



NOSTRA Network Of STRAits

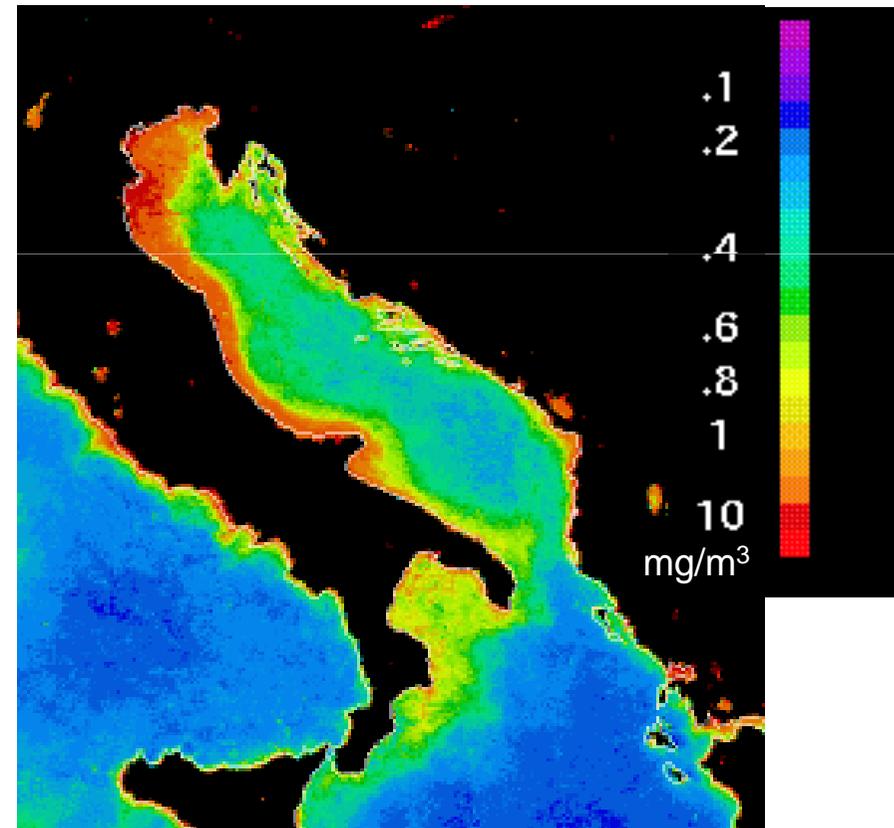
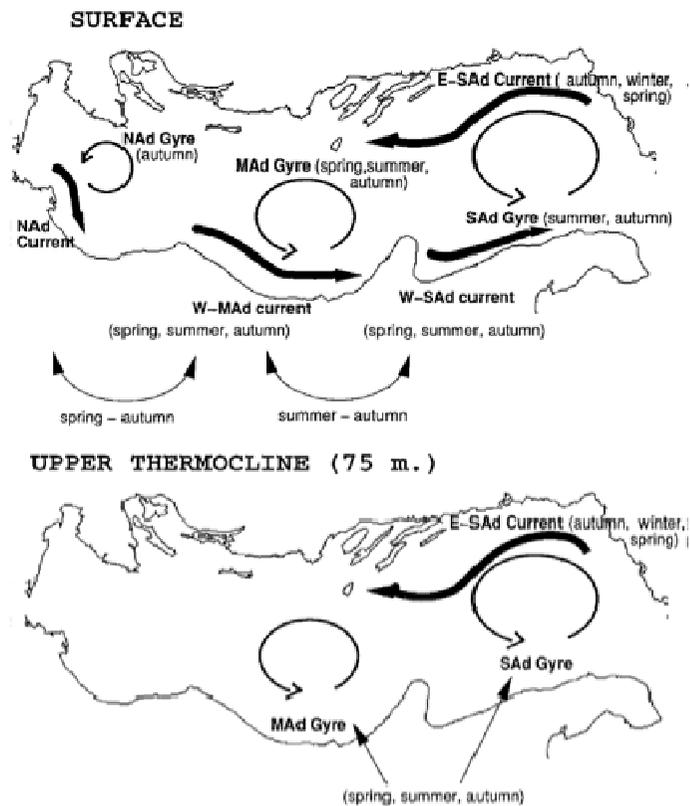
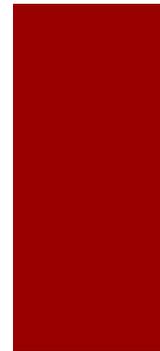
Workshop on *Tourism and Cultural Heritage*

Environmental conditions of transitional and marine ecosystems in the cross-border Adriatic Ionian Region

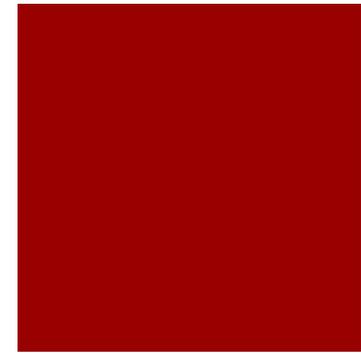
ALBERTO BASSET, SIMONA FRASCHETTI AND ALL STAFF OF THE ECOLOGY, MARINE BIOLOGY AND ZOOLOGY LABS AT *Salento University*

Otranto, 10-11 April 2013

The Adriatic-Ionian Region

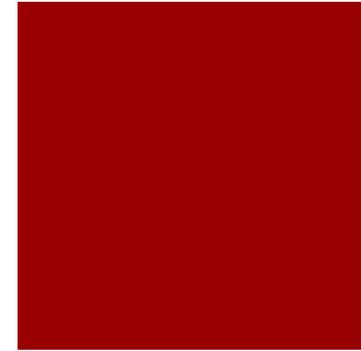


The Adriatic-Ionian Region



Cross-border cooperation

- **Transitional** & Coastal Waters in the Adriatic-Ionian Region joint EU/Bilateral project
 1. TWReferenceNet INTERREG IIIB
 2. EcoGovernance INTERREG IIIA
 3. ClimBioMedNet 6FP ERANET CIRCLEMED
 4. WISER 7FP
 5. Bilateral Italy-Albania



Cross-border cooperation

- Transitional & **Coastal** Waters in the Adriatic-Ionian Region joint EU/Bilateral project

1. INTERREG IIA/IIIA Italy-Greece/Italy-Albania

2. INTERREG IIIB *HuReDePIS*

3. PEW Institute for Ocean Science: *Assessing the health of Mediterranean coastal ecosystems*

4. CoCoNet – progetto EU FP7 Ocean 2011

5. MAREA EU project

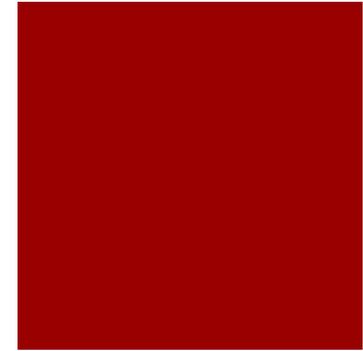


Key topic areas

- Pressure assessment and mapping
- Ecological status assessment (WFD/MSFD) and tool development
- Data Platform development
- Habitat mapping
- Biodiversity patterns, drivers and mechanisms
- Ecosystem service assessment (fish nursery and fishery, tourism, ...)
- Protected area management (planning)
- Scenario building / climate change adaptation



Pressure assessment and mapping



1. At the watershed level for every lagoon ecosystem in the cross-border area;
 1. Example on the Alimini lake ecosystems
2. At the cross border area level for the marine ecosystems.
 1. Examples on the entire cross-border area and on the Kerkira region

Lake Alimini

LAND USE

Catchment Area (Km)	70.75
Habitat Corine I Level	
Artificial surfaces	0%
Agricultural areas	94.0%
Forests and semi-natural areas	1.0%
Wetlands – Inland or Coastal wetlands	3.0%
Water bodies – Continental water bodies	2.0%



SOCIO-ECONOMICAL

Type of Activity	Unit	Value
Agriculture - Consumption of Fertilizers (N & P Total)	t/y	355
Agriculture - Consumption of Pesticides (Total)	t/y	3.5
Livestock Farming (All animals)	animal head	1759
Fisheries (in the lagoon)	t/y	-
Industrial Units (number)	number	64
Population	persons	6675
Tourism	visitors/y	46573
Urban Waste	kt/y	3.2
Urban Waste Water Treatment Plants	number	-
Water Consumption (Agriculture-Industry-Households)	m ³ /y	4931



Lake Alimini

PRESSURES

Present	Proposed	
		Alteration water schemes
		Reclamation
		Dunes alterations
		Coastal regression
		Lagoon filling
		Power generation
		Urbanization
		Military activities
		Agriculture
		Industrial and port activities
		Waste discharge
		Sewage treatment works
		Transport & communications
		Sediments extraction
		Hunting
		Fishing
		Tourism & recreation
		Education & scientific research

BIOLOGICAL

Angiosperms

Macroalgae

Phytoplankton

Macrofauna

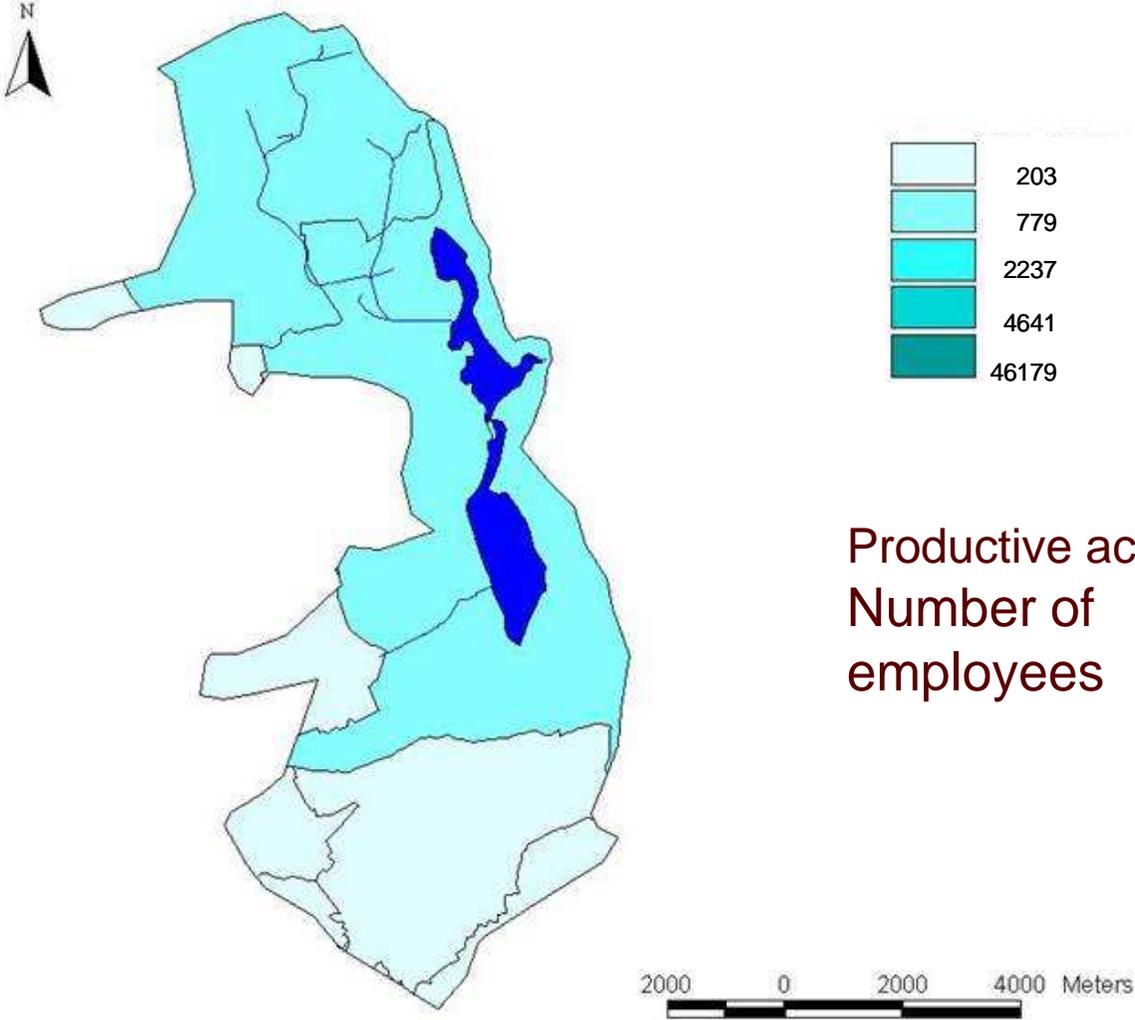
Fish fauna

 Known

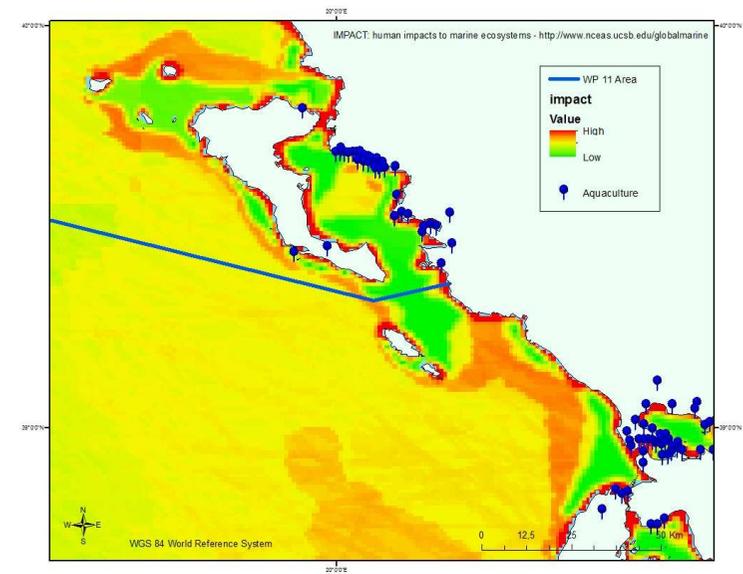
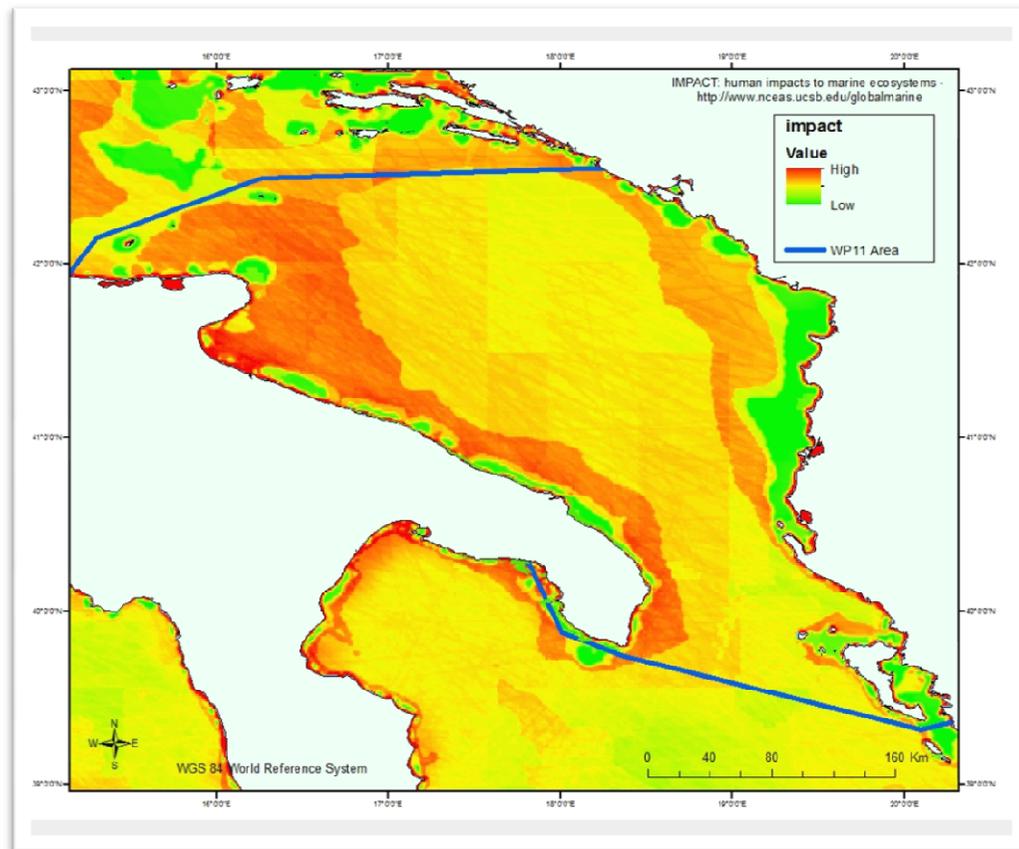
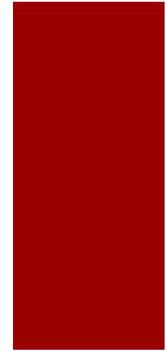
 Unknown



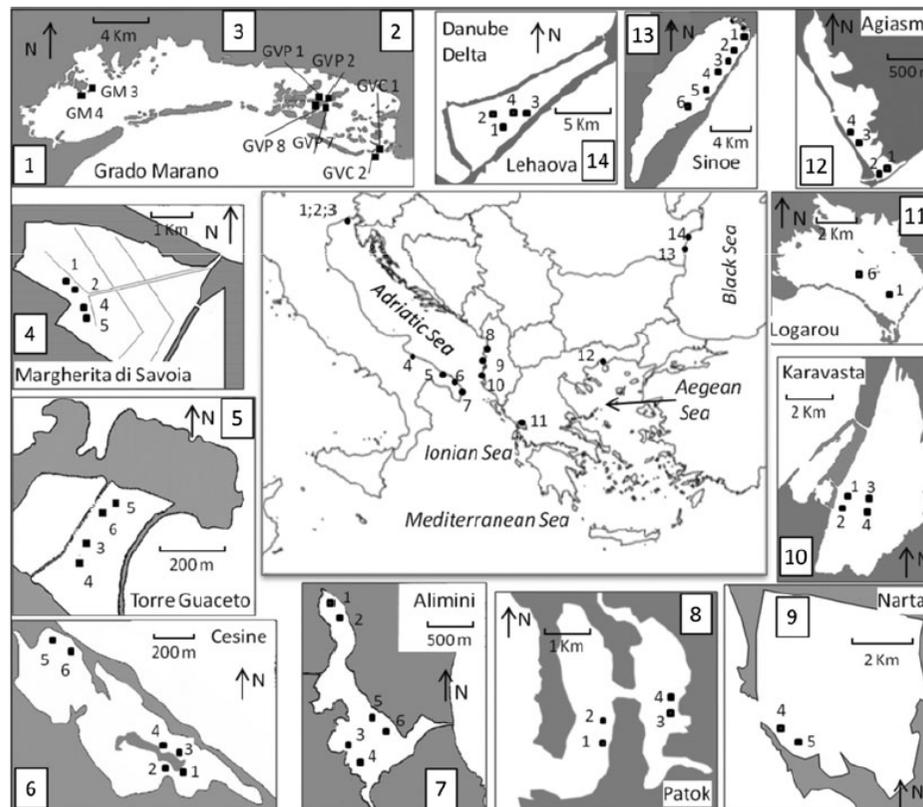
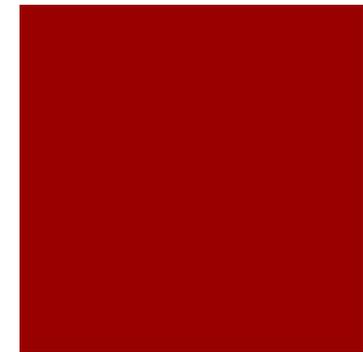
Pressure assessment/mapping



Pressure assessment/mapping



Ecological status assessment and tool development

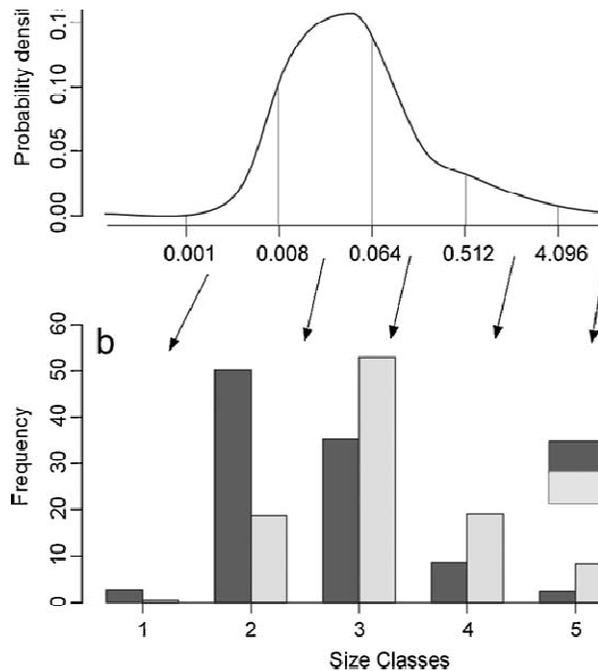


A new multi-metric index
Has been developed
and tested
in the Adriatic-Ionian region

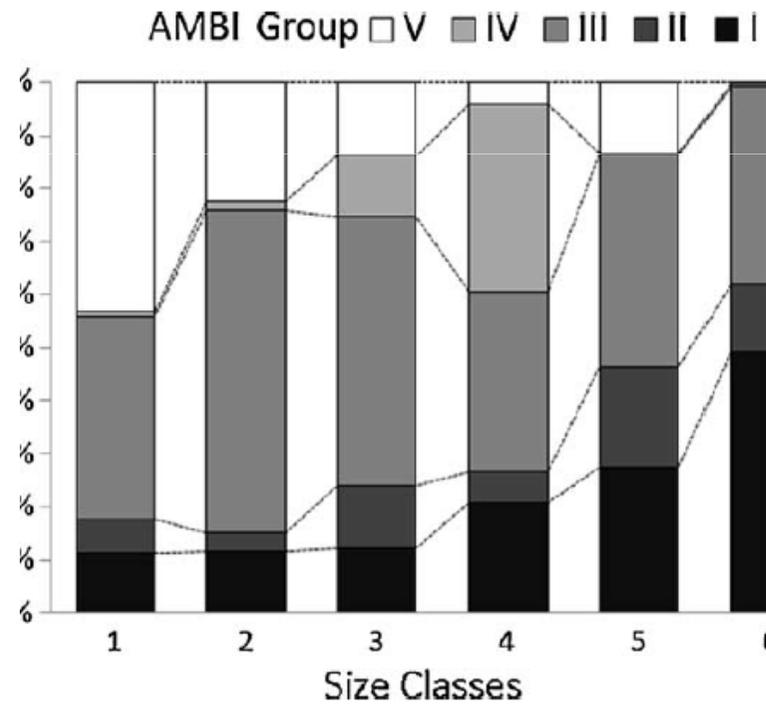
Ecological status assessment and tool development



ISS metric, based on size class abundance and

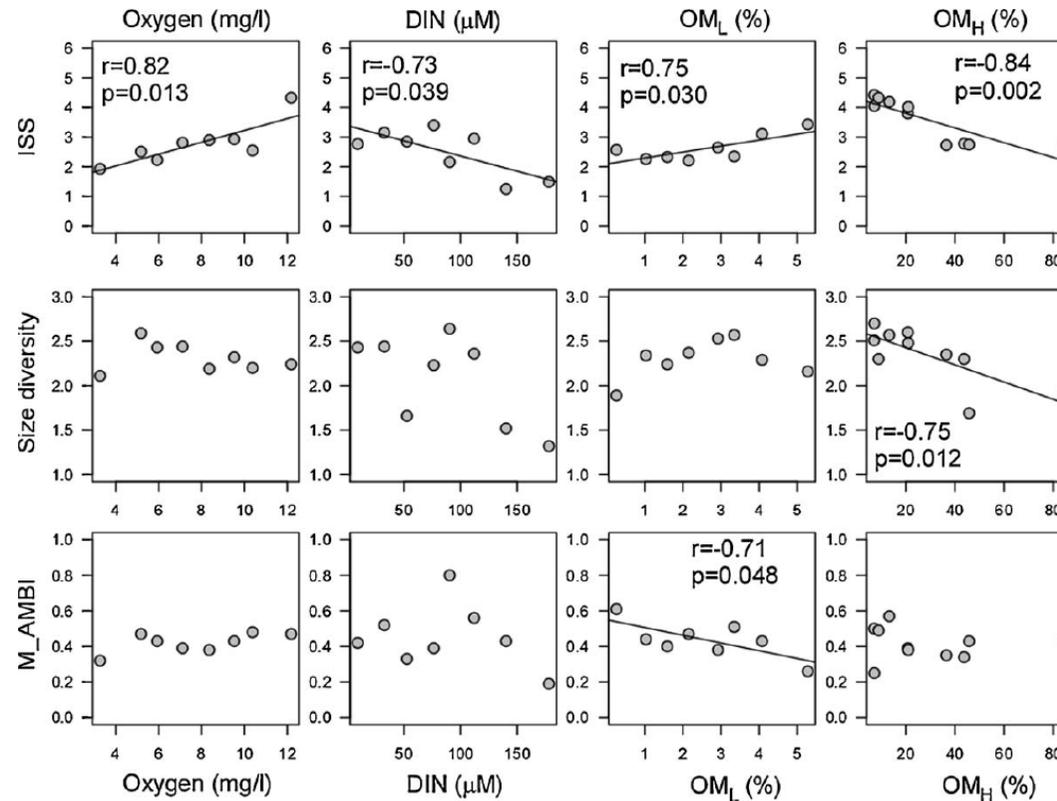


Size class sensitivity

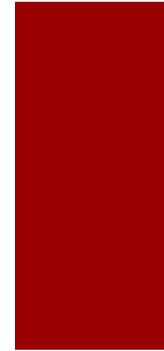


Ecological status assessment and tool development

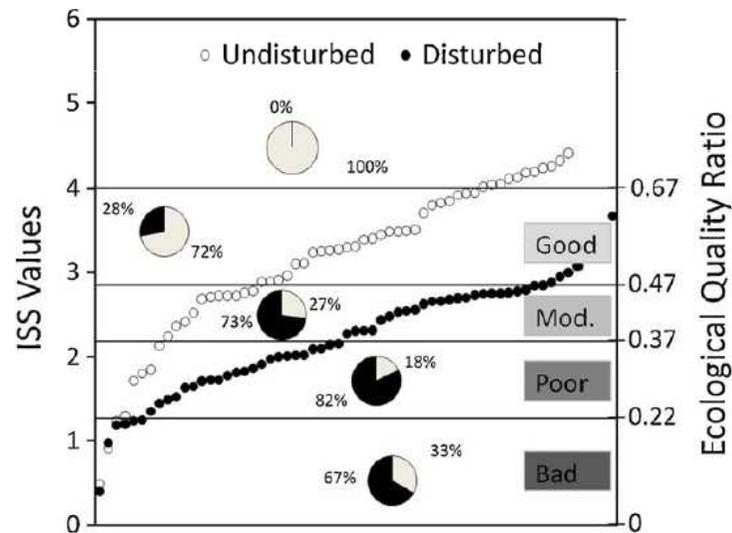
Tested the dose-response relationships with main abiotic pressures



Ecological status assessment and tool development



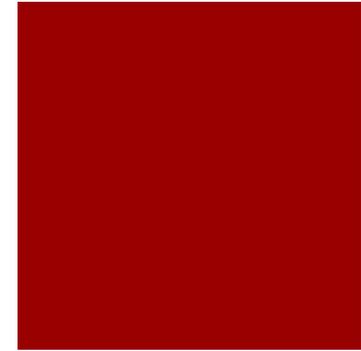
Developed classification



Performed classification

	Type A		Type B1	Type B2	Type C
	Standard	New			
Reference lagoons/lagoon area					
Agi	Moderate	Moderate	Moderate	Good	Good
Ali	Good	Good	Good	Good	Good
Ces	Good	High	High	High	High
GM	Moderate	Good	Good	High	High
GVC	Moderate	Good	Good	Good	Good
GVP	Moderate	Good	Good	Good	Good
Kar	High	High	High	High	High
Lea	Moderate	Good	Good	High	High
Log	Moderate	Good	Moderate	Good	Good
MdS	Good	High	Good	Good	Good
Narta	Good	High	Good	Good	Good
Patok	High	High	High	High	High
Sinoe	Moderate	Good	Good	Good	Good
TG	Moderate	Good	Good	Good	Good
Disturbed					
GM	Poor	Moderate	Good	Good	Good
GVP	Moderate	Moderate	Moderate	Moderate	Good
Log	Poor	Moderate	Moderate	Moderate	Moderate
MdS	Moderate	Good	Moderate	Moderate	Moderate
Narta	Moderate	Moderate	Moderate	Moderate	Moderate
Vama	Poor	Moderate	Moderate	Moderate	Good

Data Platform development: Transitional Water Platform



IT TW data Platform

↓
Built upon

↓
Public sources

- ✓ Google maps;
- ✓ Country official maps
- ✓ Institutional websites
- ✓ EEA, ECOSTAT,
national EPAs,...
- ✓ Published ISI paper
- ✓ Grey literature

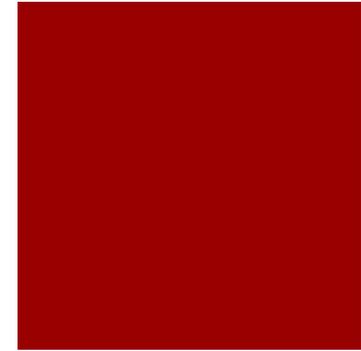
↓
Synergic with

↓
Existing TW Platforms

- ✓ Elnet TWP;
- ✓ TWReferenceNET TWP

Existing DBs

Data Platform development: Transitional Water Platform



IT TW data Platform

↓
Built upon

↓
Public sources

- ✓ Google maps;
- ✓ Country official maps
- ✓ Institutional websites
- ✓ EEA, ECOSTAT,
national EPAs,...
- ✓ Published ISI paper
- ✓ Grey literature

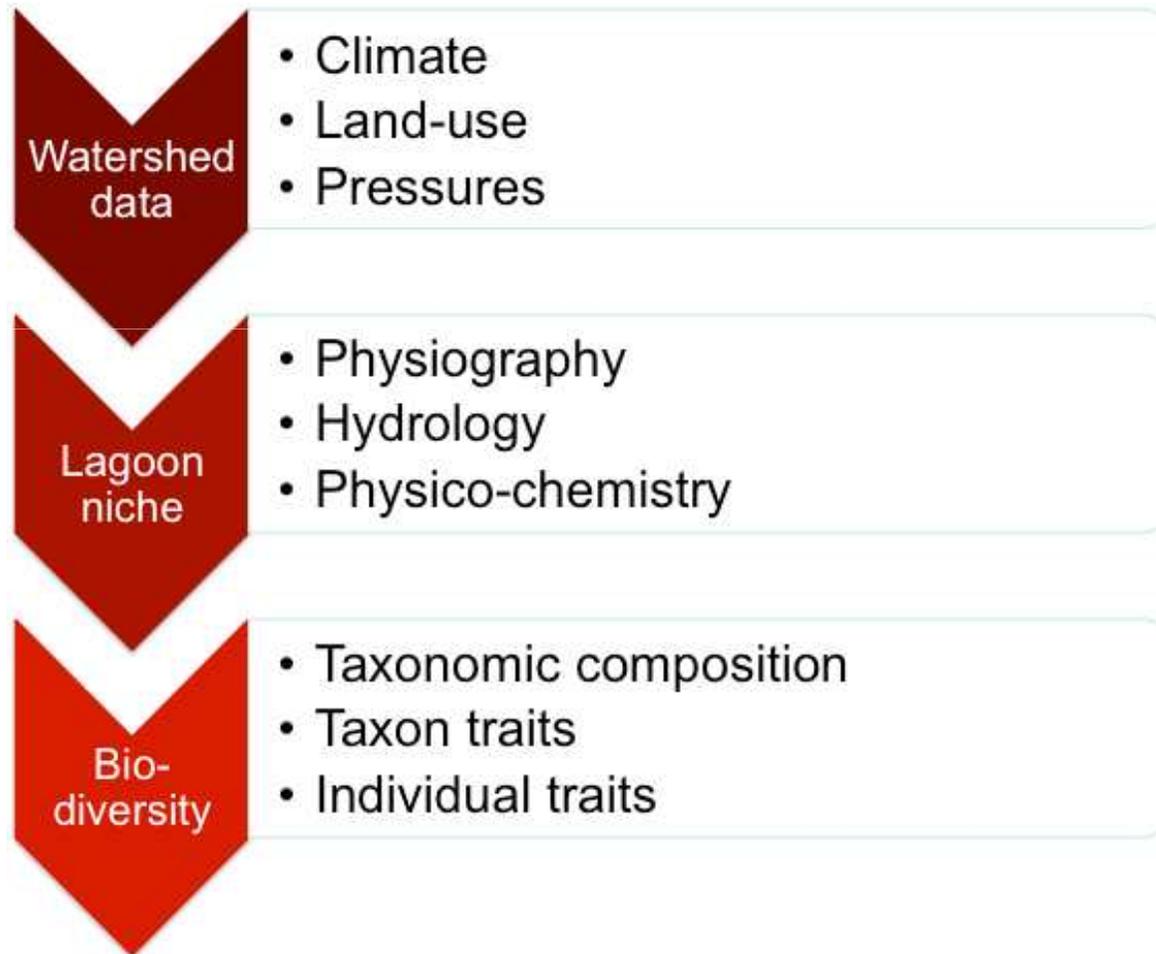
↓
Synergic with

↓
Existing TW Platforms

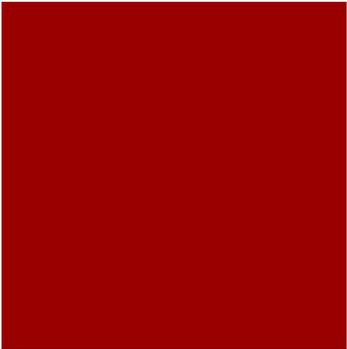
- ✓ Elnet TWP;
- ✓ TWReferenceNET TWP

Existing DBs

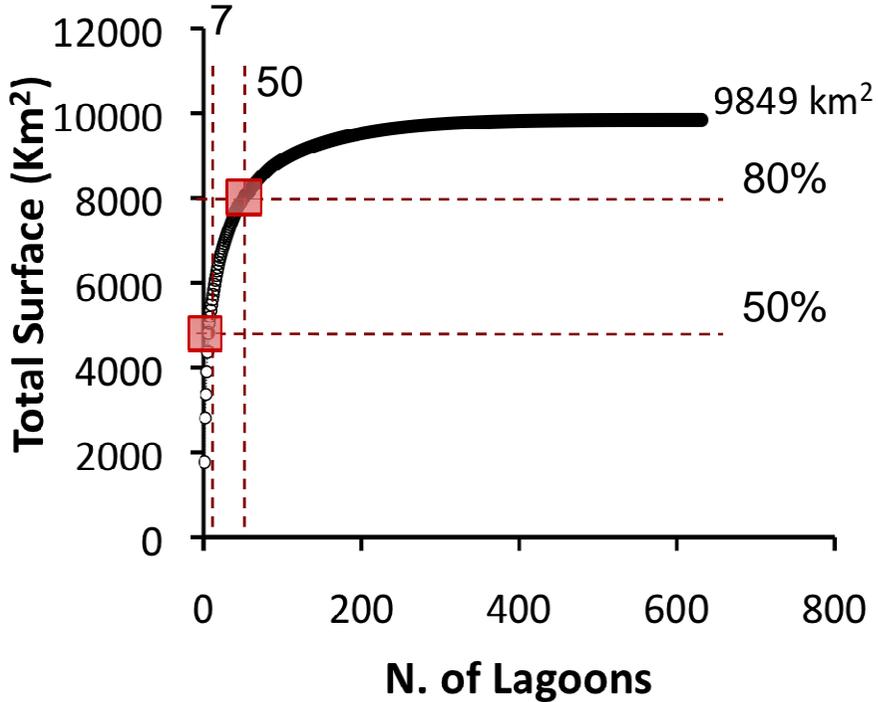
Data Platform development



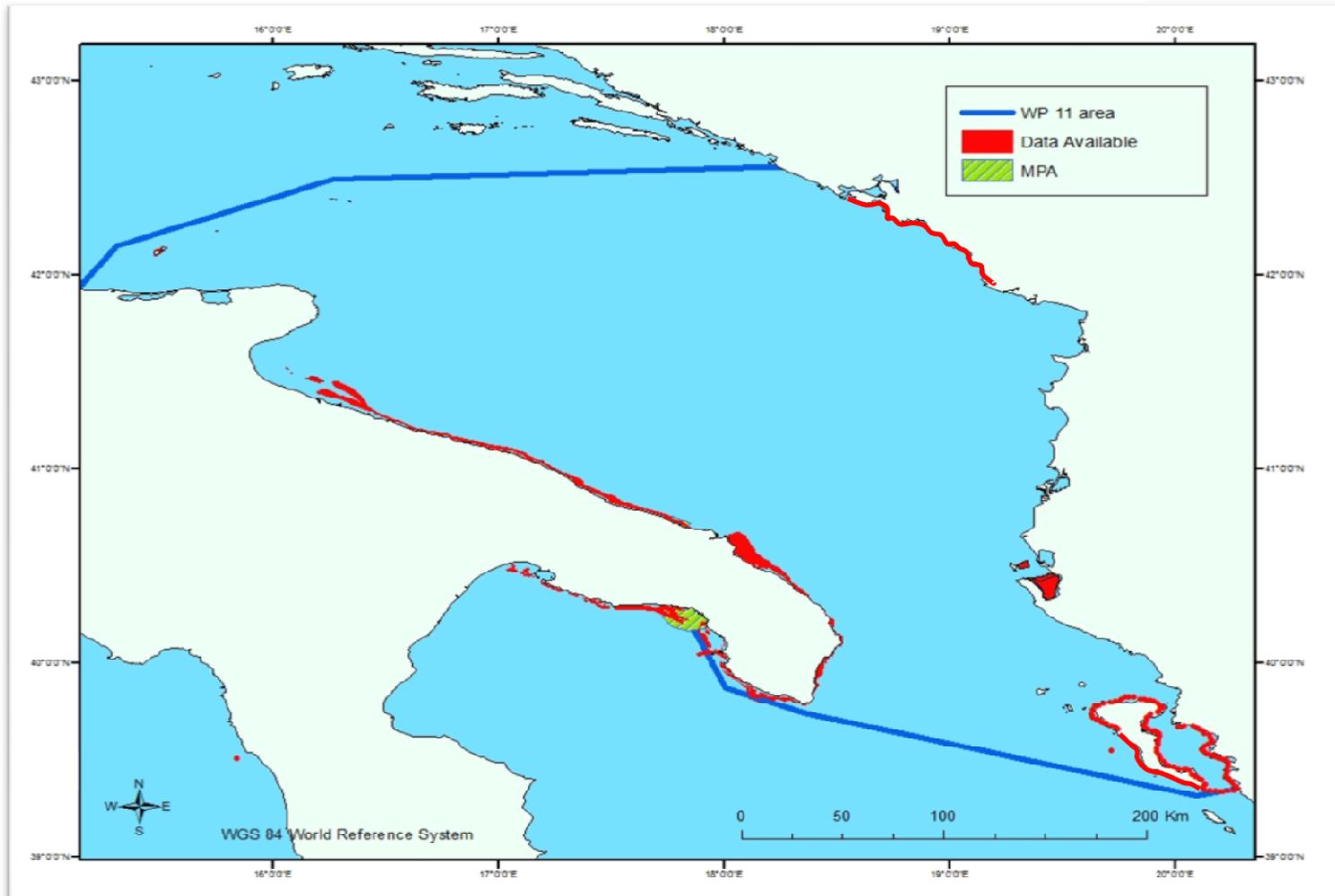
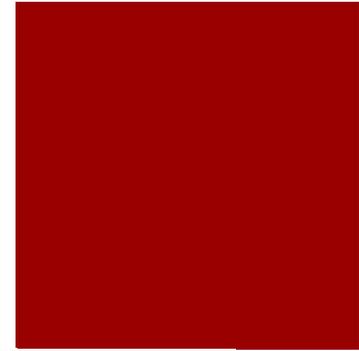
Data Platform development



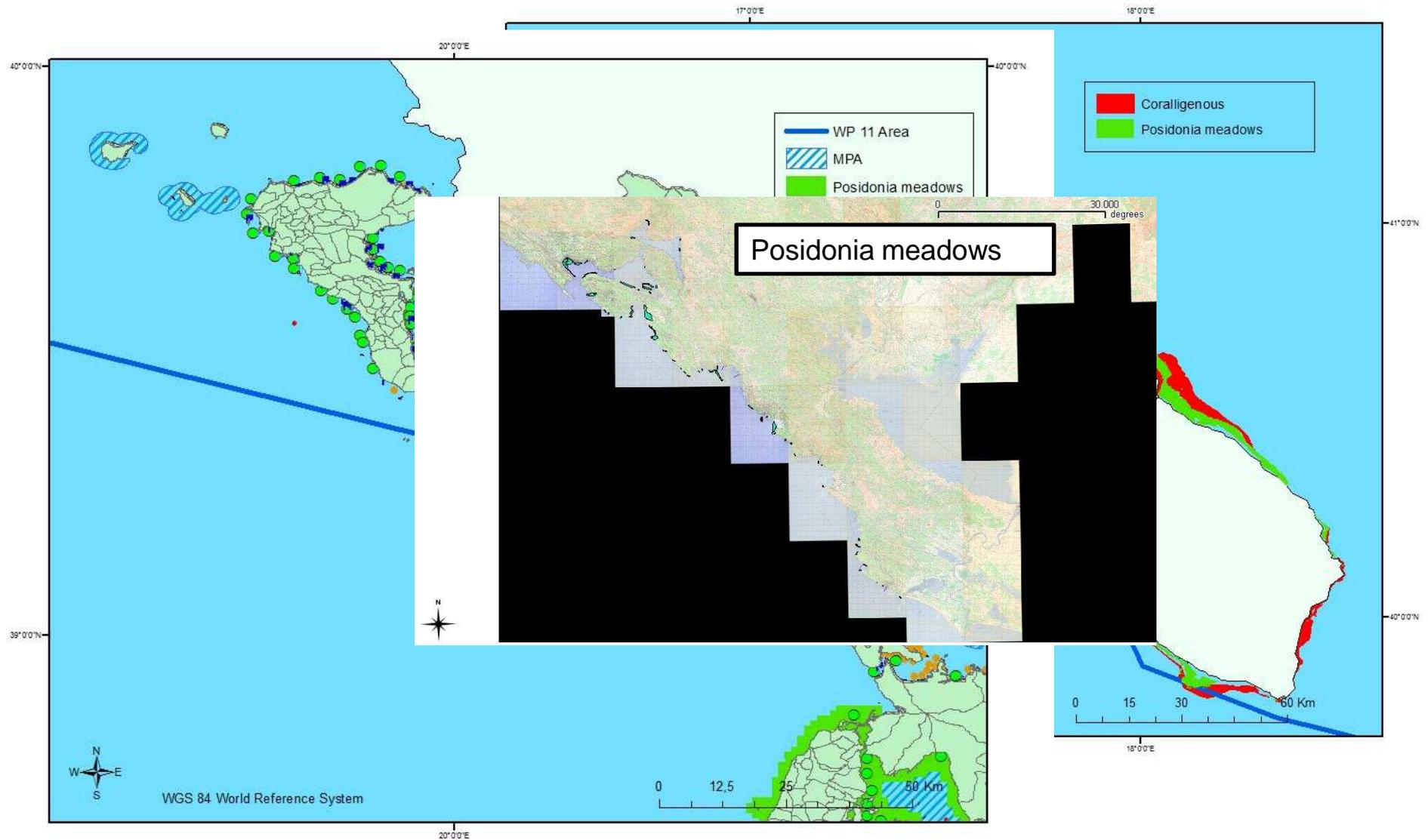
	Country	N. of Lagoons
E	Spain	116
E	France	59
E	Italy	244
E	Slovenie	4
E	Croatie	10
E	Montenegro	3
E	Albania	16
E	Greece	36
As	Turkey	66
As	Syria	2
Af	Egypt	7
Af	Lybia	16
Af	Tunisia	28
Af	Algeria	13
Af	Marocco	12
	Grand total	632



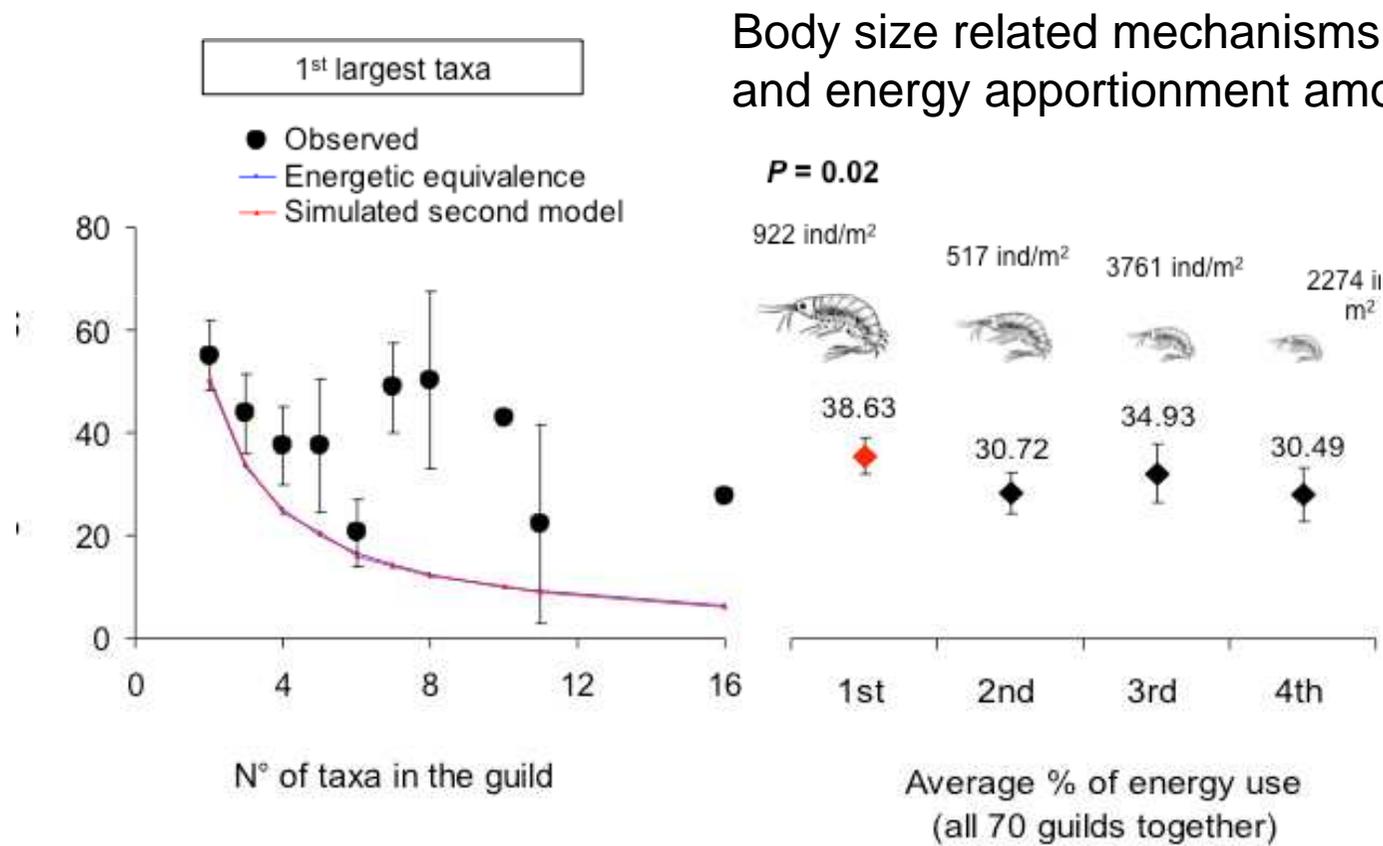
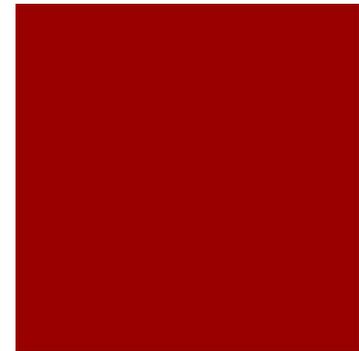
Habitat mapping: the CoCoNet project



Habitat distribution & mapping

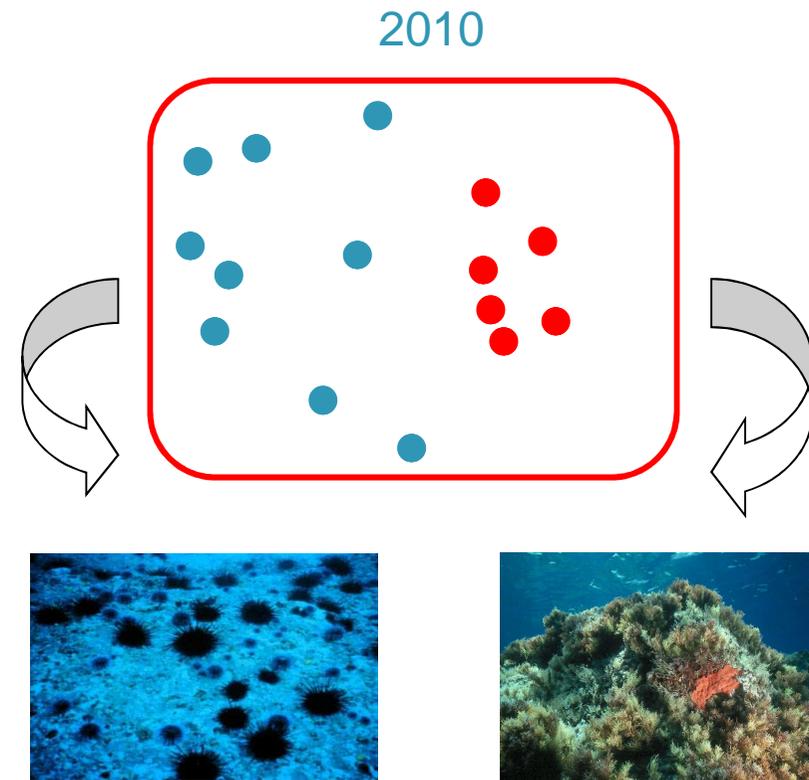


Biodiversity patterns, drivers and mechanisms



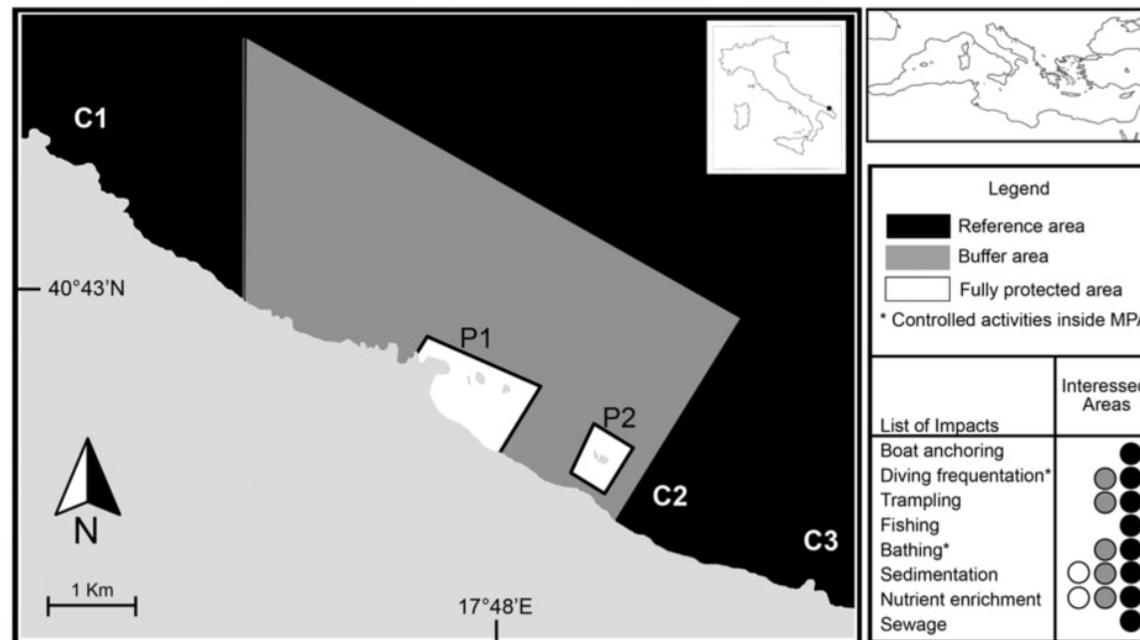
Biodiversity patterns, drivers and mechanisms

- Top down control of biodiversity
- Field experiment in the Torre Guaceto protected area

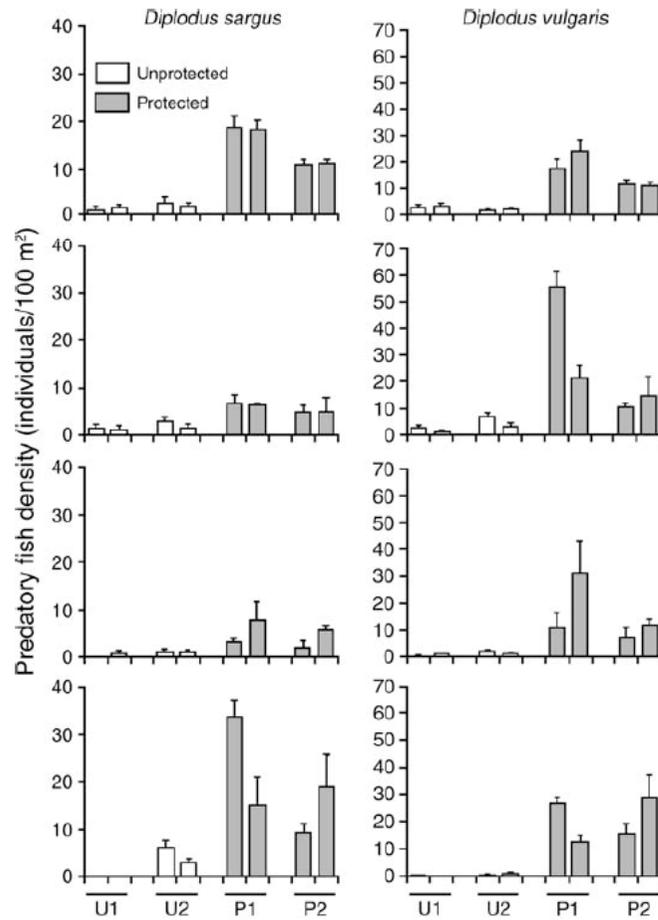
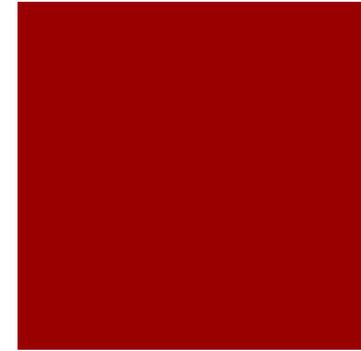


Ecosystem service assessment

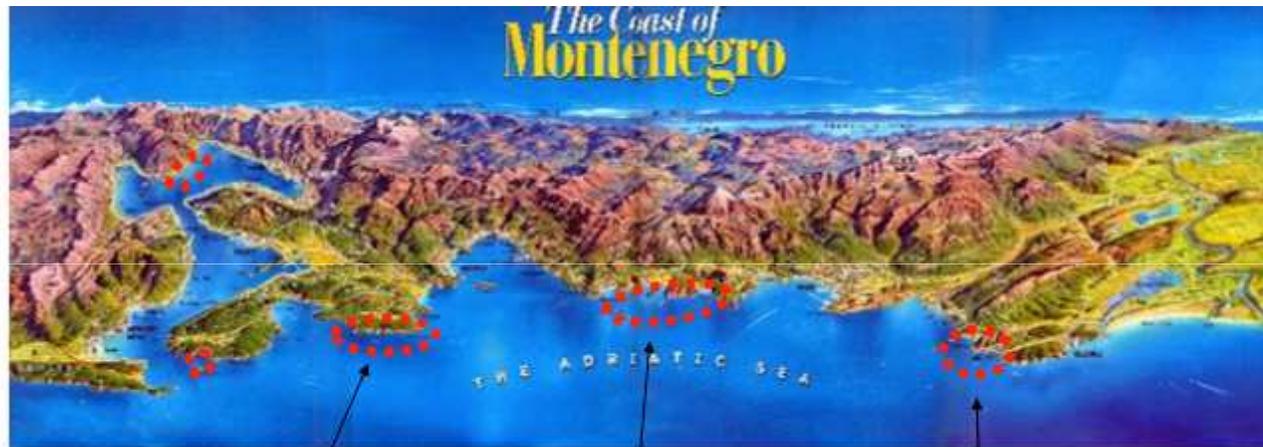
- The MPA of Torre Guaceto (Brindisi), instituted in 1991 and embedded into a human-dominated landscape, is a rare example of well-managed MPA where an adequate enforcement determined target fish recovery



Ecosystem service assessment



Protected area management (planning)



The CoCoNet Project

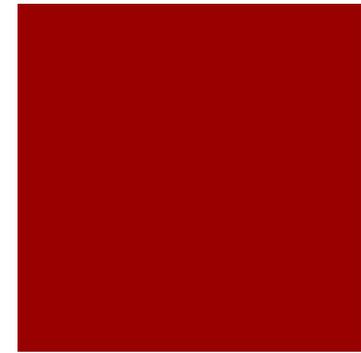
Their establishment of MPA in Montenegro is planned until the end of 2012.

cape Platamuni
(to the Žukovica bay)

island Katič area

island Stari Ulcinj
(to the Valdanos bay)

Protected area management (planning)

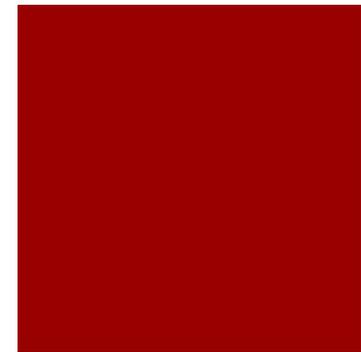


**Karaburuni Peninsula – Sazani Island (Adriatic and Ionian seas),
the first MPA in Albania (since April 2010)**



The CoCoNet
Project

Protected area management (planning)



It is **time** to move from words to **action**

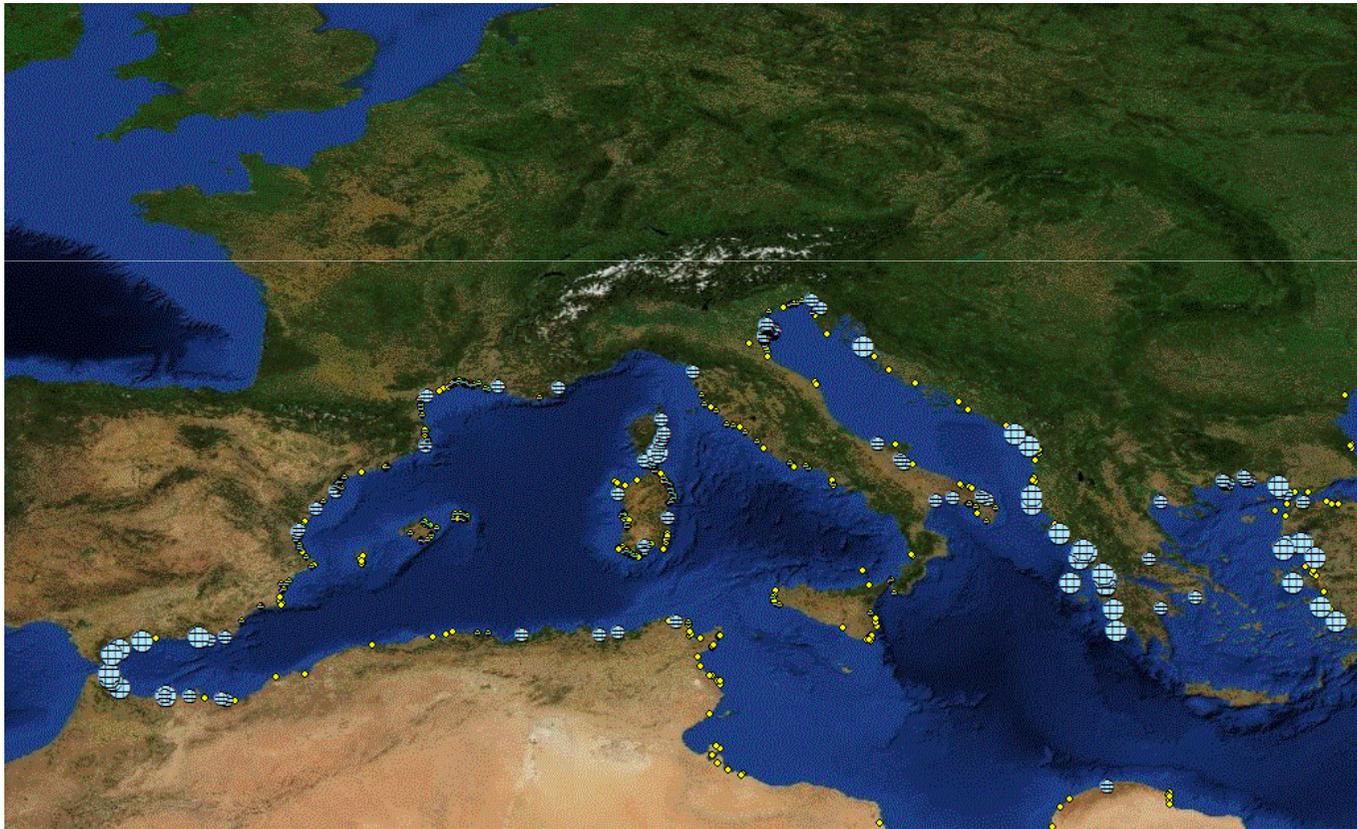
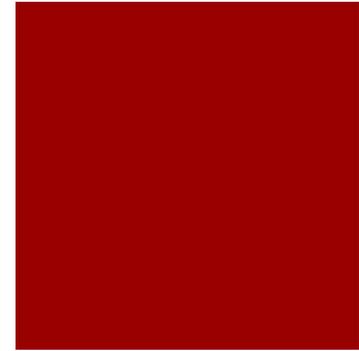
Il manuale di gestione e-book presenta molte azioni per l'obiettivo del countdown 2010 : sfogliamo le pagine più significative.



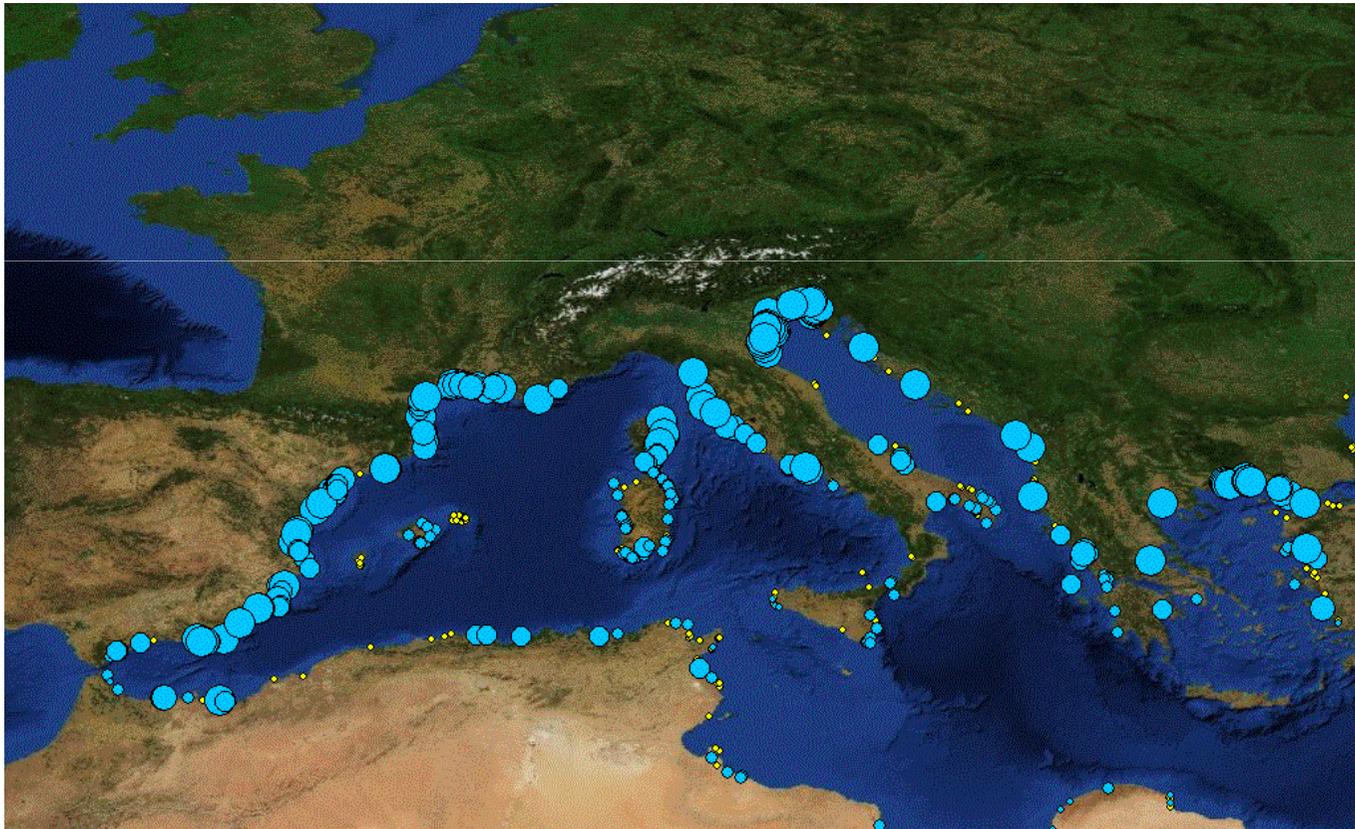
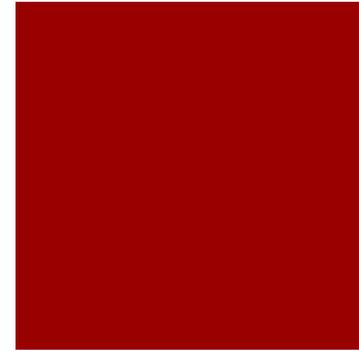
The e-handbook for the management of TW protected area contains many actions of the 2010 C.down: we can leaf through the more significant pages

TW
Project

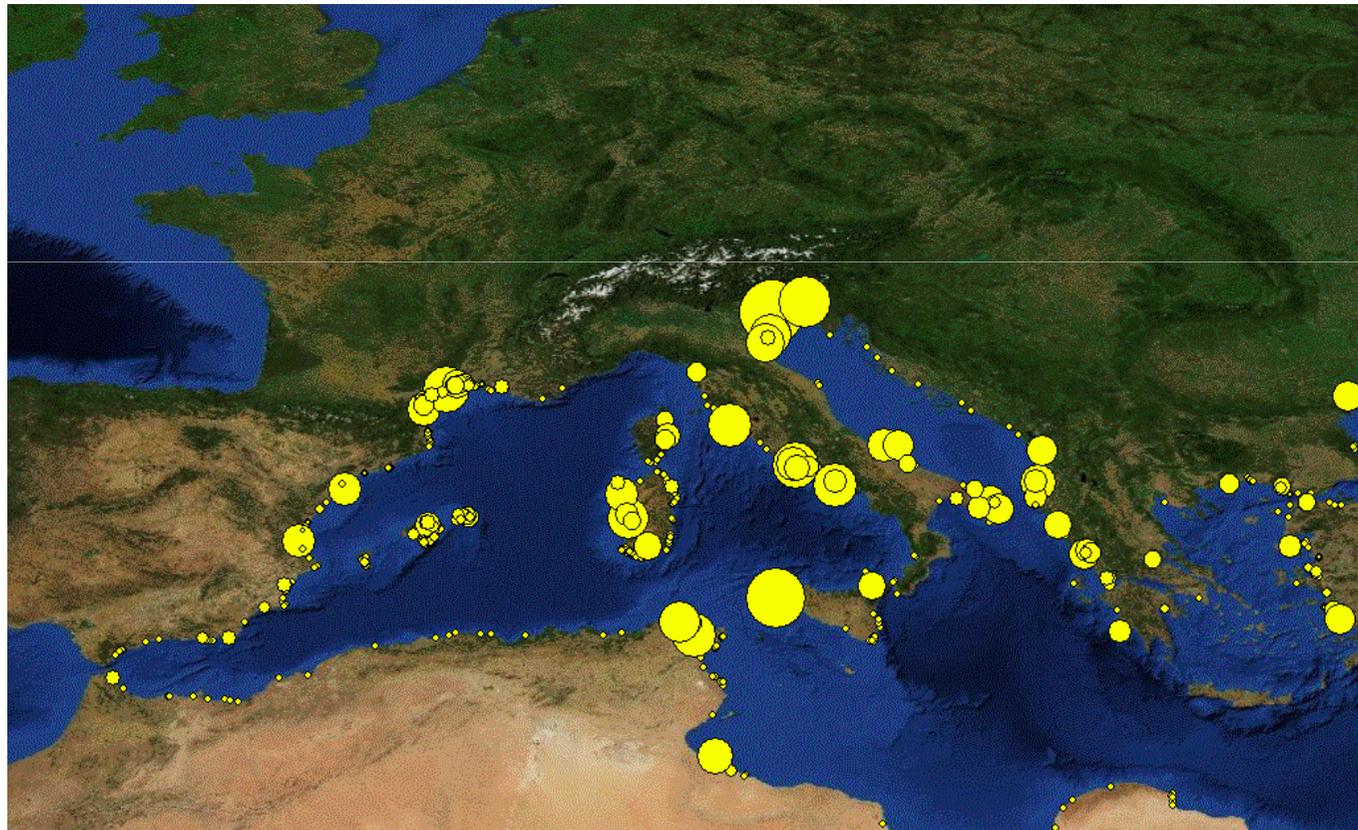
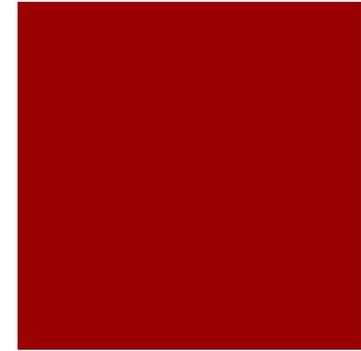
Scenario building : decreasing rainfall



Scenario building : increasing winter temperature



Scenario building : macroinvertebrate hotspots



Biodiversity is life
Biodiversity is our life

