

A photograph of a seahorse, likely a Hippocampus species, camouflaged among dense green seagrass blades. The seahorse is light brown and yellowish, blending in with the surrounding vegetation. The background is a deep blue, suggesting an underwater environment.

MISMANAGEMENT OF THE NATURA 2000 SITES IN GREEK WATERS URGES FOR EFFECTIVE AND PARTICIPATORY MARINE SPATIAL PLANS

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Demands for increased levels of protection for ecosystems are being translated into modes of spatial governance at national, regional, and local scales.

The Habitats Directive (HD, 92/43/EEC) forms a major cornerstone of Europe's nature conservation policy and is built around two pillars: the Natura 2000 of protected sites and the strict system of species protection.

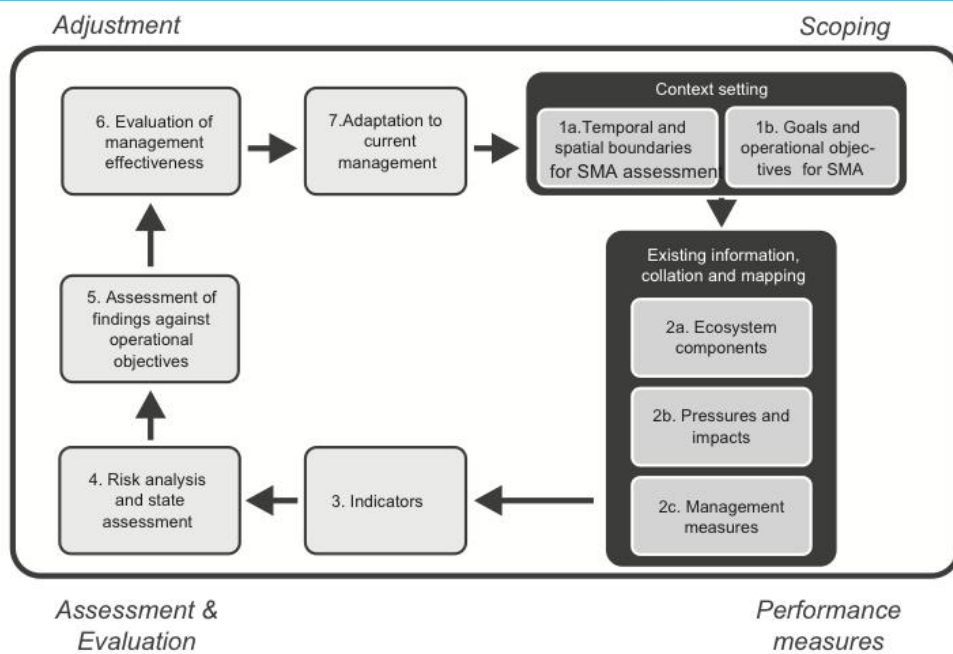
NATURA 2000 implementation has been connected with various problems and conflicts in member states.

The **major challenges facing ecosystem conservation** include:

- **habitat/species status degradation or even loss,**
- **competing human uses,**
- **market,**
- **policy and governance failures.**

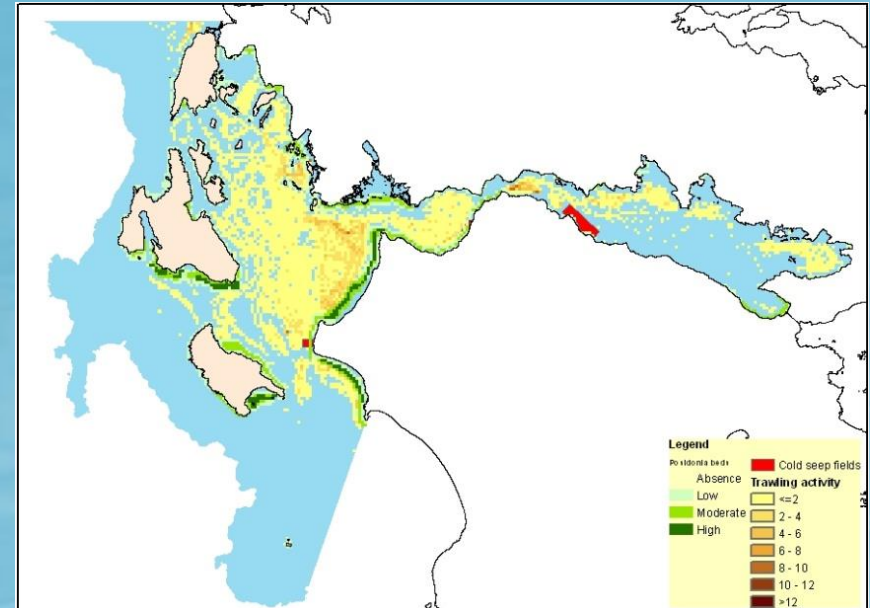
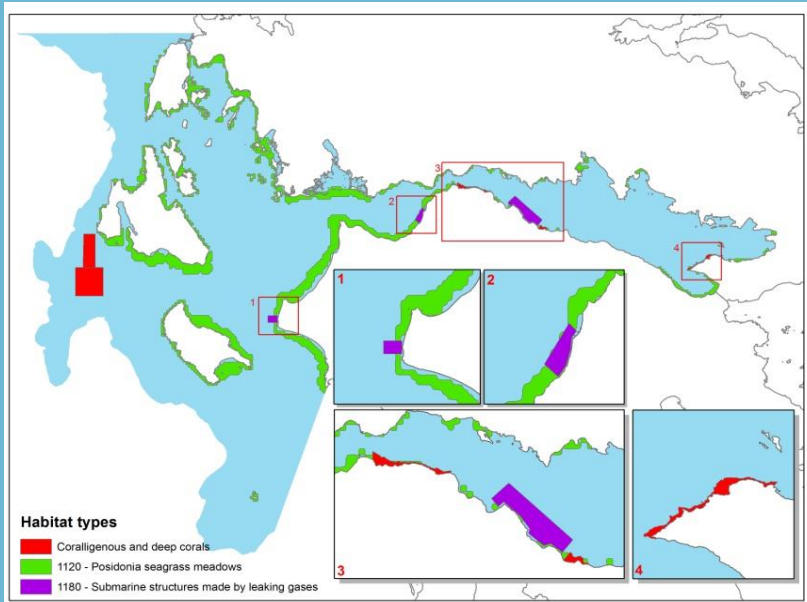
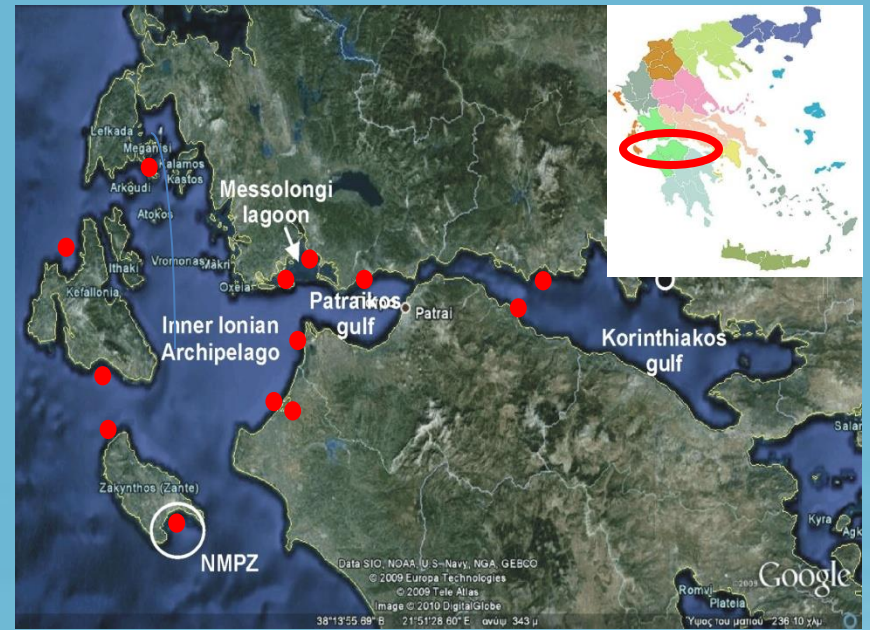
These challenges are connected; competing uses are immediate causes of degradation and are, in turn, driven by market, policy and governance failures.

- **Marine Spatial Planning (MSP)** is a promising tool that considers the existing **patterns of human uses** conflicting either among them, and/or with **conservation features**, and proposes mitigation of conflicts through adaptive management.
- The FP7 project “**MESMA**” (**Monitoring and Evaluation of Spatially Managed Areas (SMAs)**) has developed a **seven-step framework** for monitoring and evaluation of **SMAs** that was tested on nine case studies.



Source: Stelzenmüller *et al.*, 2012

The Greek CS area includes the Inner Ionian Archipelago and the gulfs of Patraikos and Korinthiakos covering a marine space of 2500 km².



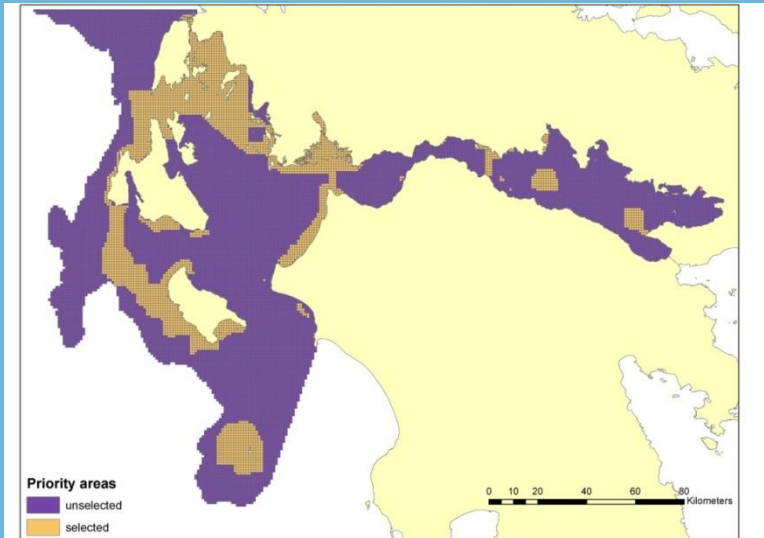
Spatial distribution and extent of conservation habitats

Source: Issaris *et al.*, 2012

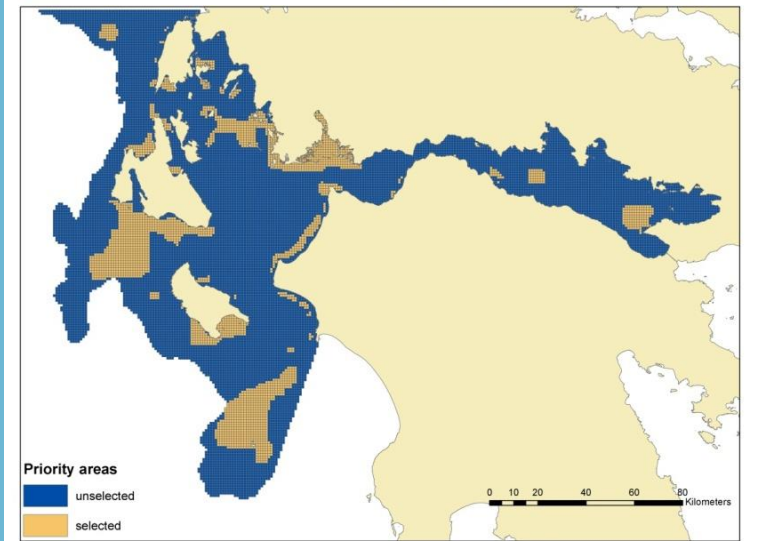
Trawling pressure on the sea bed.

Source: MESMA Deliverable 3.3

The application of a **systematic conservation planning tool *Marxan***, setting targets of 60% for high priority conservation features and 20% for lower priority features, and by forcing:



1. the selection of all Natura 2000 sites (*scenario A*), the best solution accounted for 24% (3646 km²) of the study region



2. the selection of National Parks only (**scenario B**), the best solution accounted for 18% (2720 km²) of the total area

Source: Giakoumi *et al.*, 2012

This study focuses on three marine Natura sites:



1. The “**Laganas Bay**” in the island of Zakynthos (code GR 2210002), which has also the status of a National Marine Park, designated for the protection of the breeding grounds of the species loggerhead turtle (*Caretta caretta*).
2. The “**Kalogria-Kylini**” (code GR 2330007) designated for the conservation of large meadows of the seagrass *Posidonia oceanica*.
3. The “**Inner Ionian Archipelagos**” (code GR 2220003) designated for the conservation of certain dolphin populations, particularly the bottle-nosed dolphin (*Tursiops truncatus*) and the common dolphin (*Delphinus delphis*).

Case Study 1. The Natura site “Laganas Bay”



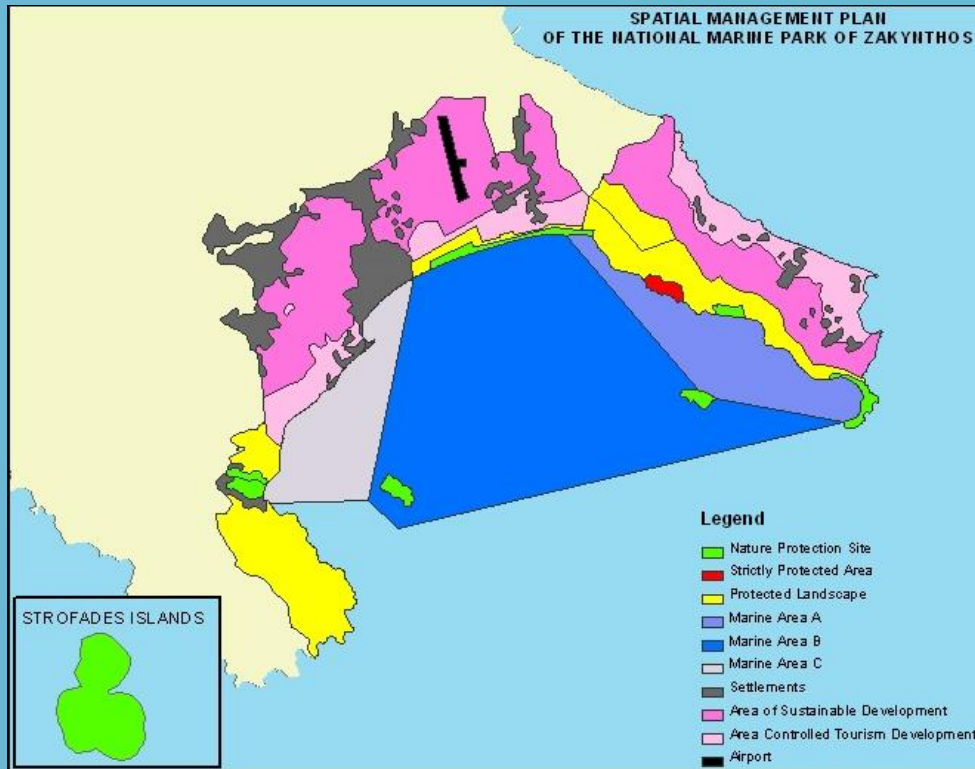
Conservation threats on loggerhead turtle nesting beaches were mainly linked to tourist development.



Certain disturbances appeared also to arise by seal watching via daily cruises around breeding caves of Mediterranean monk seals, as well as by tourist boats anchors scraping seagrass bottoms



Case Study 1. The Natura site “Laganas Bay”



In response to those threats, **the National Marine Park of Zakynthos** was established in 1999 and zones of different activities were clearly described under a specific legal framework.

A Management Body was appointed and funding has been provided on a regular basis.

Promotion of eco-tourism.

Recent studies show that **the implementation of the HD is working well and a high level of environmental protection is maintained.**



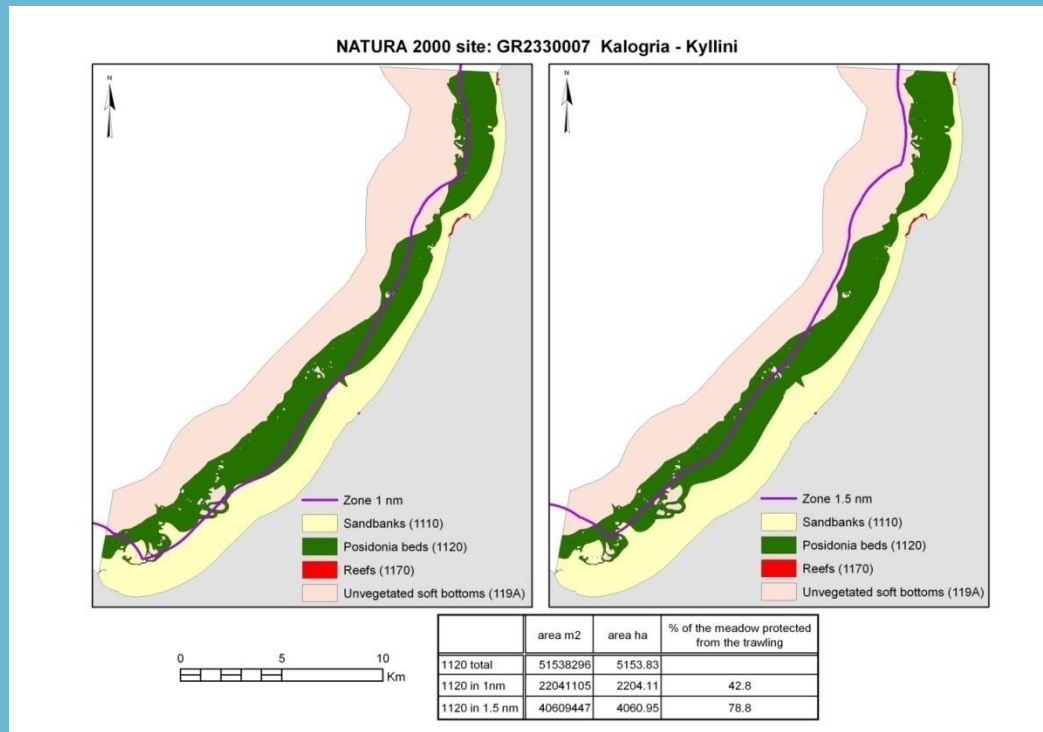
Case Study 2. The Natura site “Kalogria-Kylini”

Trawling activity is banned on sea-grass meadows. However illegal trawling was documented, while agricultural run-off seemed to have a further negative impact.



Although the area was designated as a Natura site specifically for the preservation of sea grass beds, neither the establishment of a management plan nor the adoption of management measures took place.

Case Study 2. The Natura site “Kalogria-Kyllini”



Since August 2011 bottom trawling became legal at a distance beyond 1.5 nm from the coast, harmonizing the Greek law with the EU regulation 1967/2006.

The implementation of the **fishing regulation may favour the conservation** of a large part (78,8 %) of the *Posidonia* meadows in this area.

The success of this measure on the protection of these priority habitats depends on effective enforcement that will ensure compliance by trawl fishers.

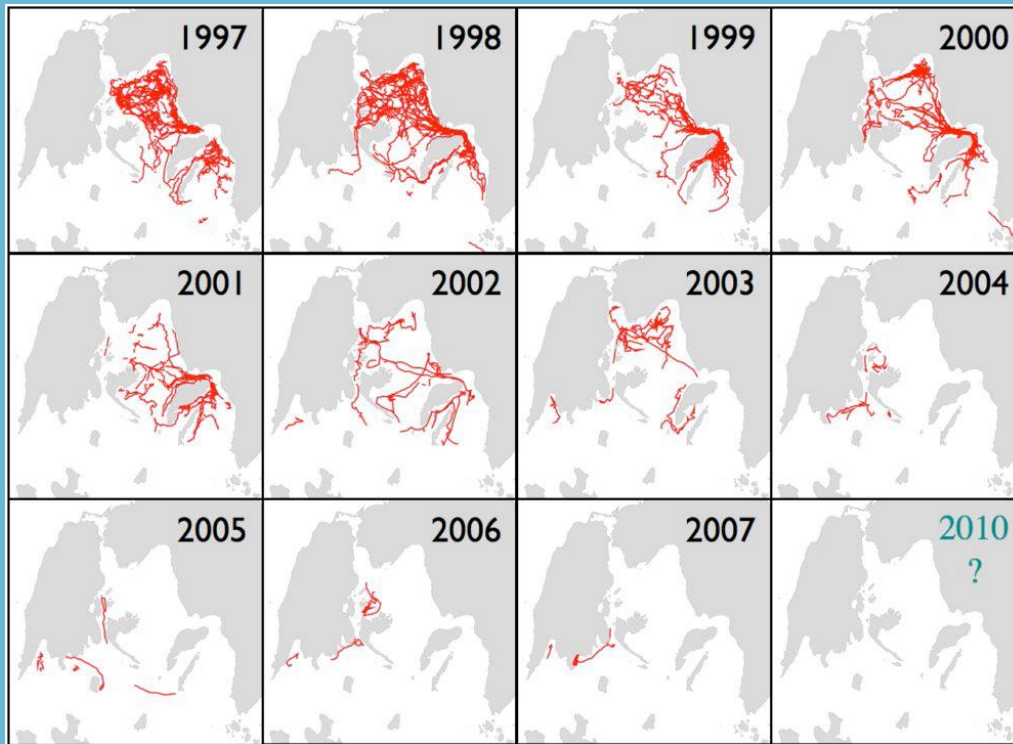
Case Study 3. The Natura site “Inner Ionian Archipelagos”



It is characterized as a Site of Community Importance under the Habitats Directive and as an Area of Conservation Importance under the 2002 Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS).

Although the area was designated as a Natura site specifically for the preservation of dolphin populations, neither the establishment of a management plan nor the adoption of management measures took place.

Case Study 3. The Natura site “Inner Ionian Archipelagos”

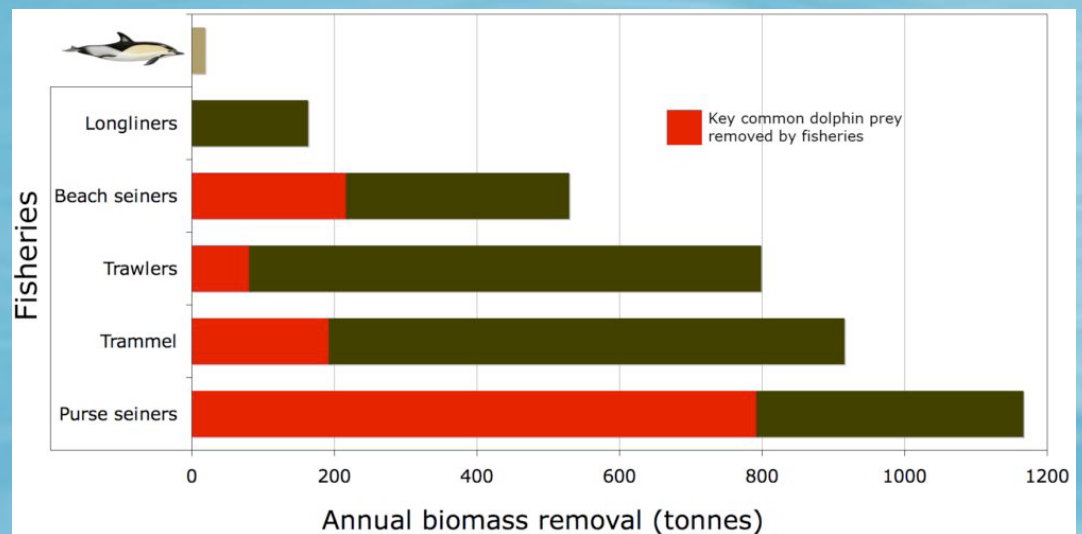


A recent dramatic decline of the latter species in the area; within slightly over a decade, the total numbers of recorded individuals dropped from 150 down to a mere 15.

Source: Bearzi *et al.*, 2008

This decline is due to depletion of small pelagics, a key prey species for the common dolphin, caused by overfishing.

Source: Gonzalvo *et al.*, 2010



Concluding remarks

In the 1st case, the Natura site of Laganas Bay coinciding with the National Marine Park of Zakynthos, there is a clear management plan, an active Management Body, well-established mechanisms between the central government and local stakeholders, and increased public awareness, which favor achievement of conservation objectives.

Budgetary problems and cost-cutting are important, and the search for extra funding is a necessity.


Management funds primarily arises from domestic government budgets. However, new sources of funding ie. transactions, involving consumer goods and recreation ecosystem services, under the umbrella of eco-tourism, have an important role in generating income for the park.

The other two case study areas constitute “paper parks”

- No management plans /management body
- Lack of funding
- Lack of public awareness

Natura sites contribute to the provision of **ecosystem goods and services**, a great number of which are **non-marketed** and therefore largely ignored in management decisions to date.

Alternative forms of governance, such as community management, are needed by involving key stakeholders and the local society in the process, to achieve a common understanding of basic structure, functions and needs for protection.

 This may enable the development of effective and widely acceptable spatial plans, balancing trade-offs between conservation and socio-economic objectives.



Thank you for your attention!