ENI CBCMED
Cooperating across borders in the Mediterranean

Project funded by the EUROPEAN UNION

REGIONE AUTONOMA DE SARDIGNA
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MED4EBM

Mediterranean Forum For Applied Ecosystem-Based Management

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PROGES

AMICI della TERRA

THE ROYAL MARINE CONSERVATION SOCIETY OF JORDAN

TYRE COAST NATURE RESERVE

INSTM

Establishing a stakeholder cooperation and coordination platform for implementing Ecosystem-Based Integrated Coastal Zone Management (EB-ICZM)

Reference methods and tools

12-13 May 2022 – Sibari Cassano allo Ionio
Live streaming

Edoardo Scepi – EBM Expert
Amici Della Terra ONLUS

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Ecosystem-Based Integrated Coastal Zone Management (EB-ICZM):

Introduction, issues and challenges.

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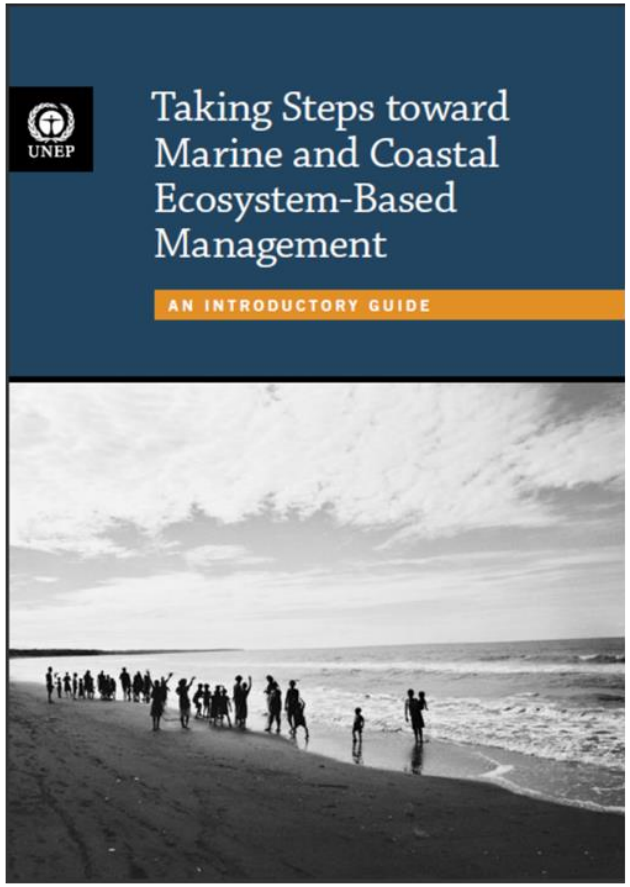
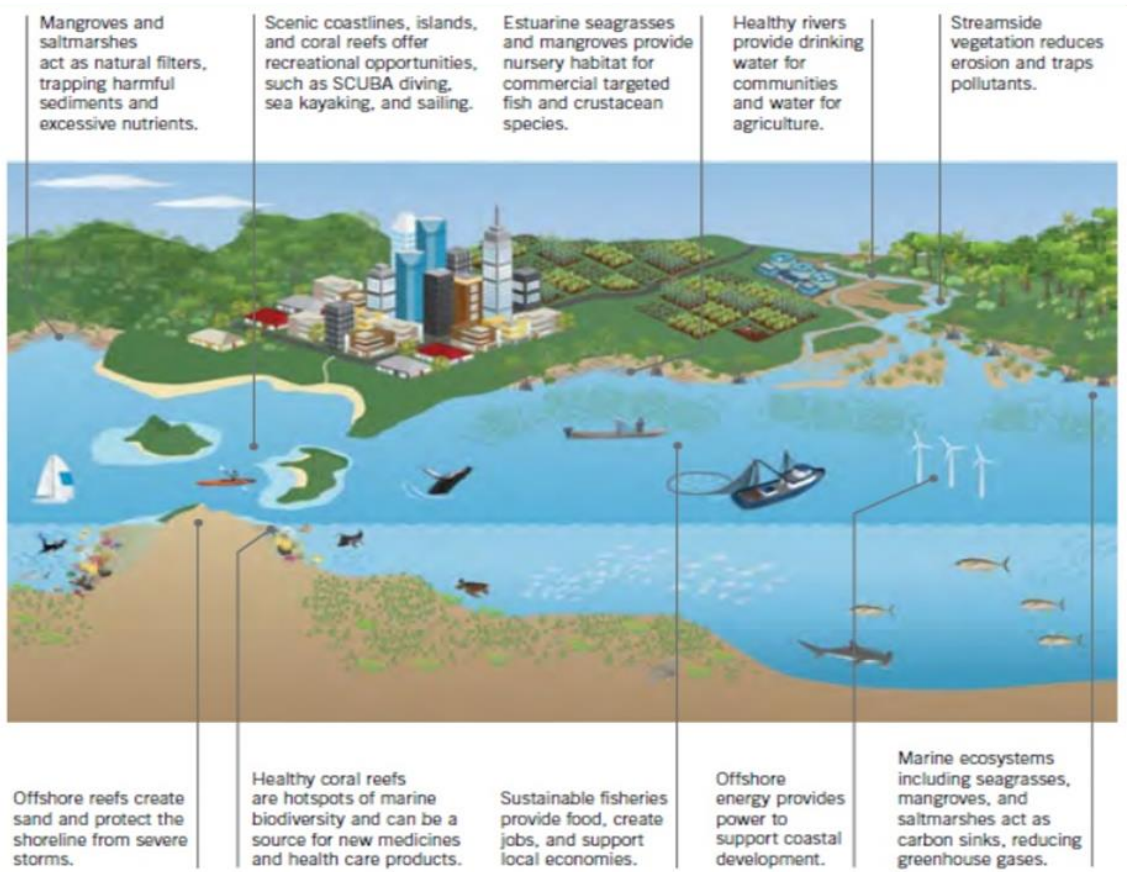
An approach that goes beyond examining single issues, species, or ecosystem functions in isolation.

Instead it recognizes ecological systems for what they are: a rich mix of elements that interact with each other in important ways.

Ecosystem-Based Integrated Coastal Zone Management (EB-ICZM)





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Translating approaches and technical guidelines into action tailor-made to the relevant context of intervention.

EB-ICZM: Challenges

- **Integration across 2-3 sectors can be easily handled, but wide cross-sector integration is highly demanding and, sometime, may also lead to some confusion for the planning team.**
- **A wide-range of stakeholder must be actively involved, who often see the same reality from a dramatically different point of view.**
- **Requires extensive data collection and the handling of large datasets, characteristics.**

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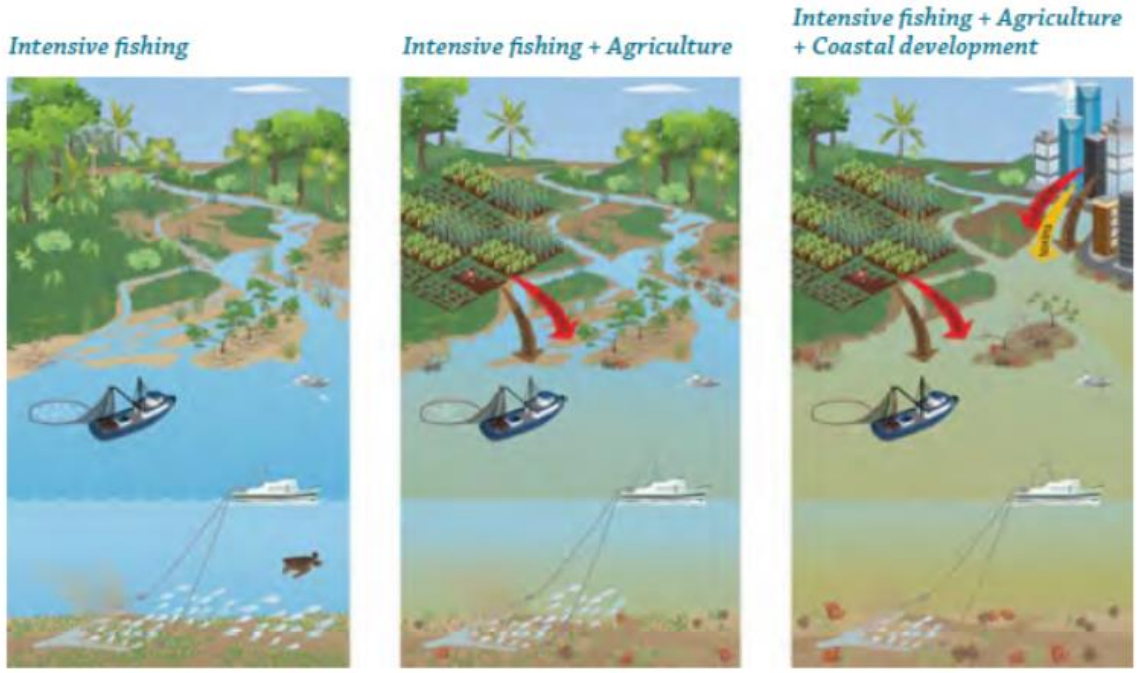
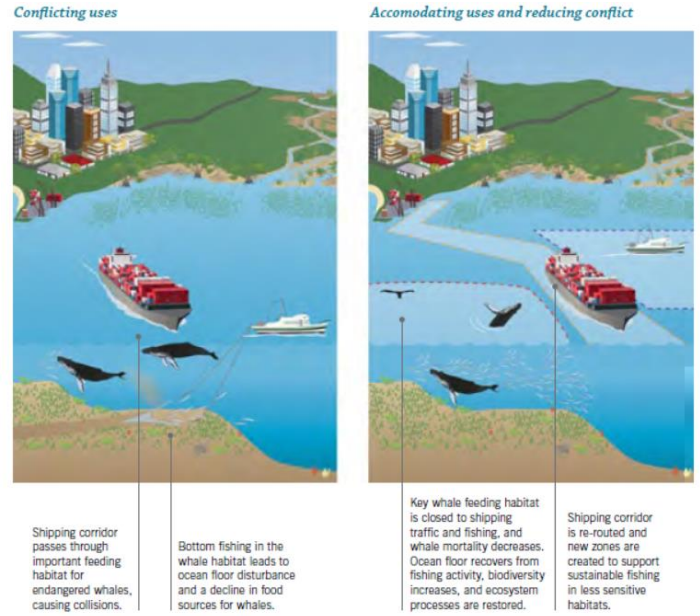
Integration across 2-3 sectors: can be easily handled.

EB-ICZM: Cross sector integration



fishing, agriculture, coastal development.



ships & whales.

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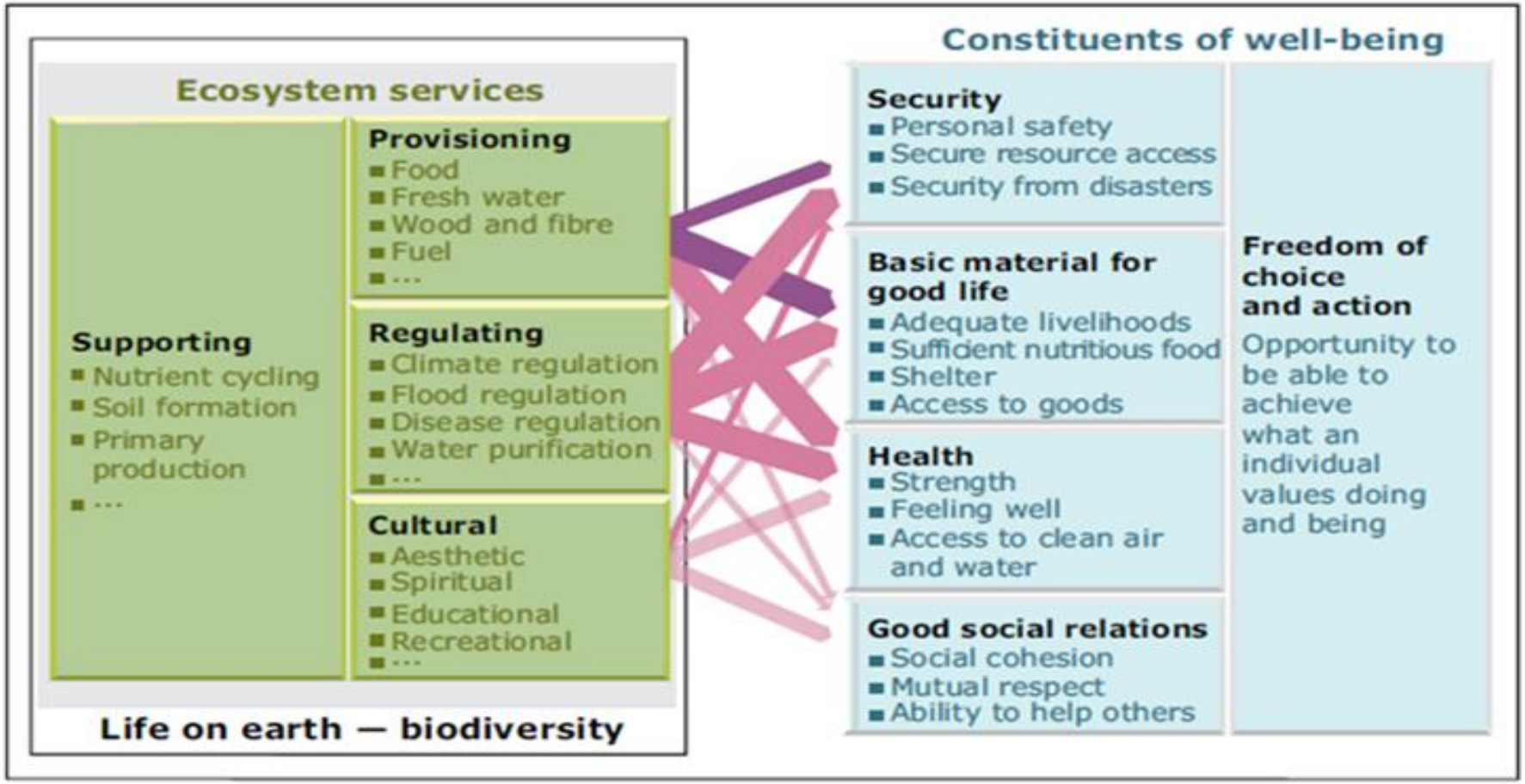
Wide cross-sector integration: each EB-ICZM application is highly demanding for the planning team and, sometime, may also lead to some confusion among them.

EB-ICZM: Cross sector integration



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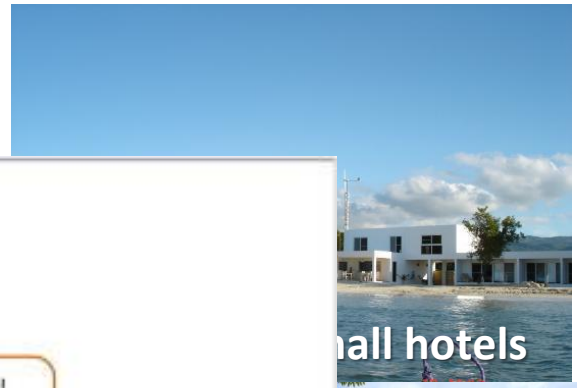
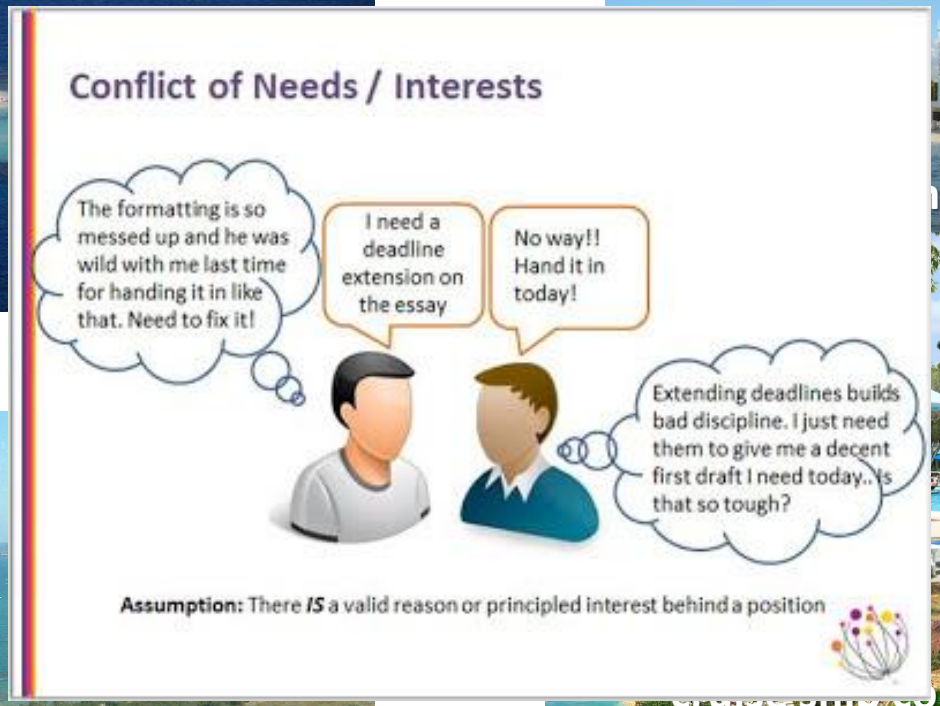
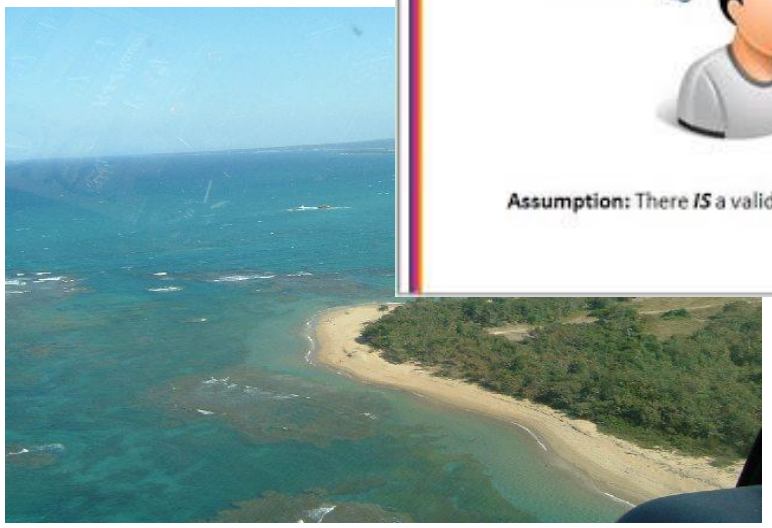
Stakeholders may see the same reality from a dramatically different point of view.

EB-ICZM: Stakeholders' different viewpoints







coastline, islands, coral-reefs.

tourist stakeholders.

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Harmonizing stakeholders' different viewpoints in multi-sector integrated management planning processes may often bring conflicts.

EB-ICZM: Harmonizing stakeholders' different viewpoints

nice group pictures

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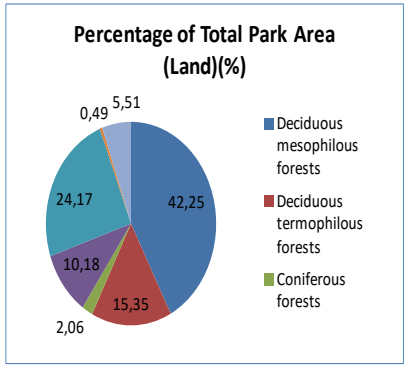
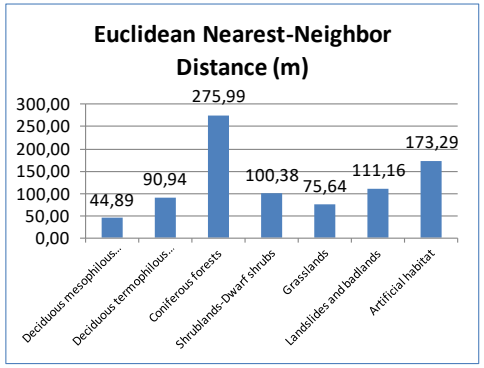
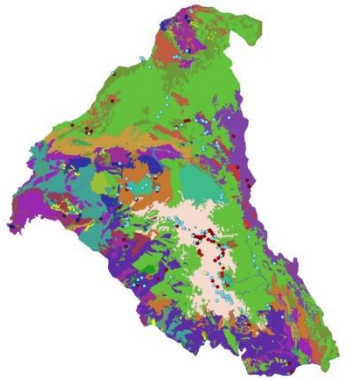
EB-ICZM require extensive data collection and the management of large datasets spanning diverse spatial and temporal scales.

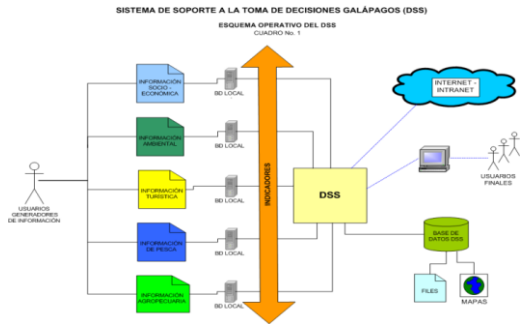
EB-ICZM: data management

data collection.









data handling and analysis.

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MED4EBM:

Methods and tools for EB-ICZM.

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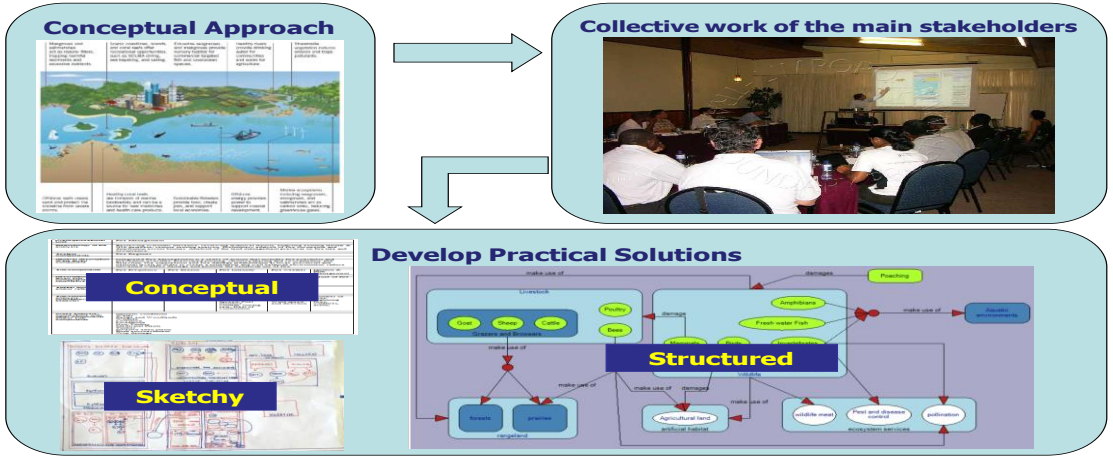
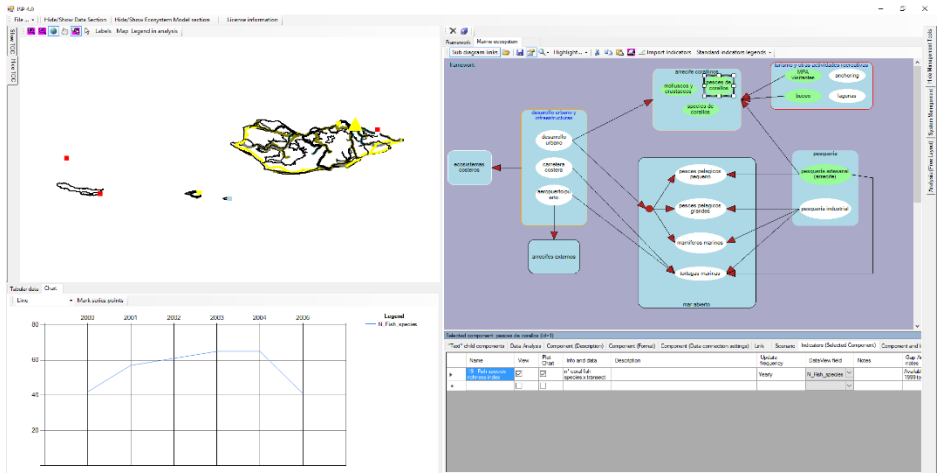
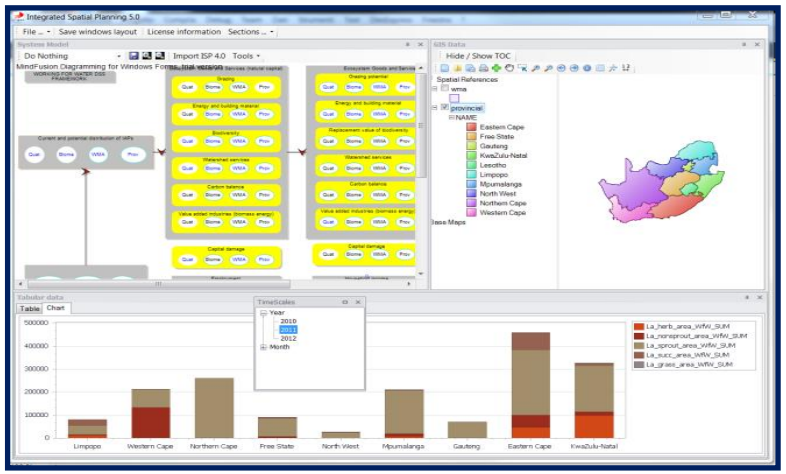
EB-ICZM methods and tools: MED4EBM proposes the PROGES-ISP package

Two categories of instruments:

- **an operational protocol for the execution of multi-disciplinary ecosystem-based environmental assessments.**







- **a software package, linked to spatial and tabular databases, to support the analysis of relevant ecological data and the preparation of synoptic reports.**

www.progesconsulting.it/EBM_DSS.aspx

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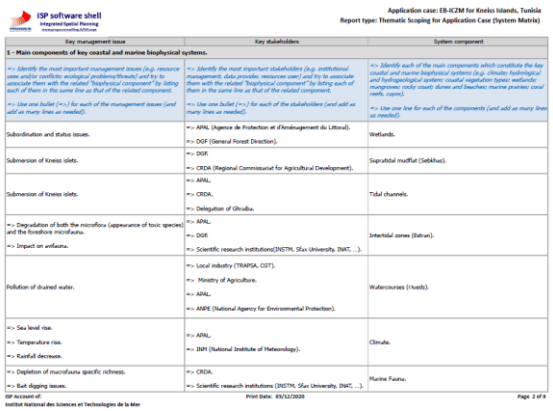
Ecosystem Context Analysis: a sequential three stage analytical process for multi-stakeholder ecosystem-based analyses.

MED4EBM EB-ICZM methods and tools: Ecosystem Context Analysis

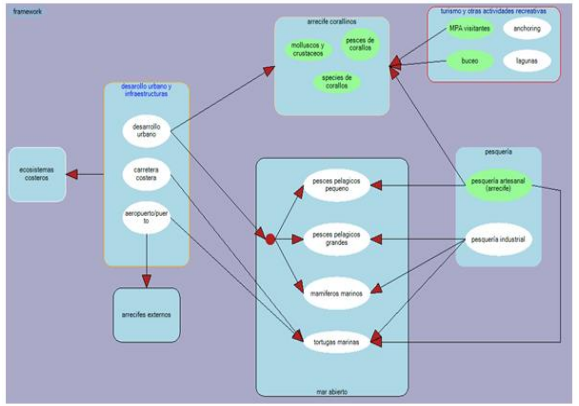
Effective dialogue between stakeholders for a common understanding of the given EBM context

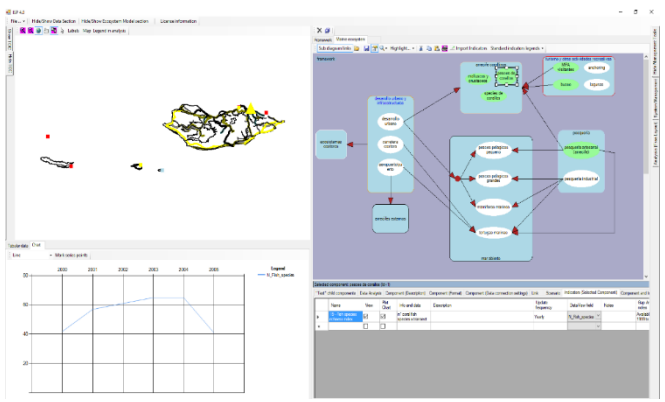

ISP software shell
Integrated Spatial Planning

Application case: EB-ICZM for Kneiss Islands, Tunisia
Report type: Thematic Scoping for Application Case (System Matrix)

Key management issue	Key stakeholders	System component
1 - Main components of key coastal and marine biophysical systems.		
=> Identify the most important management issues (e.g. resource uses and/or conflicts: ecological problems/threats) and try to associate them with the related "biophysical component" by listing each of them in the same line as that of the related component. *=> Use one bullet (=>) for each of the management issues (and add as many lines as needed).*	*=> Identify the most important stakeholders (e.g. institutional management, data provider, resources user) and try to associate them with the related "biophysical component" by listing each of them in the same line as that of the related component.* *=> Use one bullet (=>) for each of the stakeholders (and add as many lines as needed).*	*=> Identify each of the main components which constitute the key coastal and marine biophysical systems (e.g. climate; hydrological and hydrogeological system; coastal vegetation types; wetlands; mangroves; rocky coast; dunes and beaches; marine prairies; coral reefs, caves).* *=> Use one line for each of the components (and add as many lines as needed).*
Subordination and status issues.	=> APAL (Agence de Protection et d'Amaénagement du Littoral). => DGF (General Forest Direction).	Wetlands.
Submersion of Kneiss islets.	=> DGF. => CRDA (Regional Commissariat for Agricultural Development).	Supratidal mudflat (Sebkhas).
Submersion of Kneiss islets.	=> APAL. => CRDA. => Delegation of Gibraiba.	Tidal channels.
=> Degradation of both the microflora (appearance of toxic species) and the foreshore microfauna. => Impact on avifauna.	=> APAL. => DGF. => Scientific research institutions(INSTM, SFax University, INAT, ...).	Intertidal zones (Estran).
Pollution of drained water.	=> Local industry (TRAPSA, CGT). => Ministry of Agriculture. => APAL. => ANPE (National Agency for Environmental Protection).	Watercourses (Oueds).
=> Sea level rise. => Temperature rise. => Rainfall decrease.	=> APAL. => INM (National Institute of Meteorology).	Climate.
=> Depletion of macrofauna specific richness. => Bait digging issues.	=> CRDA. => Scientific research institutions (INSTM, SFax University, INAT, ...).	Marine Fauna.

ISP Account of: Institut National des Sciences et Technologies de la Mer — Print Date: 05/12/2020 — Page 2 of 9





conceptual: system matrixes → **qualitative-structural: system diagram** → **quantitative-structural: system-diagram & indicators**

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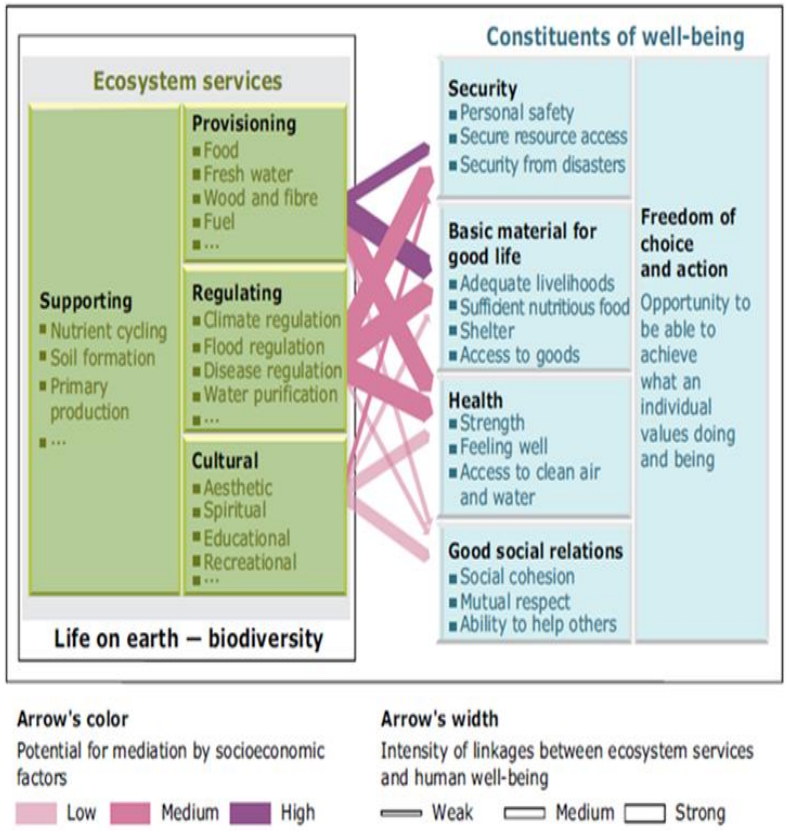
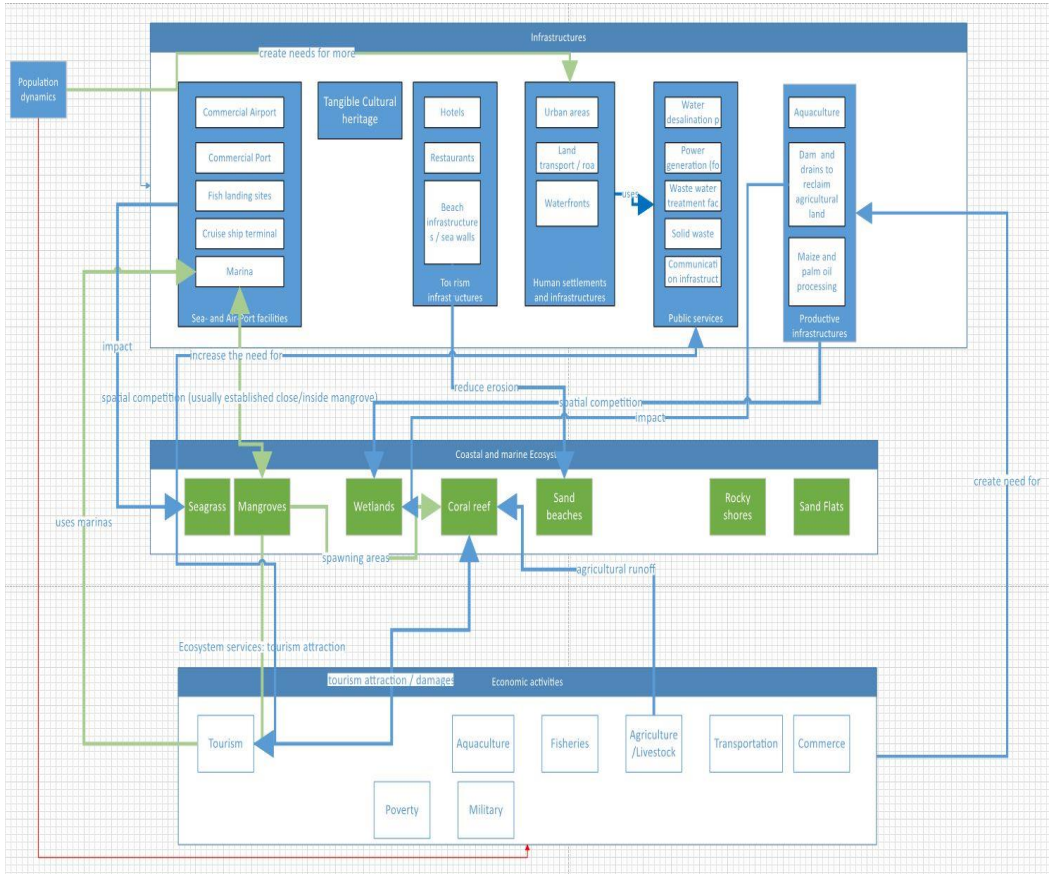
MED4EBM EB-ICZM methods and tools: EB-ICZM model

EB-ICZM Model recognizes connections within and across ecological and human systems.





complex EB-ICZM dynamics are decomposed in a structured set of elemental items and interactions between them.

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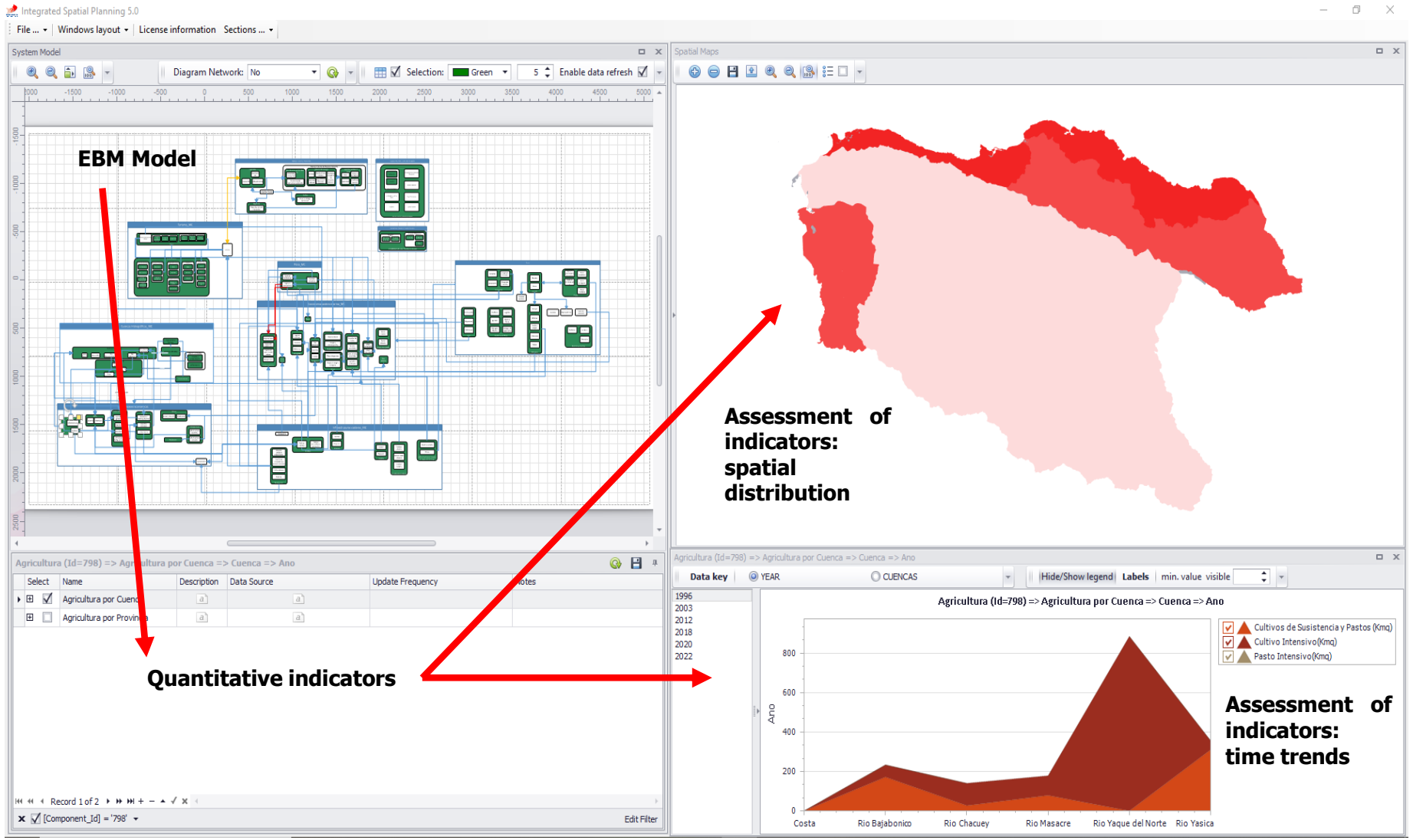
Data interaction at multiple time and spatial scales to allow efficient and effective EBM analyses.

MED4EBM EB-ICZM methods and tools: PROGES-ISP software



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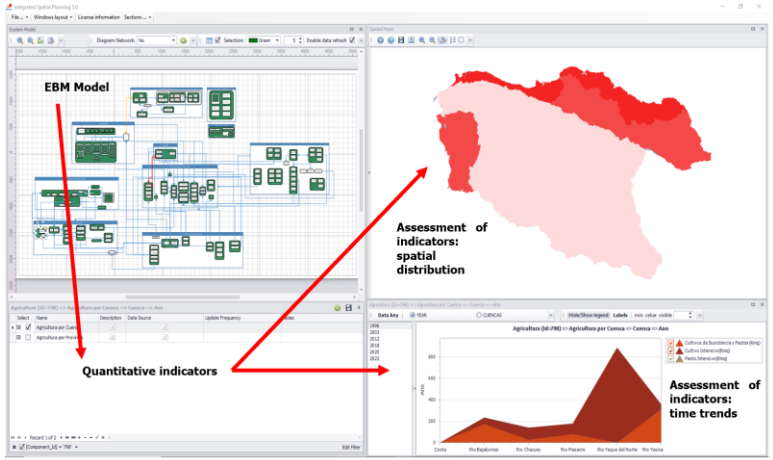
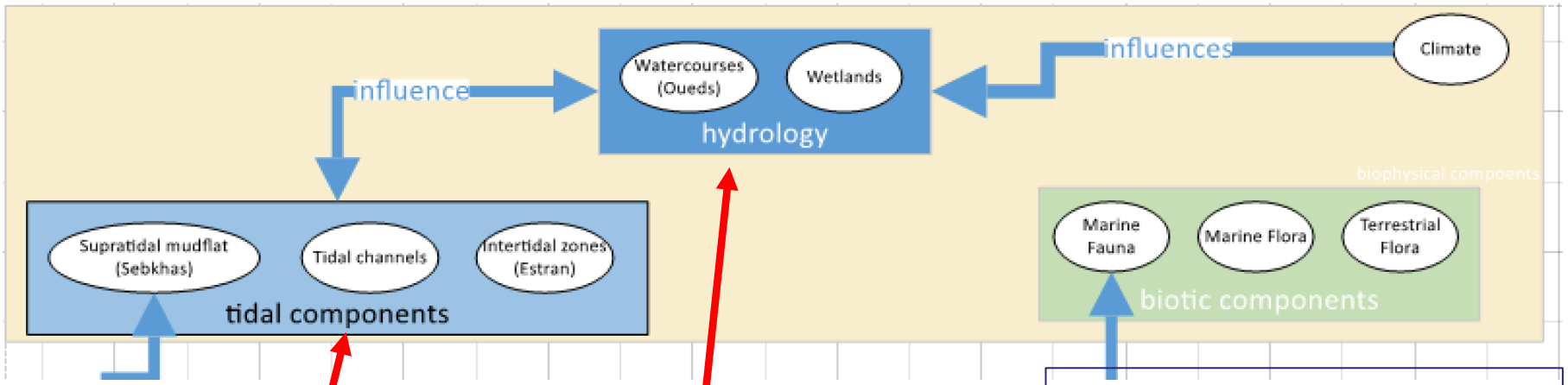
MED4EBM EB-ICZM methods and tools: System Cause-Effect Analysis



System Cause-Effect Analysis: participatory indicator-based analysis of the stakeholders' EBM model.



Assess status and dynamics of a given component.

Assess status and dynamics of related component(s).

Intersect the assessments: coordinate management (water management vs. coast erosion/flood) and define triggers and targets for action.

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THANK YOU

PROGES PROGETTI DI SVILUPPO

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الجمعية الملكية لحماية البيئة البحرية
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TYRE COAST NATURE RESERVE
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