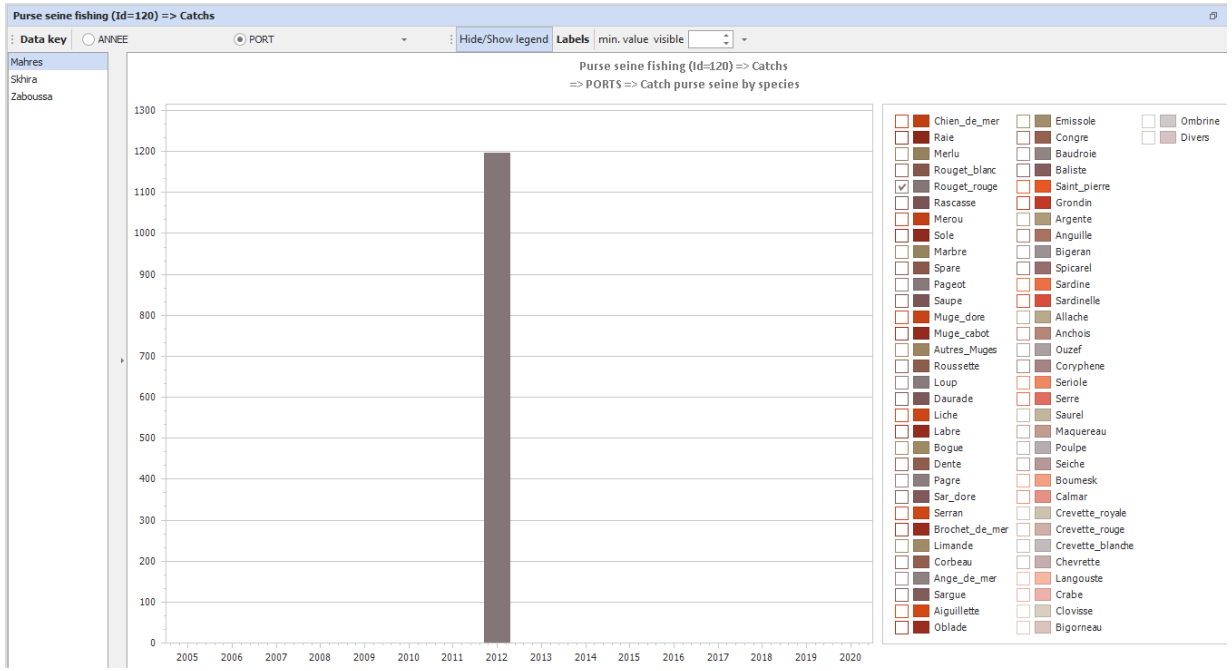
Example 1:Catch by species

<u>Catch by fishing type by species: Catch by purse seine by species (Indicator)</u>
Rouget_rouge in January 2012 in Mahres is fished by purse seine while it should be found in coastal fishing.



Rouget_rouge yearly purse seine production

Confusion in species identification
Example: “Sardinelle”/ “Allache” (same species) and “Sardine”

Sardinella aurita

Sardina pilchardus

Source: FAO, Sana Khemiri

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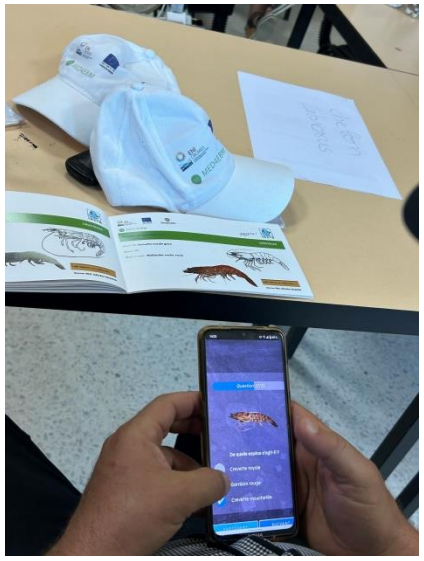
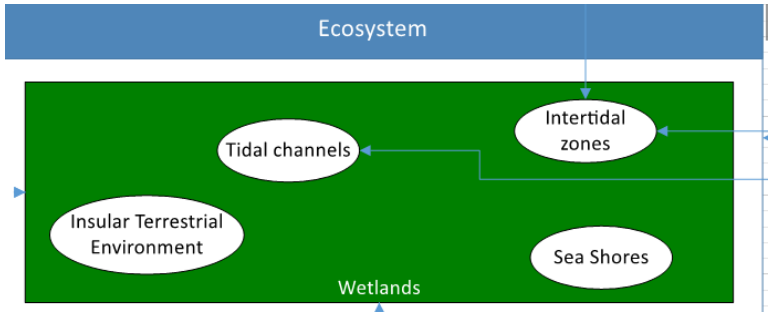
Example 1:Catch by species
Management actions & protocols

Governance protocol already executed: National training on the identification of the landed species in Tunisia

Management action: A guide to strengthen the monitoring protocol already in place



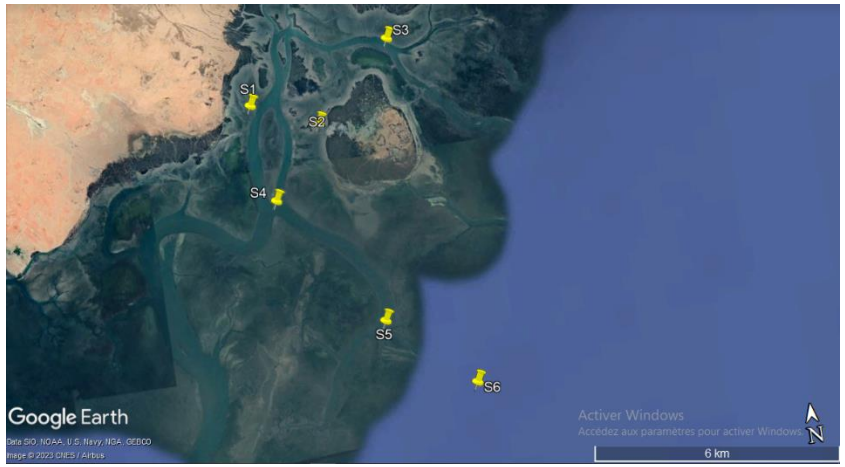
MED4EBM Example 2: Wetlands environment parameters Monitoring protocol



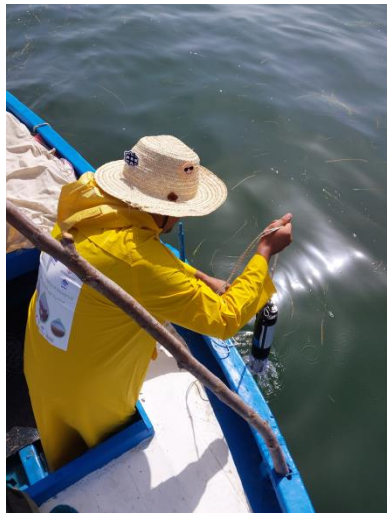
Empty component

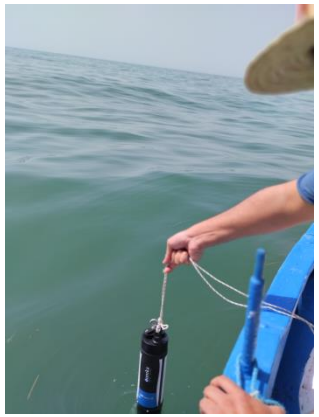
Monitoring protocol on the wetlands' environment parameters
=>Filling the gap on the state of the ecosystem of Kneiss Islands.

Management action is already implemented by INSTM: Gathering the knowledge on the aquatic abiotic parameters of Kneiss Islands.
=>Monitoring protocol is already executed monthly.



Location of the sampling stations





Multiprobe for sampling water variables

Data collection and monitoring protocol

Ecosystem abiotic parameters

SECTOR/ TOPIC: ECOSYSTEM COMPONENTS: WETLANDS	
TITLE: ECOSYSTEM ABIOTIC PARAMETERS	
TARGET AREA (KNEISS ISLANDS) Location on Google Maps https://www.google.com/maps/place/Kneiss/@34.3680593,10.3011168,14.42z/data=!4m6!3m5!1s0x12feb7758c80a87:0xbc2172aca6054cc!8m2!3d34.3505561!4d10.2997221?entry=ttu	
FREQUENCY The monitoring is conducted every month. INSTM started the survey in June 2023. After the end of MED4EBM Project, the monitoring sessions can be modified based on the available resources, continuing to carry out one field session each month to – in the most conservative scenario – reducing the to four sessions per year.	
MONITORING RATIONALE (System Component)	Ecosystem Aquatic variables Understanding, assessing, and monitoring the main indicators of water and air quality and their primary parameters is vital to comply with standards. Water quality parameters include a wide range of chemical, physical and biological properties, such as dissolved oxygen, turbidity, pH, salinity, and water temperature. Samples of water are taken to assess and monitor water quality which provides data that gives important indicators of pollution and changes in patterns of standard behaviour. Dissolved Oxygen (DO)

Monitoring protocol

Water variables:
-Temperature
-Salinity
-Conductivity
-pH
-Turbidity
-ORP (=Oxidation Reduction Potential)

Other management actions and protocols

Strengthening the application of ICZM by adopting interactive plateforms for data sharing between stakeholders

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Integrated Spatial Planning

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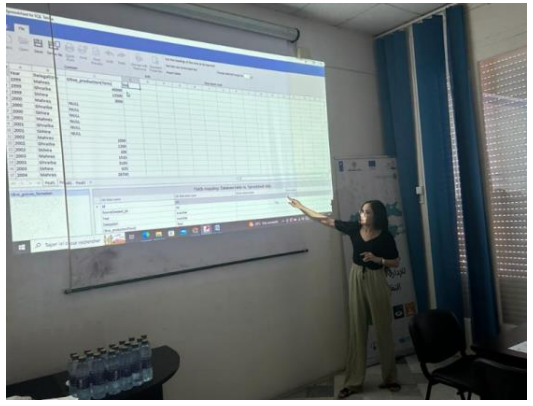

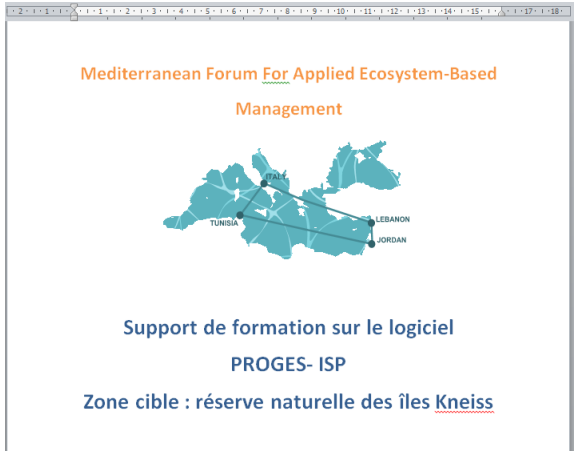

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Thank you for your kind attention!