

decisionali. Inoltre il progetto permetterà agli enti partecipanti di rafforzare la cooperazione internazionale, di condividere conoscenze e competenze, e di accrescere le capacità necessarie per assicurare appropriate strategie gestionali.

Qualora il Comune di Aglientu aderisse alla richiesta di partecipare in qualità di partner associato, con il Sito di Interesse Comunitario ITB010006 Monte Russu come caso di studio, l'amministrazione beneficerà di un quadro di conoscenze dettagliate e utile per l'appropriata gestione del territorio. Inoltre sarà fornita una base dati di riferimento rispetto alla quale potranno essere valutati nel tempo i risultati delle misure gestionali eventualmente adottate, nonché i protocolli di monitoraggio necessari.

Si specifica che il coinvolgimento nel progetto in qualità di Partner associato non comporta alcuna contributo finanziario per il Comune di Aglientu. Il Partner associato partecipa in qualità di beneficiario dei risultati del progetto e può essere coinvolto alle riunioni di progetto e alle attività da realizzare localmente con spese a carico di uno dei partner del progetto. Le spese sostenute da tali organismi dovrebbero in linea di principio essere limitato al rimborso delle spese di viaggio e di soggiorno legate alla loro partecipazione alle riunioni di progetto.

Certi della Vostra attenzione, e di quella della Giunta Comunale e dell'intera cittadinanza di Aglientu, per questa iniziativa, e sottolineando la nostra disponibilità per eventuali ulteriori chiarimenti, rimaniamo in attesa di una Vostra manifestazione di interesse al progetto PEMPAMED.

Cogliamo l'occasione per porgere i nostri più cordiali saluti.

Per il comitato organizzatore del MSW '15

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Interreg MED Programme (<http://interreg-med.eu/en/home/>)

Priority Axis 3: ENVIRONMENT Protecting and promoting Mediterranean natural and cultural resources

Specific objective (S.O.) 3.2. To maintain biodiversity and natural ecosystems through strengthening the management and networking of protected areas. The specific objective is strengthening capacities to adapt and improve protection measures in order to maintain the biodiversity of natural coastal and marine ecosystems. It includes a better integration of protected areas in regional development strategies and more intensive cooperation between Interreg MED regions (exchange of information, strategies, regulations...).

The result indicator: to increase the share of protected areas meeting their conservation goals and objectives (thanks to their improved management).

Main Focus:

1. To strengthen better integration of protected areas in national, regional and local territorial development strategies through awareness raising on protection of fragile areas, including generating policy-making and local communities associations support
2. To strengthen networking of protected areas through supporting more intensive cooperation between competent public authorities and key stakeholders
3. To improve monitoring, management and surveillance of protected areas through supporting scientific, technical and management knowledge base for the monitoring of pressures and impacts on ecosystems, including efficient governance of protected areas

PROJECT OUTLINE

Programme "Med" open call (deadline 02.11.2015): project idea on "Development of common strategies for enhancing the effectiveness of Mediterranean marine protected areas (Natura 2000 network) whose management and governance are weak".

I - GENERAL INFORMATION

Provisional Title: PEMPA-MED: from Paper to Effective Marine Protected Areas in the Mediterranean

No. of countries: min 4

No. of partners: max 8

Short description

Scientific data indicate that effective management of Mediterranean MPAs contributes to marine ecosystem protection, to fisheries and tourism enhancement and consequently to social and economic benefit increase. Nonetheless several environmental, socio-economic and management factors concur to the effectiveness of MPAs, and "paper parks" are widespread throughout the Mediterranean frequently due to lack of knowledge and management shortcomings. PEMPA-MED project aims at providing managers and policy makers with guidelines to enhance the effectiveness of conservation strategies, management measures and development policies in some Mediterranean protected areas and help them to shift from paper to effective MPAs. The final goal is to improve the conservation of coastal-marine habitats and species by improving their knowledge and identifying proper strategies to be suggested for their effective management.

Partnership

no. (max 8)	Partner	Short name	Country
1 Lead partner	Conseil Général du Var	VAR	France
2	International Marine Centre	IMC	Italy
3	Centre d'Estudis Avançats de Blanes	CEAB	Spain
4	Local Councils' Association	LCA	Malta
5	Public Institution Priroda	PRI	Croatia
6	Parc National de Port-Cros	PNPC	France
7	Univ. Thessaly	UTH	Greece
8	Generalitat de Catalunya		Spain

Other potential partners (associated/beneficiaries/consultant) and study areas

Regional Government of Sardinia	Italy	associated / beneficiaries
Municipality Barisardo	Italy	associated / beneficiaries / study areas
Municipality Aglientu	Italy	associated / beneficiaries / study areas
Municipality Narbolia	Italy	associated / beneficiaries / study areas
Municipality Cabras	Italy	associated / beneficiaries / study areas
Other MPAs	Other countries	associated / beneficiaries / study areas
Sunce.	Croatia	potential partner / consultant (proposed by Priroda)

II - PRESENTATION OF THE PROJECT

Origin of the project and partnership experience

The project idea arises from the need to enhance management policies of Mediterranean coastal-marine protected areas (MPAs, Natura 2000 sites) in order to improve protection measures to maintain biodiversity of coastal and marine ecosystems. The project focuses on high value natural systems characterized by fragile equilibria and, in particular, on areas with little knowledge and/or poor enforcement of management measures. In fact, in the regions identified for the implementation of project activities, several coastal sites belonging to the Natura 2000 network can be reasonably considered as paper parks (*sensu* Dudley and Stolton, 1999). Often they lack proper management plans and/or qualified personnel for the management, and/or adequate management measures; sometime they even lack of specific knowledge about the presence, distribution and health status of priority habitats and species that should be protected as well as any sources of disturbance that burden them. Nonetheless, managing authorities are required to implement the policies of conservation and sometimes the local bodies (i.e. municipalities), stakeholders (environmental organizations, tourist operators, even fishermen occasionally) and citizens demand appropriate management of natural resources and a strict enforcement of conservation measures.

In this context, PEMPA-MED project aims to fill gaps of knowledge, to identify targets for monitoring, to increase skills and capacities that are crucial for proper management strategies to reduce impacts on marine habitats and species of EU community importance and to halt/avoid the loss of biodiversity in the project areas. The general objective is to provide management boards and policy makers with guidelines to improve the performances of MPAs, in terms of effectiveness of conservation strategies and development policies. For this purpose, different pilot areas in the project countries are selected on the base of their natural features (e.g. presence of priority habitats and protected species, high level of biodiversity), needs of improving knowledge (e.g. increase data collection and knowledge on the distribution and state of marine habitats and species), needs of conservation (e.g. reduction of pressures, control of threats, lack of management plans), and management capacities (e.g. increase awareness and management skills/expertise).

The promoter of the project is the IMC, International Marine Centre of Oristano (Italy). The IMC has been partner in EU projects dealing with the functioning and the effectiveness on Mediterranean MPAs (EMPAFISH project - FP VI), their role in the sustainable management of economic activities (AMPAMED project and H₂O project - Interreg III B MEDOCC), the identification of marine sites to be protected and the creation of new MPAs (COREM project - PO Maritime); it has frequently been engaged in several Mediterranean marine protected areas for the coordination of monitoring activities, feasibility studies, enlargement of borders and drafting management plans.

The partnership is formed by partners already involved in other projects concerning research, monitoring and management of Mediterranean marine reserves. Local entities in charge for the management of the study areas (managing bodies, coastal municipalities, agencies and regional governments), are involved in the project as beneficiaries.

The added value of PEMPA-MED lies in the bottom-up approach in the selection of study areas whereas the availability/interest/involvement of local administrators, stakeholders and citizens is believed to be decisive for reduce conflicts and achieve objectives. In addition, the project makes use of scientific partners (e.g. CEAB, IMC, ...) for the development of monitoring protocols and research activities on priority habitats, protected species, pressures and threats; they will closely work with administrative and management partners (e.g. Port-Cros, Priroda, ...) for sharing experiences and good practices of management of protected areas; local administrations (e.g. Generalitat de Catalunya, Sardinian government, local municipalities, ...), stakeholders and citizens will be involved in the project tasks as beneficiaries.

In addition, the project aims to produce a model exportable to other Mediterranean contexts.

State of the art in relation to the activities and objectives proposed

Nowadays, Marine Protected Areas (MPAs) are considered as a valuable tool for ecosystems conservation and management of natural resources (Bohnsack, 1998; Murray et al, 1999; Claudet &

Pelletier, 2004; Badalamenti et al., 2000; Pinnegar et al., 2000; Gell and Roberts 2003, Roberts et al., 2005; Claudet et al., 2008; Garcia-Charton et al., 2008; Vandeperre et al., 2011).

In coastal marine environment, the priority goals of protective measures are the preservation of coastal ecosystems and biodiversity and the sustainable management of marine resources (Garcia-Charton et al., 2008). Thus, the protection objectives are not merely conservative but they have to produce improvements in the quality of life of human populations affected. This principle is explicit in the indications that the International Union for Conservation of Nature provides about the aims of marine protected areas (IUCN, 1981), here summarized:

- ✓ protection of biological and ecological values through the protection of habitats and species;
- ✓ protection of spawning and growth areas of endangered or commercial species;
- ✓ protection of areas with high values of biological productivity and ecological processes;
- ✓ maintenance or increase of biological and ecological values perturbed by human activities;
- ✓ promoting sustainable use of resources;
- ✓ monitoring, research, education, training and development of environmental awareness;
- ✓ development of recreational and tourism activities compatible with the environment.

This approach emphasizes the need to preserve nature as environment in which people live and work. It indicates that the establishment of a marine reserve has to be functional not only to the protection of natural resources but also to the increase in economic opportunities, thus leading to the need for territorial planning and implementation of management measures able to merge the interests of conservation with the development of the local economy. Several observations have shown that, whenever effective protection measures are implemented and concrete environmental results are achieved, protected areas can play a major role, even in terms of socio-economic development. In many cases, the revenue generated by the ecosystem services provided by protected areas outweigh the management costs. In general, the main economic drivers are the tourist-recreational activities (boating, swimming, diving, and fishing) related to the quality of the environment and to the abundance and size of fish (Cattaneo Vietti e Tunesi, 2007; Roncin et al., 2008).

The application of an adaptive management relies on scientific evidences (Agardy et al., 2003; Pomeroy et al., 2005) and the establishment of collaborative approaches among scientists, managers and stakeholders are crucial to effectively achieve conservation goals and resources sustainability (Guidetti & Claudet, 2010). Nonetheless, because of inappropriate design (Sala et al., 2002) or size (Claudet et al., 2008), poor enforcement (Mora et al., 2006; Guidetti et al., 2008), and inadequate management (Bonham et al 2008) a number of worldwide MPAs is not effective (Jameson et al., 2002; Kareiva, 2006) and Mediterranean ones need to be more effective (Abdulla et al., 2008).

In the Mediterranean context, several EU projects have been developed to investigate the role and functioning on MPAs. ECOMARE provided indication on the monitoring methodologies to assess the ecological effects of MPAs; BIOMEX shed light on the efficiency of MPAs as sources of fish biomass for the surrounding areas. EMPAFISH highlighted the importance of time since protection, size of no-take zone and enforcement in enhancing the abundance of fish assemblages and captures in atlanto-mediterranean reserves. It also valued socioeconomic issues and stakeholder perceptions emphasizing the importance of recreational activities for the local economy and the need for greater communication between scientists, managers and fishers. AMPAMED studied the role of 3 reserves in the sustainable management of economic activities such as small fishery and tourism, in Western Mediterranean regions. MedPAN North works to improve MPA management effectiveness and to contribute to the establishment of a network of Mediterranean MPAs. MedPAN South Project aimed to increase the effectiveness of conservation of important coastal and marine biodiversity of the Mediterranean by improving the management of existing marine protected areas and promoting the establishment of new ones.

The general objective of PEMPA-MED project is move towards the extension and the progress of Natura 2000 network, particularly in the marine domain. The project aims to improve the performance, in terms of effectiveness of conservation strategies and development, of different marine areas of the Mediterranean (Sardinia, Catalunya, Paca, Croatia, Thessaly, Malta) with

various administrative regimes (e.g. MPAs, Natura 2000 sites, regional reserves/parks) and protection levels, but sharing a poor effectiveness or even the complete lack of management measures.

The specific objectives consist in: (i) collecting baseline data (characterization of the area in terms of physical, biotic, landscape, urban, socio-economic features; main pressures and threats); (ii) setting conservation targets and test the application of conservation measures; (iii) sharing of experiences, good practices and cross-border collaboration on the management of protected areas; (iv) increasing stakeholder awareness and involvement and improve enforcement; (v) providing guidelines, based on sound scientific evidences, for the development of management plans of marine sites currently protected "on the paper".

All these objectives (increasing knowledge, setting conservation targets, improving transnational cooperation and awareness of the main users of the sea, in a nutshell, enhancing management) are crucial to fill the gaps and move from "paper parks" (legally established protected areas where experts believe current protection activities are insufficient to halt degradation, Dudley and Stilton, 1999) towards effective protected areas able to reduce impacts on habitats and marine species.

Study areas will be located in Sardinia, Croatia, Catalunya, Poca, Thessaly, Malta.

In Sardinia 2 sites are selected as case studies.

1. The Plateau of Teccu, located along the Eastern Sardinian coast was appointed as Area of Outstanding Natural Interest (*zona di Rilevante Interesse Naturalistico* or *RIN*), under the Regional Law no. 31 of June 7, 1989. The establishment of the coastal marine area to be protected has been strongly requested by the local municipality and the citizenship of Barisardo. In response to this request and after preliminary studies on the main biotic communities and coastal-marine species, the application of a regional law seemed at that time the most suitable for the establishment of a protected area (Guala et al., 2012). However, three years after its establishment, the measures indicated in the preliminary management plan, have never been applied. In order to fill the gaps in management, to achieve the objectives of marine conservation and sustainable land use, and improve the network of marine areas under Natura 2000, the project aims to provide the information required by the "Habitats" Directive and include the area of Teccu in the national list of Sites of Community Importance (SCI) to be proposed to the European Commission.
2. The Site of Community Importance ITB010006 Monte Russu is located along the Northern Sardinian coast in the Municipality of Aglientu. The SCI covers about 2'000 ha, consisting mainly of habitats 2270 - Wooded dunes with *Pinus pinea* and/or *Pinus pinaster*, 2250 - Coastal dunes with *Juniperus* spp., 1120, Posidonia beds (*Posidonia oceanica*). However, the marine part of the SCI stops at the bathymetry of 10 meters, in an area where *Posidonia oceanica* meadows attain up to 38 meters deep with exceptionally high values of density (VV.AA, 2000). In addition, information on habitat 1170 - Reefs are totally missing both on the surface and on deep infralitoral environment. Here the project aims to collect information on the distribution, functions and health status of the main marine habitats, in order to propose to the European Commission the expansion of the marine surface of SCI.

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