



CONNECTING PEOPLE AND PLACE: AN EXCHANGE ON BIOCULTURAL INDICATORS







COMANAGEMENT OF THE AL HOCEIMA MARINE PROTECTED AREA, THROUGH THE SYNTHESIS OF LOCAL BIOCULTURAL KNOWLEDGE AND PRECISE EX SITU KNOWLEDGE MEASUREMENT METHODS



ODYSSEA

CDB Conference

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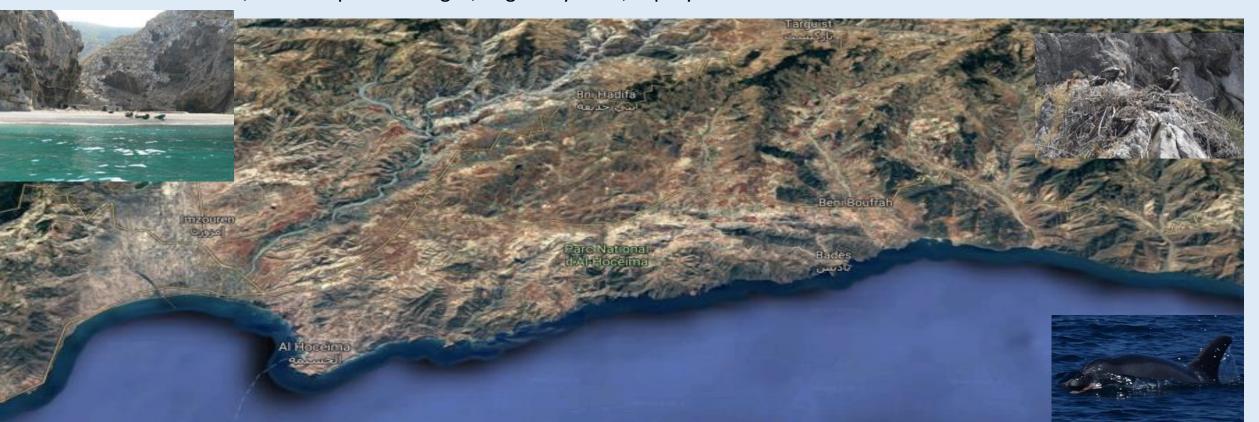


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AL HOCEIMA NATIONAL MARINE PARK OBSERVATORY

- Al Hoceima National Marine Park (48000 Ha, including a sea area of 19600 Ha), is one of the most representative Mediterranean biotope for its high biodiversity
 - It is Home to several rare and endangered species listed on the IUCN Red List
 - It contains the Mediterranean's largest population of osprey and a reserve of red coral
 - It is home to 3 varieties of **dolphins**, 69 species of birds and hosted the last population of monk seals (disappeared since 2003), rays and sea **turtles**.
 - It is also, home to pink flamingos, migratory birds, ospreys.









- Traditional fishing is one of the major economic incomes for precarious local people
- Rapid demographic enhanced pressures on the marine environment and the use of illegal fishing activities
- Sector weakened by the lack of an appropriate infrastructure, the decrease of the fish stock and the lack of organization of artisanal fishermen
- Lack of a true local management system based on respect for community biocultural knowledge, that's essential to cope with global changes,
- yet these in situ socio-ecological systems are often not respected and ignored at either national or global level.



SOLUTIONS :TRADITIONAL FISHING KNOWLEDGE REINFORCEMENT

- AGIR facilitate the identification analyse crucial problems
- Implicate local community in solutions that take into account ecological and sociocultural in term of Vision & goals objectives threats factors
- Training through Nomenclature of the indicators & participative planification
- Allows feedback in a transversal approach, linking end users from local, national and global initiatives frameworks.



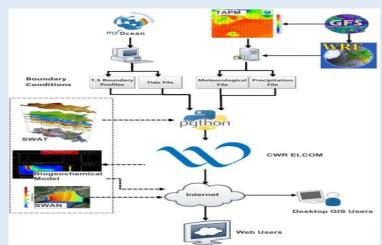
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MONITORING AND EVALUATION ARE ESSENTIAL TO ENSURE INNOVATIVE, MULTI-SCALE AND INTERDISCIPLINARY APPROACHES TO ACHIEVE EFFECTIVE SUSTAINABILITY

- Biocultural approaches, combined with measures of indicators trough methods of synthesis based on evidence from multiple sources, such as the ODYSSEA Project
- Example: "Operating a network of integrated observatory systems in the Mediterranean Sea", which links nine Mediterranean and European regional technological observatories, made up of 31 academic, scientific and non-governmental institutions including AGIR.







AGIR IS HELPING TO ADOPT INNOVATIVE POLICIES AND MANAGEMENT TO REDUCE THREATS

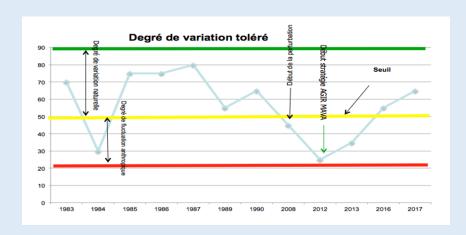
- Project links the provision of services to local users, according to a socio-ecological system;
- Biocultural approach to development indicator; Wellbeing / Governance Resilience
- By adopting policies and management that recognize In situ and Ex situ knowledge; strategies has been synthesized, which has reduced several threats and even eradicated dynamite fishing (especially since it is ancestral) within Al-Hoceima National Park.





 Indicators mesure from ODYSSEA will help more **Adaptive** management inspired by the CMP allowed us to measure and monitor since 2012 to 2018;

ECOSYSTEMIC APPROACH: BIOLOGICAL RESULTS **CHAINS & WELBEING IMPACTS**





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	TO	Moyen	Moyen	Moyen		Moyen			Moyen	Milan noir			LOW					LOW
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n/2018/10/rapport-scientifique-	lons imé des ements des	Elevé	Elevé	Elevé	Moyen	Elevé	Moyen	Faible	Elevé	Chalutage dans les zones peu profondes	Medium	Medium	Medium		Medium	Medium		Medium

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LOCAL COMMUNITY ACCOMPAGNED NOT ASSISTED

- Indicators should be developed in multi-stakeholder participatory approach:
 - Local community, resource managers, scientists and decision-makers
- Indicators should be defined, classified (Type), designed, implemented, measured assessed with local community
- Indicators must reflect a combined assessment of biologic evolution and community wellbeing
- Co-management means that Science should be at the service of the Local knowledge of the community