



**MESMA Work Package 6 (Governance)
Deliverable 6.1
Typology of Conflicts in MESMA case studies**

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A7.6 Case study report: The Strait of Sicily case study, Sicilian sub-case study

Basic details of the case study:

Initiative	Egadi Islands (<i>Isole Egadi</i>) Marine Protected Area, Sicily
Description	The implementation and management of the Egadi Islands marine protected area (designated under national legislation) and the overlapping cSAC (due to be designated under the Habitats Directive)
Objectives	Nature conservation / MPAs: Maintaining or restoration to favourable conservation status of conservation features
Scale	Local (single MPA), ~540 km ²
Period covered	1991-2012
Researchers	Giovanni D'Anna, Tomás Vega Fernández, Carlo Pipitone, Germana Garofalo, Fabio Badalamenti (Institute for Coastal and Marine Environment (IAMC), National Research Council (CNR))
Researchers' background	Natural Science (Environmental Science, Marine Ecology)
Researchers' role in initiative	Independent observers

The next 34 pages reproduce the case study report in full, in the format presented by the authors (including original page numbering!).

The report should be cited as:

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A paper on this case study analysis is in preparation for a special issue of Marine Policy.



MESMA Work Package 6

WP6 Governance Analysis in the Strait of Sicily

Sub-case study: “Sicily”

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1. Context

Introduction

Status of the MPA network in Italy

Different types of protected areas occur in the Italian seas, each one created under different legal frameworks: (i) **marine protected areas (MPA)**, (ii) **sites of community importance (SCI)**, (iii) **specially protected areas of Mediterranean importance (SPAMI)**, (iv) **biological protection zones (BPZ)** and other **fisheries regulated areas**.

i. MPA

Two Italian acts regulate the conservation of natural environment: Act no. 979/1982 on the defence of sea and Act no. 394/1991 on protected areas. Twenty-seven MPAs, and two submarine parks whose surface ranges from 20 to more than 50,000 hectares have been created to date after these acts. They are typically divided in a no-take/no-access or integral zone (A zone), a buffer zone (B zone) and a peripheral zone (C zone): in the latter two, restrictions to human uses become progressively looser (Villa et al 2002; Guidetti et al 2008). Italian MPAs are created and controlled by the Ministry of the Environment which delegates the management responsibility to a local management body.

The Marine Mammals Sanctuary is a special kind of MPA created and managed by France, Italy and the Principality of Monaco created by an *ad hoc* act.

To date in Italy there are 27 MPAs and one Marine Mammals Sanctuary.

ii. SCI

SCIs are sites that contribute significantly to the maintenance or restoration at a favourable conservation status of a natural habitat type or of a species and may also contribute significantly to the coherence of Natura 2000 and/or to the maintenance of biological diversity within the biogeographic region or regions concerned. Italian SCIs are created and controlled by the Ministry of the Environment, except in special statute regions like Sicily that create their own SCIs. In Sicily 6 marine SCIs have been designated.

iii. SPAMI

SPAMIs are particularly relevant areas aimed at protecting endangered species and their habitat according to the Barcelona Convention, selected according to several criteria. UNEP's RAC/SPA (Regional Activity Center for Specially Protected Areas) has produced a SPAMI list that includes also ten Italian MPAs and the Marine Mammals Sanctuary.

iv. BPZ

Presidential Decree no. 1639/1968 provided for the creation of BPZs aimed at banning or regulating fishing in spawning or otherwise sensitive areas important for commercial fish. Thirteen such zones exist in Italian waters, created and controlled by the Ministry of Agriculture, Food and Forests.

Other fisheries regulated areas include areas where different types of fishing ban are imposed, like e.g. the Gulf of Castellammare no-trawl area. Such areas may be created and controlled either by the Ministry of Agriculture, Food and Forests or by regional governments.

Strait of Sicily

In the Strait of Sicily (SoS) there is no integrated spatial management plan but only a mosaic of sectoral management plans/initiatives lacking of a co-ordinated approach and focuses mainly on nature conservation and fisheries sustainability (Figure 1).

In the SoS governance analysis is going to be conducted at two levels in both "Sicily" and "Malta" sub-case studies. The first level includes a brief review of different perspectives and issues on UNEP-RAC/SPA high seas network proposal in the SoS as revealed by ongoing consultations and overviewing of the Pantelleria marine protected area (MPA) establishment process. The second level deals with a detailed stakeholder analysis in the Egadi MPA.

In this first section of the analytical structure for WP6 governance analysis in the SoS, we outline the context of the Egadi MPA where semi-structured interviews to stakeholders will be conducted.

1.1 About the existing initiative you are evaluating, which can be an integrated marine spatial plan or part of the plan, or an initiative with spatial elements if there is no integrated marine spatial plan in place

The governance analysis of the existing spatial initiatives in this sub case study is updated at September 2012

- Location and geographical boundary of Egadi MPA

The Egadi Marine Protected Area (MPA) (Geographical coordinates: 37.95 / 12.21666) is an archipelago of three islands (Favignana, Marettimo and Levanzo), and two rocky outcroppings (Formica and Maraone) located west of the city of Trapani at the western-most point of Sicily (Figure 2). The nearest distance from the Sicilian shore is ca. 5 km while the length from the inner to outer edge of the MPA is about 35 km. It is the largest MPA established in Italy to date and one of the largest in the Mediterranean.

Favignana and Levanzo are separated by a channel approximately 50 m deep, whereas the depth range between Levanzo and Marettimo is 100 - 300 m.

The MPA lies in what is part of the southern segment of the Sicilian-Maghrebian chain. The wide continental shelf cut by a NNW-SSE depression between Marettimo and Favignana Islands is incised by a canyon that is draining both to the NW and to the South, with a remnant divide at about 200 m depth. The shelf-edge is located at depth ranging from 95 to 130 m.

The shelf-break is generally sharp in the western part of the archipelago, while to the south of Marettimo Island the transition from shelf to slope is more gradual. North-east of Marettimo some canyons discharge sediments along the slope into the deeper water.

In the Eastern part of the archipelago the shelf surrounding Favignana and Levanzo Islands is wide and flat and the shelf break, in the south, is formed from prograding sediments. Buried surfaces of abrasion and relict deposits and features related to glacial Quaternary sea level changes occur on shelf. Large sedimentary structure south-east of Marettimo island, such as sand-weaves and sand patches, ranging mainly in the NW-SE direction, indicate the presence of strong current.

Benthic assemblages at the Egadi Archipelago are strictly correlated to the nature of substrate, hydrodynamic regime and water transparency. The combination of these factors determines a high heterogeneity and fragmentation of both photophilic and sciaphilic benthic assemblages. Only infralittoral benthic assemblages are found at Favignana and Levanzo while at Marettimo circalittoral assemblages are also present.

The main impact is due to human activities, in particular the tourism industry has the potential of detrimental effects on benthic communities. Marettimo is undoubtedly the best preserved of the three islands.

Bioconstructions, such as facies with *Astroides calycularis*, vermetid reef (*Dendropoma petraeum*), *Lithophyllum lichenoides* encorbellement and *Posidonia oceanica* meadows, sciaphilic assemblages and semi submerged caves are amongst the most representative naturalistic features of the area. Notably, the semi submerged cave system of Marettimo hosted a monk seal (*Monachus monachus*) population until the 1980 when the last seal was killed by a fisherman. Very recently the monk seal has been spotted again in Marettimo.

Egadi MPA covers 53.992 hectares and 73,9 km of coastline. The protected area is partitioned into four zones: (A) integral zone with a surface of 10,67 ha and a coastline length of 8,9 km; (B) buffer zone 2.865 ha large and 18,6 km length; (C) peripheral I zone extends for 21.962 ha and for 46.4 km of coastline; (D) peripheral II zone with an extension of 28.098 ha. The two areas designated as zone A include a small square shaped area surrounds the island of Maraone and a section of the western coast of Marettimo situated directly on the opposite side of the island from the fishing village. Four areas of zone B are designated while zone C and zone D fill in between the islands (Figure 2).

- History of the existing initiative (how and why it was established)

The MPA was established by the Ministry of the Environment in 1991 according to the Italian Law for the Defence of the Sea (L. 979/1986, modified by decree, August 6th, 1993 and decree, May 17th, 1996).

The designation of Egadi Islands as MPA was not a result of rigorous scientific research, but rather because of political perceptions and negotiated decisions with a small amount of scientific information describing the ecological components of the system. In the Egadi Islands, the main proponents of the MPA were local environmental groups that successfully lobbied the Ministry of Environment to create a protected area to eliminate the threat of oil drilling in local waters. Local residents and fishermen were not given the opportunity to comment on MPA design and most have been obstinately opposed to its existence from the beginning.

Also the boundaries of the reserve and its differential zones were drawn to be “politically” acceptable. Some scientific input necessarily was included placing zones composed of the strictest regulations in ecologically valuable areas, which also happened to be historically profitable fishing grounds.

To date, few biological studies have examined the effectiveness of the Egadi reserve in terms of its ability to increase the biomass of local marine organisms. Furthermore, minimal work has been done to determine the economic impacts and very few studies has been done on the socio-cultural impacts of the marine reserve on local stakeholders.

At inception, the Egadi MPA was established to get six stated objectives: (1) protect the local environment, (2) protect the local biological resources, (3) educate the public about the unique characteristics of local waters, (4) support scientific research, (5) increase the understanding and protection of local archaeological resources, and (6) promote socio-economic development connected to the environmental importance of the area.

To reach the above objectives the regulation of the Egadi MPA provides varying levels of restriction in the use of the marine area. Zone A can be considered a no-take/no-entry area where only permitted research can take place. Zone B allows only general non-consumptive uses (e.g., swimming, boating beyond 500 m from the coast). In Zone C, all non-consumptive uses and permitted recreational and commercial fishing are allowed, with the exception of trawling. In Zone D, all activity is allowed; only trawling has limitations. In the last two years several attempts to eliminate the trawling restrictions into the D zone of the MPA have been done.

According to IUCN guidelines on protected area (Dudley, 2008), Egadi MPA is a Natural Marine Protected Area belonging to IV management category. From nature conservation view the Egadi MPA includes a Special Protection Area (SPA) and Sites of Community Importance (SCIs) but it is not a Special Area of Conservation (SAC) yet.

Since 2011 Egadi MPA and the Natura 2000 (SPAs, SCIs) sites are “spatially nested” in the area of the Trapani Local Management Plan for fisheries (Figure 3).

To date, no management plan has been drafted for the Egadi MPA.

- Competent authority/authorities (*eg* which government authority is in charge of the existing initiative, and collaborating national/local authorities).

After being managed by the Coast Guard from 1991 to 2000, management responsibility was transferred to the local government in 2001 (decree January 16th, 2001). The MPA’s management body is currently the city government of Favignana. The local mayor is the official President of the MPA and has responsibility of insuring the presence of a MPA director, an advisory board, and that the MPA is being successfully managed.

The Trapani Harbor Master’s Office has the responsibility for enforcement of the regulatory framework of the MPA and all relevant regional and national fishing regulations.

- Main sectors and stakeholder groups involved in the initiative
 - Sectors

Professional and recreational fishing

Tourism

Nature and cultural heritage

Instruction and education

Research

Shipping

- Stakeholder groups

Fishermen

Public administrations

Representatives of Management Consortium

Research bodies

Enforcement

Trade associations of professional fishing

Tourism industry

NGOs

1.2 ***The socio-economic and political context of the case study*** (if the local context is significantly different from the national context, you may focus on the local context and briefly mention the difference between local and national contexts where this information is available):

<https://www.cia.gov/library/publications/the-world-factbook/geos/it.html>

- Per capita GDP

In 2010, per capita GDP was 30.500 \$US (23.573,23 €) for Italy and 22.634,82 \$US (17.488,00 €) for Sicily. Sicilian per capita GDP is significantly different from the national context. The main reasons of such difference can be found in the so called 'Southern Question' which has been (perhaps it is still) a major topic in Italian political, economic and cultural life for a century and more.

- Population density per km²

In 2010, the population density in Italy was 202,48 (61.016.804/301.340 km²).

In Sicily it was calculated to be 196.4 (5.048.806/25.711 km²) while in the Egadi Islands it was 115,19/ km² (4.314/37,45 km²). Among the Egadi Islands, Favignana has the highest population density (169.2 km²) followed by Marettimo (68.25 km²) and Levanzo (38.83 km²).

- GDP growth rate and main driver(s) of economic growth

Italian GDP growth rate was 1.3% (2010 est.). Italy has a diversified industrial economy, which is divided into a developed industrial north, dominated by private companies, and a less-developed, welfare-dependent, agricultural south, with high unemployment. The Italian economy is driven in large part by the manufacture of high-quality consumer goods produced by small and medium-sized enterprises, many of them family owned. Italy also has a sizable underground economy, which by some estimates accounts for as much as 15% of GDP. These activities are most common within the agriculture, construction, and service sectors. Italy has moved slowly on implementing needed structural reforms, such as reducing graft, overhauling costly entitlement programs, and increasing employment opportunities for young workers, particularly women. The international financial crisis worsened conditions in Italy's labor market, with unemployment rising from 6.2% in 2007 to 8.4% in 2010, but in the longer-term Italy's low fertility rate and quota-driven immigration policies will increasingly strain its economy. A rise in exports and investment driven by the global economic recovery nevertheless helped the economy grow by about 1% in 2010 following a 5% contraction in 2009. The Italian government has struggled to limit government spending, but Italy's exceedingly high public debt remains above 115% of GDP, and its fiscal deficit - just 1.5% of GDP in 2007 - exceeded 5% in 2009 and 4% in 2010, as the costs of servicing the country's debt rose.

- Economic structure (eg GDP composition by sector, main economic sectors, main source of employment *etc*)

The main economic sectors contributing to the Italian GDP are:

- agriculture 1.9% (fruits, vegetables, grapes, potatoes, sugar beets, soybeans, grain, olives, beef, dairy products, fish). The employment provided by this sector was estimated 4.2% of the labor force (Italian labor force = 24.99 million, est. 2010)
- industry 25.3% (tourism, machinery, iron and steel, chemicals, food processing, textiles, motor vehicles, clothing, footwear, ceramics). The employment provided by this sector was estimated 7% of the labor force.
- Services 72.8% (2010 est.). The employment provided by this sector was estimated 65.1% of the labor force.

- Contribution of maritime sectors to the national economy

Maritime activities produce goods and services worth almost 2.7% of the Italian GDP, equal to approximately 39.6 billion euro in 2008 value, providing work for more than 164,000 individuals directly employed in the maritime sectors and 230,000 engaged in all the other manufacturing activities and services (upstream and downstream).

- Unemployment rate

The global Italian unemployment was 8.4% (2010 est.) but it reached 25.44% if youth ages 15-24 unemployment was considered (male: 23.3%; female: 28.7%). Sicily's unemployment rate was 14.7% (2010 est.) and it is the highest among the Italian regions. The youth ages 15-24 unemployment was 29.8%. In 2010 (Bank of Italy data), in the Sicilian labour market, the number of persons in work diminished again and the employment rate declined for the fourth year running. The employment rate among women is structurally low, about half the rate for men and the number of job-seekers grew.

- Administrative structure (eg degree of autonomy of local/sub-national government)

The administrative structure of the Italian Republic is composed by 15 regions and 5 autonomous regions. A federalism process (deregulation and decentralization of some rules from the central to regional government) to provide more autonomy to regions is still in progress.

Since 1946, Sicily, together with the Eolian, Egadi, Pelagie, Ustica and Pantelleria islands, is an autonomous Region, having a juridical personality, within the political unity of the Italian State. Sicilian region has legislative power in many sectors such as agriculture and forest, tourism, fishing and hunting but it has no authority in the institution of marine protected areas. In Sicily there are 9 regional provinces and the Egadi Islands belong to the Regional Province of Trapani.

- The Italian average Governance capacity index was 0.52 (2010 est.)
- Gini index of income disparity (UCL can provide this index for each relevant country)

The distribution of family income disparity (Gini index) calculated in 2010 was 36.03

Most of the indices listed above can be found at in CIA World Factbook

(<https://www.cia.gov/library/publications/the-world-factbook/>), governance indicators for countries are measured by the World Bank and can be found at www.govindicators.org.

1.3 The regional policy framework within which your specific WP6 focus is 'nested', eg regional sea action plans.

- How the regional policy framework come into existence in the SoS

The Strait of Sicily is comprised between the international waters off the African coast, the southern coast of Sicily, and the waters surrounding the Maltese archipelago. It roughly coincides with the FAO GSAs 15 and 16, except in the fact that the Egadi Islands are completely incorporated in the study area for the MESMA purposes. Such definition embraces an area characterized by high seas with sprinkle small islands, unique oceanographic features, large habitat heterogeneity, huge (beta) diversity, exceptionally high productivity, and a massive cultural heritage.

The entire area holds the homelands of very different human populations which heavily exploit a vast array of marine resources from ancient times. As a result of the lack of a unified policy among nations and sectors, Sicily inherits a complex composite of conflicts among different uses of the marine realm at several spatial and temporal scales.

The policy framework of such complex context necessarily refer to "Mediterranean Sea" region and in particular to Central Mediterranean and Western sub-regions (Figure 4).

Regarding Mediterranean region agreements and legal instruments, several offer particular potential to the protection of living marine resources, the regional fisheries management organisations (RFMOs) and species-specific regional conservation agreements.

As our specific WP6 focus deals with maintaining or restoration to favourable conservation status of conservation features of the SoS, the policy framework to which we refer in this section include the

main instruments, institutions and initiatives devoted to Mediterranean conservation and in particular to the creation and management of protected areas in the Mediterranean Sea.

- Background: geographical scale, participating countries, overarching goals and objectives of the policy framework in the Mediterranean Sea region

- *Mediterranean Action Plan and Barcelona Convention*

In 1975, 16 Mediterranean countries and European Community adopted Mediterranean Action Plan (MAP). The MAP was the first-ever plan adopted as a Regional Seas Programme under United Nations Environmental Program (UNEP) umbrella.

In 1976, these Parties adopted the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention).

In 1995, the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II) was adopted by the Contracting Parties (21 countries) to replace the Mediterranean Action Plan of 1975. At the same time the Parties adopted an amended version of the Barcelona Convention of 1976, renamed Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.

The Barcelona Convention scope covers all maritime spaces of the Mediterranean Sea, which are under sovereignty or jurisdiction of the coastal States or in the high sea, it include also gulfs and coastal areas.

Actually the Barcelona Convention has given rise to seven Protocols addressing specific aspects of Mediterranean environmental conservation:

- Dumping Protocol (from ships and aircraft);
- Prevention and Emergency Protocol (pollution from ships and emergency situations);
- Land-based Sources and Activities Protocol;
- Specially Protected Areas and Biological Diversity Protocol;
- Offshore Protocol (pollution from exploration and exploitation) ;
- Hazardous Wastes Protocol ;
- Protocol on Integrated Coastal Zone Management (ICZM).

- *Specially Protected Areas and Biological Diversity Protocol*

The Protocol concerning Specially Protected Areas (SPA) and Biological Diversity in the Mediterranean was adopted by the contracting parties in 1995.

The main objectives of the Protocol is the conservation and the sustainable use of biological diversity in the Mediterranean, by establishing specially protected areas in the marine and coastal zones subject to the sovereignty or jurisdiction of the Parties. The Parties shall also cooperate in transboundary specially protected areas and shall take protection measures with regard to the rules of international law.

The Protocol applies to all the maritime waters of the Mediterranean, irrespective of their legal condition (be they maritime internal waters, historical waters, territorial seas, exclusive economic zones, fishing zones, ecological zones, high seas), to the seabed and its subsoil and to the terrestrial coastal areas designated by each of the Parties.

The Protocol provides for the establishment of a list of Specially Protected Areas of Mediterranean Interest (SPAMI List). The SPAMI List may include sites which “*are of importance for conserving the components of biological diversity in the Mediterranean; contain ecosystems specific to the Mediterranean area or the habitats of endangered species; are of special interest at the scientific, aesthetic, cultural or educational levels*”

The procedures for the listing of SPAMIs are specified in detail in the Protocol (Art. 9). The Protocol is completed by three annexes, which were adopted in 1996 in Monaco, namely the Common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI List (Annex I), the List of endangered or threatened species (Annex II), the List of species whose exploitation is regulated (Annex III).

- How does this regional policy framework relate to the existing initiative you are evaluating in your case study?

The regional policy framework above described is related to the “Sicily” sub-case study by a need to protect the “hot spots” of biodiversity in the SoS by human pressures (illegal fishing, wind mills, maritime traffic). From the environmental and cultural aspects, Egadi MPA has the requisites to be a SPAMI sites. However, the absence of management plan with clear objectives, the lack of monitoring for the evaluation of the MPA and the complex institutional landscape are probably the main reasons which prevent the Egadi Islands to be included in the SPAMI list. The creation of an protecting ecologically representative MPA network in the Mediterranean, could be a valid instrument to met the need of nature conservation in the SoS and an incentive for an efficient governance system in the Egadi MPA.

- A brief description on the implementation of the regional policy framework in relevant countries, based on existing information wherever feasible.

To date, the SPAMI List includes 25 sites, giving them their recognition by the 21 riparian countries of the Mediterranean as marine protected areas.

Egadi MPA is not included among the 25 sites yet mainly due to the absence of a management plan which is one of the requisites to be included in the SPAMI list.

In 2009, the Contracting Parties to the Barcelona Convention adopted a regional working programme for the coastal and marine protected areas in the Mediterranean, including the high sea.

Through two main projects, the MAP/RAC-SPA provides technical and financial support for the countries to undertake the activities of this regional work programme:

- A “Project for the Development of a Mediterranean Marine and Coastal Protected Areas Network through the boosting of Mediterranean MPAs creation and management in areas within national jurisdiction of eastern and southern Mediterranean countries” (MedMPAnet Project), which consists in enhancing the effective conservation of regionally important coastal and marine biodiversity features in areas under national jurisdiction. This will be achieved through a series of demonstration activities and targeted capacity-building exercises that will be conducted in the countries involved in the project.

- A project for facilitating the establishment of Specially Protected Areas of Mediterranean Importance (SPAMIs) in open seas, including the deep seas. Its working methodology aims at enhancing the governance of the areas that lie in the open seas using a sub-regional or local approach, in order to ensure the conservation of the biodiversity of these areas and guarantee the sustainable use of their marine resources.

The last project is implemented by UNEP-MAP-RAC/SPA and financially supported by the European Commission according a two phases process:

Phase I: Identification of priority conservation areas in the Mediterranean open seas, including the deep seas (2008 – 2009)

Phase II: Support to the Parties to the Barcelona Convention for the establishment of MPAs in open seas areas, including the deep seas (2010 – 2011)

The two projects pursue the same overall objective of creating an ecologically representative marine protected areas network in the Mediterranean region.

In 2010, scientific experts and national representatives of the UNEP/MAP specialised in biodiversity and Specially Protected Areas identified twelve areas in the Mediterranean, which present specific interest for biodiversity conservation, in view to promoting the establishment of a representative ecological network of protected areas in the Mediterranean.

The SoS is one of the twelve Specially Protected Areas proposed for biodiversity conservation in the Mediterranean (Figure 5).

References

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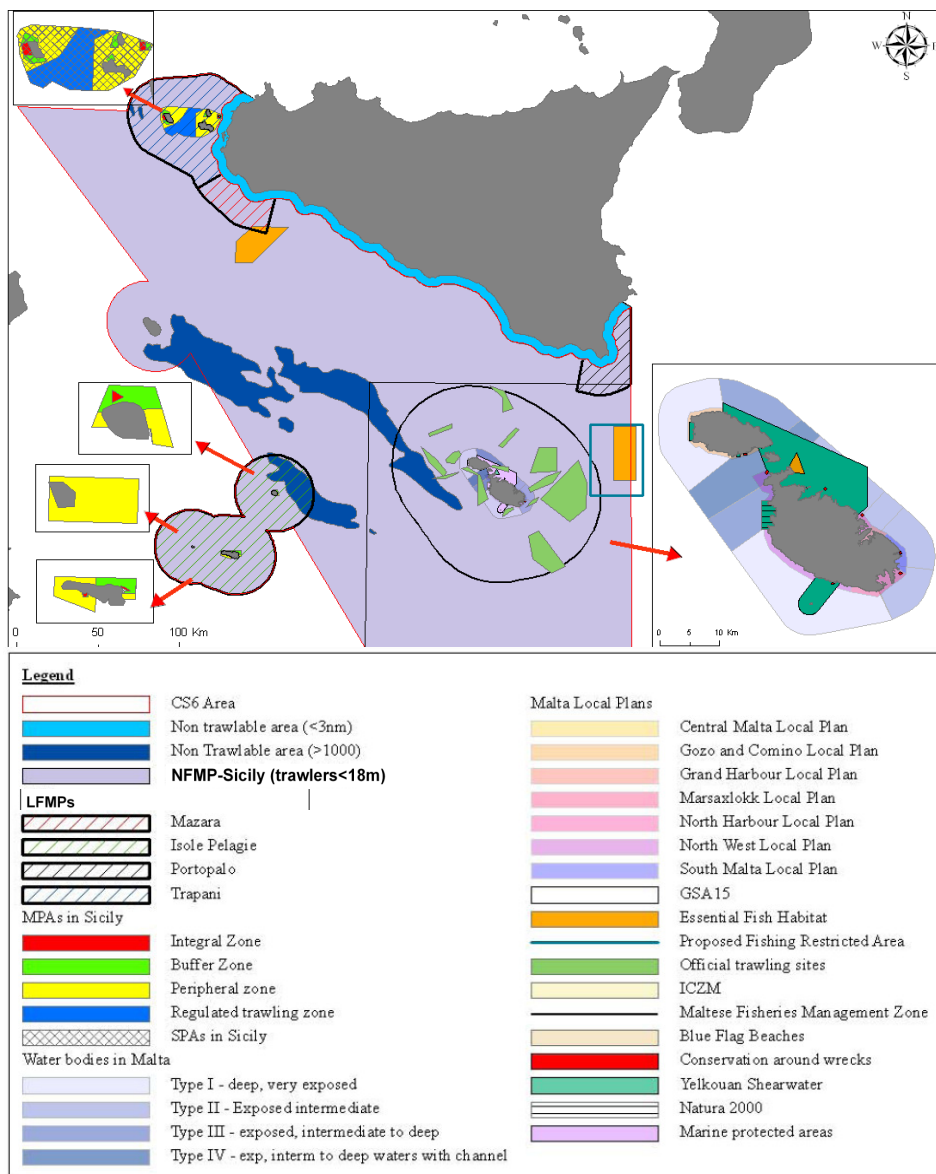


Figure 1- Strait of Sicily showing the existing initiatives focused on nature conservation and fisheries sustainability. LFMPs = Local Fisheries Management; NFMP = National Fisheries Management Plan

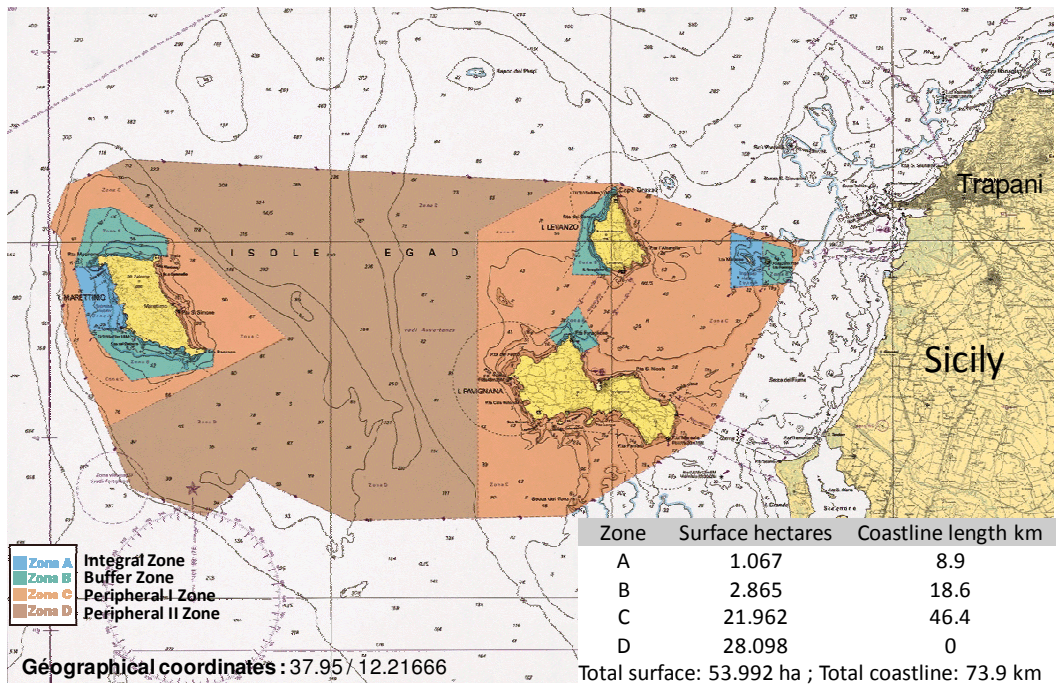


Figure 2 – Location, geographical boundary and zoning of Egadi Marine Protected Area

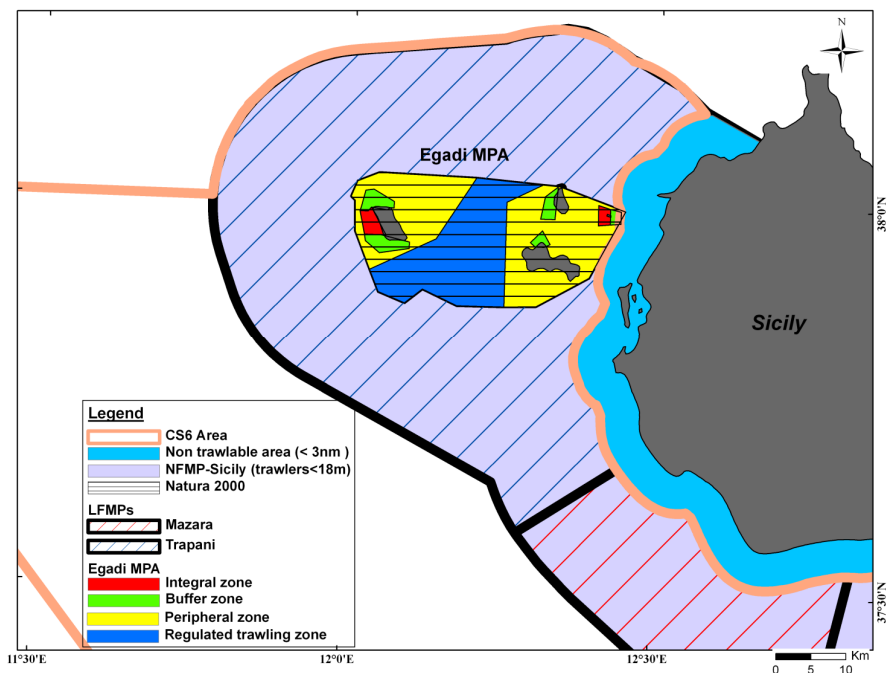


Figure 3 – Map showing the spatial overlap of the existing sectoral initiatives. LFMPs = Local Fisheries Management; NFMP = National Fisheries Management Plan (Figure 3).

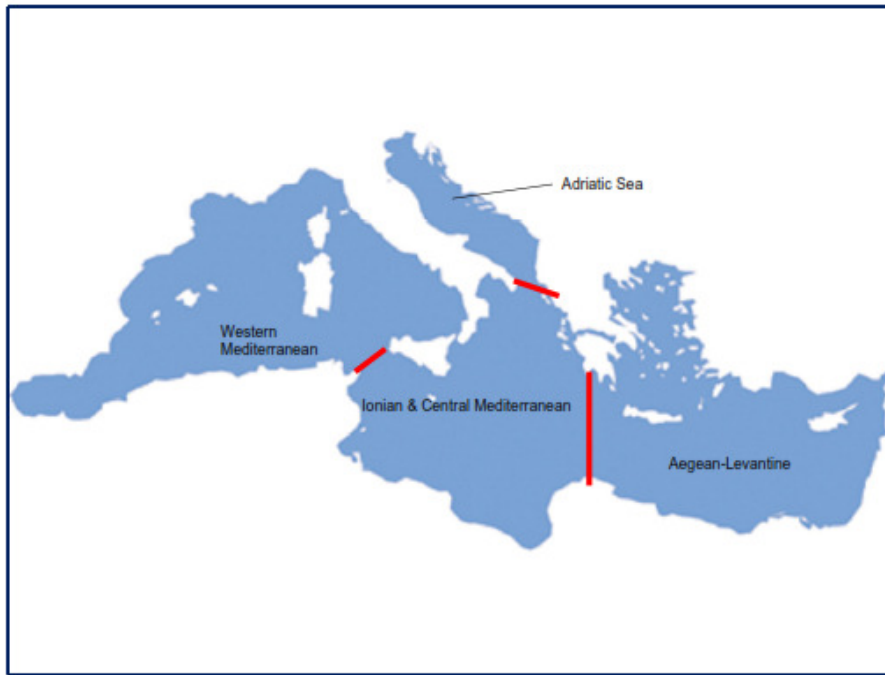


Figure 4 – Map showing the subdivision of the Mediterranean Sea region in four sub-regions according to the art. 4 of the Marine Strategy Framework.



Figure 5 – Map showing 12 new areas for biodiversity conservation in the Mediterranean identified in 2010 by UNEP-MAP-RAC/SPA in view to promoting the establishment of a representative ecological network of protected areas in the Mediterranean.

2 Objectives and management measures

➡ Section 2 links to Action 2C in the WP2 framework.

Briefly review the following information in this section. **Please note that policies and regulations at the EU level will be reviewed by UCL, so you only need to describe the policies and regulations that apply at national and local levels**, in relation to the objective chosen as the focus in your governance analysis

2.1 What is the priority objective in your case study?

The priority objective is maintaining or restoration to favourable conservation status of conservation features of the Egadi MPA.

Priority objective: the objective on which the governance analysis is focused, recognising that this should also be a key priority in the existing initiative you are evaluating. This may come from a local, national or regional policy level but, where appropriate, relate this objective to the regional policy framework. There will often be other related objectives that complement and go alongside the priority objective, which may come from a local, national or regional level and these may be included in your analysis whilst maintaining the focus on the priority objective. For example, your priority objective may be to designate a network of MPAs or to promote marine renewables, and the complementary objective may be to minimise the socio-economic or ecological impacts when meeting the priority objective. Note that the priority objective may, for instance, be national, whilst complementary objectives may be regional but you should only undertake one analysis with a focus on the priority objective.

It is also important to note that in reality, MSP initiatives often have multiple operational objectives, and it may be difficult to identify the priority objective, however, for the purpose of this governance analysis, please identify a single priority for the evaluation of governance approaches and incentives in subsequent sections. The WP6 analytical structure considers all the other objectives that interact, including conflicting and supporting objectives, with the priority objective in the following sections, however, the focus must be maintained on the priority objective. The priority objective in each sub-case study, as agreed through the WP6 case study workshops is listed in Appendix II.

2.2 What are the key policies, legislations, regulations and/or plans that enable/facilitate the achievement of the above priority objective?

Please list the **titles** of these policies, legislations, regulations and/or plans, **the year of implementation, and key legal provisions in relation to the priority objective** here. Please try to limit your list to the policies, legislations, regulations and/or plans that are of **particular importance** to the fulfilment of the priority objective in your case study, *ie* driving or directly related to the priority objective in your case study.

Table 1- Information on policies, regulations and legislations¹

[No.]/Scale	Title and legal provisions	Year	Contents
[1]National: Italy	DM of 7 Mar 2012 (GU no. 79 of 3 Apr 2012, ordinary suppl. no. 6), Ministry of the Environment - Fifth updated list of SCIs for the Italian biogeographical region.	2012	It contains the list of the SCIs for the Mediterranean biogeographic region in Italy, including the Egadi Islands
[2]National: Italy	DM of 1 Jun 2010 (GU no. 145 of 23 June 2010), Ministry of the Environment - Rules for the enforcement and organization of the Egadi MPA.	2010	It contains the executive regulations of the Egadi MPA

¹ DM: ministerial decree. GU: Official Gazette, where all legislative acts are published. DPR: presidential decree. DA: regional council decree. DI: inter-ministerial decree. DDG: general director decree.

[3]National: Italy	Notice on the implementation of projects on the use of “green energy” (GU no. 68 of 20 Mar 2008), Ministry of the Environment.	2008	It is a notification of a call dedicated to protected area managers for the realization of projects on the use of “green” energy within protected areas, carrying into effect the DM no. 94 of 22 Feb 2008.
[4]National: Italy	Notice on the implementation of projects on the use of “green energy” (GU no. 61 of 12 Mar 2008), Ministry of the Environment.	2008	It is a notification of a call dedicated to municipalities of smaller islands with a planned or existing MPA as well as to municipalities in any other type of protected areas that extend over the sea.
[5]National: Italy	Act no. 248 of 4 Aug 2006, Ministry of the Environment - Turning of Decree no. 223 of 4 Jul 2006 into a law.	2006	Art.22 of Decree no. 223 of 4 Jul 2006 provided for a reduction of 10% of the funds dedicated to the management bodies of protected areas.
[6]National: Italy	Agreement of 14 Jul 2005 (GU no. 174 of 28 Jul 2005) on the concession of properties within MPAs. Ministry of the Environment	2005	It is an agreement (as stated in Act of 5 Jun 2003, art. 8) on the concession of maritime State properties and zones of sea within MPAs
[7]National: Italy	DPR no. 120 of 12 Mar 2003 (GU no. 124 of 30 May 2003), Ministry of the Environment - Modifications to DPR no. 357/1997.	2003	Italian Regions are charged to designate sites (special protection zones and special conservation zones) of the Natura 2000 network and apply conservation and protection measures, including sectoral or integrated management. The Ministry of the Environment maintains the institutional competence on the protection of the sea.
[8]National: Italy	Act no. 179 of 31 Jul 2002 (GU no. 189 of 13 Aug 2002) - Provisions for environmental matters.	2002	It allows for changes in the organization of MPA management bodies and for the institution of a dedicated environmental branch within the Coast Guard, among many other heterogeneous issues
[9]National: Italy	Act no. 426 of 9 Dec 1998 (GU no. 291 of 14 Dec 1998), updated by and coordinated with Act no. 93 of 23 Mar 2001 - New interventions for the Environment.	1998-2001	(1) Institution of a technical department for the establishment and update of MPAs within the Ministry of the Environment; (2) Establishment of a 3-year national program on <i>Posidonia oceanica</i> .
[10]National: Italy	DI of 6 Aug 1993 (GU no. 199 of 25 Aug 1993), Ministries of the Environment and of the Merchant Navy - Modifications of	1993	It rejects the proposal of allowing trawling in the C zone and approves a provisional

	conservation measures in the Egadi MPA.		Egadi regulations allowing for some changes in the B zone.
[11]National: Italy	DI of 27 Dec 1991, Ministries of the Environment and of the Merchant Navy - Institution of the Egadi MPA.	1991	It establishes the Egadi MPA.
[12]National: Italy	Act no. 9 of 9 January 1991 (GU no. 13 of 16 Jan 1991) - Implementation of the new national energy plan.	1991	Art. 4 prohibits surveys and extraction of hydrocarbons in the waters of the Egadi Islands.
[13]National: Italy	Act no. 979 of 31 Dec 1982 (GU no. 16 of 18 Jan 1983) - Provisions for the defence of the sea.	1983	It contains provisions for the defence of the sea. Art. 31 identifies the Egadi MPA and the Pelagie MPA.
[14]Regional: Sicily	DDG no. 434 of 08 August 2012 , Regional Department for the Territory and Environment.	2012	It approves the “Egadi Islands Management Plan”, which includes the “Archipelago of Egadi marine and terrestrial area”, “Island of Favignana”, “Island of Marettimo” and “Island of Levanzo” Natura 2000 sites. Valorisation and sustainable use of Natura 2000 sites promoting some economic activities within SACs and SPAs.
[15]Local: Egadi MPA management body	Deliberation of the Director of Egadi MPA, 2010. Project “Vedette del mare” (Guardians of the sea).	2012	It provides economic incentives for the surveillance of the MPA and the sighting of protected marine species in the area.
[16]Local: Municipality of Favignana	Deliberation of Trapani Municipal Government of Favignana n. 33 of the 29 February 2012	2012	Integrative regulations for the organization of the activities allowed in the Egadi MPA.

2.3 What measures and actions have been put forward by such policies, legislations, regulations and/or plans listed above in your case study, in order to promote the achievement of the priority objective?

Please **briefly summarise the measures and actions here**; the details of how such measures and actions have been implemented on the ground and how effective they are should be described in the incentives section below.

National policies, legislations and regulations aim at providing general guideline about the management of the Egadi MPA and assisting the municipality of Favignana holding the protected area. In particular, they provide standard criteria for the definition of conservation measures to be applied in the MPA. They also contain the framework of the main principles for the management of Natura 2000 sites, which include the Egadi MPA. Some national actions aim at creating technical institutions for the establishment and update of MPAs. Other actions provide criteria for MPAs functioning and for the choosing of MPAs management body. Some ministerial decrees provided for the institution and later modifications of the Egadi MPA. Several measures contain provisions for the defence of the Egadi MPA from human impacts (i.e., extractive activities). The Ministry of the Environment is also expected to provide funds for the MPA functioning.

Local measures and actions are contained in the Sicilian legislation, in the “Egadi Islands management plan” and in the regulations put forward by the municipalities linked to the Egadi MPA. Some aspects

related to the protection of the Egadi MPA are also envisaged in the Local Fisheries Management Plan (LFMP) of Trapani.

With the council decree of 8 August 2012 the Regional Council for the Territory and Environment has approved the “Egadi Islands Management Plan”, which includes the “Archipelago of Egadi marine and terrestrial area”, “Island of Favignana”, “Island of Marettimo”, and “Island of Levanzo” Natura 2000 sites. The plan contains conservation measures (like the control of human impacts) that interact in a synergic and complementary way with those of the MPA. In particular the plan aimed at (i) the preservation of biodiversity in the terrestrial and marine areas of the archipelago, (ii) the sustainable use of natural resources and (iii) the reduction of the causes of degradation and decline of the Egadi habitat and species.

However, other measures contained in the plan promote economic activities, such as tourism and sport activities, within the archipelago.

The Trapani LFMP is already implemented and aims mainly at the protection of the fishery resources in the competence area of the plan, which encompasses also the Egadi MPA. Measures and actions include a wider use of selective gears, the reduction of fishing effort and the protection from fishing impact on some essential fish habitats present on the seabed around the islands.

The executive regulations of the Egadi MPA contain measures aimed at organizing and managing all the activities allowed in the four zones of the MPA (see Fig. 2 in the Context). Almost all activities in the MPA need an authorization issued by the MPA management body. The control of the activities is operated by the Coast Guard or by other institutional or voluntary associations in agreement with the MPA management body.

2.4 Are there other specific and particularly important sectoral priorities, objectives, obligations etc that are conflicting, could potentially conflict or be perceived as conflicting with the fulfilment of the priority objective? If so, what measures or initiatives are in place to address such conflicts? Such measures could include an existing or emerging marine spatial planning framework and policies.

Please note that while a description of the key policies is needed here, an extensive review of every sectoral policy or legislation is not necessarily. **Please focus on the policies and legislations that interact, articulate and/or conflict with the priority objective. It is the interactions between the key policies** that are of interest here, **not the details** of individual policies and legislations, *i.e.* analogous to a synecology rather than an autoecology approach. This section is mainly about setting the policy background for the following analysis, so the description on the interactions between different policies should be related to the discussion on conflicts, incentives and cross-cutting themes below. If there are policies and legislations that are not directly related to your discussion on the conflicts, incentives and cross-cutting themes below, you do not need to include them in the description.

Table 2 - Description of the key policies and legislations that interact, articulate and/or conflict with the priority objective²

No./Sector	Title and key legal provisions	Year	Objectives
[1] Fisheries	DM of 30 Aug 2012, Ministry of Agriculture, Food and Forests. It enforces the technical measures contained in the “Castellammare del Golfo – Marsala including the Egadi Islands” Local Management Plan for Fishery (LFMP). Management body: Co.Ge.Pa. (Consortium for the Management of Artisanal Fisheries) of Trapani.	2012	Preservation of the stock turnover capacity; Reduction of fishing effort; Enhancement of the economy of the fishery workers; Increase of job opportunities; Job positions in fishing-related activities.
[2] Fisheries	DM of 20 May 2011, Ministry of Agriculture, Food and Forests. It enforces the national plans for the management of the offshore trawling fleet (GSA 16: Strait of Sicily) and the inshore fishing fleet (Sicily), which include the Egadi archipelago.	2011	Preservation of the stocks capacity of recovering from fishing; Enhancement of the workers' welfare; Increase of job opportunities in fishery-dependent areas.
[3] Conservation Green energy	(a) Notice on the implementation of projects on the use of “green energy” (GU no. 68 of 20 Mar 2008), Ministry of the Environment. It is a notification of a call dedicated to protected area managers for the realization of projects on the use of “green” energy within protected areas, carrying into effect the DM no. 94 of 22 Feb 2008. (b) DD no. 982 of 21 Dec 2001 (GU no. 91 of 18 Apr 2002), Ministry of the Environment. It contains a plan for the diffusion of removable energies, energy efficiency and sustainable mobility within Italian protected areas	2008 2001	Promotion of energy-saving policies, particularly in buildings; Promotion of diversification, decentralization and decarbonisation of electricity sources; Promotion of renewable energies and related technologies. Funding the diffusion of removable energies, energy efficiency and sustainable mobility within protected areas
[4] Conservation Tourism	Regional Act no. 13 of 8 May 2007 (GURS no. 22 of 11 May 2007). It contains measures on the tourism and building industries, and modifications to Regional Act no. 10/2007.	2007	Promoting economic activities within SCIs and SPAs.

² DM: ministerial decree. GU: Official Gazette, where all legislative acts are published. GURS: Official Gazette of the Sicilian Region, where all regional legislative acts are published. DD: directorial decree; DL: legislative decree; DDG: executive decree.

[5] Extractive non- living resources Conservation	(a) Council of Ministers no. 35 of 15 Jun 2012. It approves the measures for a sustainable growth in Italy, which include the so called “environmental corrective”. (b) DL no. 128 of 29 June 2010. It prohibits extractive activities within 12 nm from the shoreline or from MPA boundaries.	2012 2010	Protection of the Egadi sea bottom from the extractive use of non-living marine resources except for the licensors in the field of hydrocarbons off-shore that were in progress at the date of entry into force of the new measure. It prohibits the activities of prospecting, exploration and production of gas and crude oil within 12 miles from MPAs.
[6] Fishing Tourism	DDG no. 531 of 10 September 2012, Regional Department of Fisheries. It approves the Plan for the sustainable development of the fishing zones of the “Towers and tuna traps of the Trapani coastline” GAC (Coastal Action Groups). Measure 4.1 of the European Fisheries Fund (EFF)	2012	It aims at sustaining such economic activities as tourism which mainly involve fishermen of small fishing areas.
[7] Conservation Tourism	DDG no. 83 of February 2012, Regional Department of Environment. It approves a public call related to the operational objective 3.2.2 - intervention line 3.2.2.4 of the P.O. FESR Sicilia 2007/2013.	2012	It aims to improve joined actions for the protection, sustainable development and entrepreneurial promotion of the Sicilian Ecological Network (Natura 2000).
[08] Fishing Tourism	Act no. 164/1998 (GU no. 124 of 30 May 1998); DM no. 293 of 13 Apr 1999, Ministry of Agriculture, Food and Forests. Regulation of the “Pescaturismo” activity.	1999	It aims to enforce the “Pescaturismo” (i.e. fishing tourism) regulations.

3 Conflicts

Describe the conflicts generated by the implementation of the above management measures (section 2.3) aimed at achieving the priority objective; such conflicts will generally include:-

- Primary conflicts between environmental conservation and resources use
- Secondary conflicts between different sectors/users

Wherever possible, please describe the conflicts in the competition for sea space and related impacts in accordance with the following eight categories:-

- Extractive use of living marine resources (e.g. fishing)
- Extractive use of non-living marine resources (e.g. aggregate extraction, oil-and-gas exploration)
- Mariculture
- Commercial shipping
- Biodiversity conservation
- Marine renewables
- Amenity/recreation/tourism

- Military activities

Maps of the distribution of different activities can be used here to illustrate the spatial scale of the conflicts. However, please describe and discuss the conflicts rather than just trying to present and address them through a matrix, as this general approach has already been followed through WP3.

The implementation of the above listed management measures (sections 2.3) provides, on the paper, the legislative and management basis to facilitate the achievement of the priority objective. All the legislations and regulations listed in the section 2.4. interact with the priority objective but, while some of them are articulated in synergy with it, others generate conflicts with the conservation of the biodiversity in the Egadi MPA.

The primary conflict in our sub-case study is between *fisheries and conservation* and between *tourism and conservation* while the secondary conflict is between *fisheries and tourism*.

Fisheries vs conservation

The Egadi Islands host highly productive fishing grounds exploited for a long time by fishermen coming also from nearby areas. The institution of the Egadi MPA (Decree of 27 Dec 1991) originated an immediate reaction from trawlers and small-scale fishermen from adjacent harbours (Trapani, Marsala and Mazara del Vallo) due to the fishing ground reduction caused by the MPA: there was a strike of trawlers who blocked the activities of the Trapani harbour for days. Fishermen declared that they had not been involved and informed about the institution of the MPA, obtained a 90-day suspension of the MPA start and, as a sort of special concession, a D zone open to trawling was created that included the deep trawling grounds between the three islands, also as a mean for linking the A-B-C zones around the islands. By the way, a D zone does not exist in any other Italian MPA.

According to the interviews there are contrasting attitudes of local artisanal fishermen towards the MPA regulations: some are scared that artisanal fishing will undergo further restrictions, some are very happy because fishers from outside are banned inside the MPA, and some are unhappy because they state they suffer the current limitations without enjoying any positive outcome. Some artisanal fishermen who feel “protected” by the MPA against fishermen from the outside do not see any conflict between conservation and fishery. Concerning possible positive effects of protection on fish abundance, opinions are discordant.

The most frequent reasons of the fisheries vs. conservation conflict according to the interviews are the large size of the MPA and the absence of stakeholder involvement. Several interviewees declared that the area is too large (this is the largest Italian MPA and one of the largest in the Mediterranean) to be efficiently protected and suggest a re-zonation with a reduction of the protected area. Some members of fishermen associations attribute the severe reduction (ca. 50%) of the fishing fleet in the last decades to the presence of large protected areas in the Trapani compartment.

As regards the rumours of a re-zonation, which is officially aimed at releasing the conservation pressure on Marettimo by decreasing the extension of the current A zone while creating A zones in Levanzo and Favignana, the interviewees had different feelings: some had a positive and optimistic attitude while others i.e., artisanal fishermen were much scared to lose their favourite inshore fishing grounds due to the re-zonation.

The competition for space has also generated a harsh conflict between Egadi and Trapani fishermen due to the MPA regulations, which allow only to Egadi residents and landlords to fish inside the B and C zones. The reserve is seen by some stakeholders as a sort of privilege to Egadi residents while fishers from nearby areas are angry because they have to go farther from the coast to fish in less productive fishing grounds.

The fishing sector that conflicts most heavily with conservation is trawling, which is allowed only inside the D zone to trawlers registered in Favignana and Trapani. The main complaint is about the trawler exclusion from the C zone, which includes some fishing grounds deeper than 50 m that were exploited especially during the winter time before the MPA. Some interviewees stated that illegal trawling occurs frequently in the C and even B zones mainly in winter and during the night, with a heavy impact on coastal fish resources and on seagrass meadows. The enforcement bodies which patrol the MPA confirmed the existence of illegal trawling and attributed poor enforcement to the lack of economic and human resources. Some interviewees reported about requests submitted by trawl

fishers to the MPA management body to reduce the trawl ban area and to allow trawling inside the C zone at >50 m depth: apparently such requests have been debated at different institutional levels but no modification to the current regulations has been approved to date.

A conflict between recreational fishing and conservation stemmed from the interviews, with some of the interviewed stakeholders stating that spearfishing should be allowed at least to resident people. They explained that spearfishing as well as hand collection of limpets and sea urchins (all currently prohibited inside the MPA) is a traditional, locally well established practice and that for the young living on the islands the ban on spearfishing represents a problem because they either fish in hidden localities exposing themselves to a risk or move to the main land for their hobby. Also some interviewees are well aware that spearfishing is one of the few spare time activities left to the young and think that some form of regulated recreational fishing should be allowed, maybe in dedicated areas. Nonetheless other stakeholders are keen to ban all sorts of non-professional resource extraction from the MPA and demand more patrolling to ensure observance of MPA regulations.

Tourism vs conservation

Most of the Italian legislation and regulations related to MPAs recognize to nature conservation an “added value” able to diversify tourism economy. The Management Plan “Isole Egadi”, approved recently for the sustainable use of the Natura 2000 sites, represents a step in this direction. However tourism can be a double-edged blade that can negatively impact the environment (through e.g., discharge from cruise ships, building in coastal areas and increased sewage and waste). According to most - not all - of the interviewees the tourism in the Egadi is not necessarily linked to the existence of the MPA. Some stakeholders operating in the tourism sector stated that most tourists do not even know of the presence of an MPA: they rather come for the beauty of the landscape and seascape, for the archaeological sites and for the presence of a traditional tuna fishery (“tonnara”). The availability of low-cost flights to the nearby Birgi airport is also perceived as a strong incentive to tourist traffic. Some interviewees also think that a more efficient promotion of the MPA could attract more tourists although an efficient interaction between the MPA and the local tourist operators is still lacking. The islands have always attracted huge amounts of tourists, especially people from Trapani who come for one-day trips. Such mass-tourism has involved mainly Favignana and not Levanzo (which is small and with limited accommodation facilities) or Marettimo (which is farther offshore and more isolated). The MPA did not do much to address the impact of mass tourism, which is typically well accepted by restaurant and hotel owners but is not environmentally sustainable.

The main tourist-related uses of sea in the MPA are (1) pescaturismo (fishing-tourism), (2) scuba diving and (3) boat excursions.

Pescaturismo is an integrative activity for artisanal fishers introduced by Decree no. 293 of 13 April 1999, which allows tourists to go aboard fishing boats in order to participate to artisanal fishing operations, thus having a taste of a fisherman’s life. Pescaturismo is allowed in the B, C and D zones of the MPA and in the A zone only for fishers residing in Marettimo. Some fishers stated that pescaturismo is a way to integrate their salary in summer, when catches are low and tourists are numerous. However other fishers complained about bureaucracy costs to obtain the authorization as well as about the privilege for Marettimo fishers. Pescaturismo is not perceived by interviewees as an activity conflicting with conservation because artisanal fishing boats can host less than 10 tourists and selective gears are used.

Underwater excursions in the MPA are strictly regulated and allowed only in a few sites imposed by the MPA management body. There are two diving centres in Favignana and three in Marettimo. Neither scuba diving nor snorkelling are permitted without a guide in the A (no-take area) zone. A diving owner stated that scuba diving is not still an important economic activity in the Egadi despite the fact that coastal bottoms are among the most beautiful in the Mediterranean. Divers are generally disappointed by the scarce amount of fish. He also stated that there is no conflict between diving and conservation due to good management. Diving operators are highly interested in the protection of the sea as their economy is strictly dependent on the good status of the marine environment. For this

reason they generally report illegal activities that impact on the environment to the competent authorities.

Boat excursions are among the most impacting yet economically important tourist business in the Egadi Islands. This activity is concentrated from April to October with a peak in the summer months and is made up of (1) small private boats owned by tourists, (2) small boats hired from local residents, (3) large boats coming from Trapani and hosting up to about 100 passengers for one-day trips that make several stops at the most attractive spots that include sensitive habitats like e.g. the coastal caves in Marettimo. The boating business has grown to such a point that it is now regulated the MPA management body: a limit to the number of authorized boats and to the amount of passengers has been set in order to reduce the impact on the marine environment. Moreover, several mooring buoy fields have been established around the islands to reduce the impact of anchors on the sea bottom. The buoy fields can be used after a payment of a ticket to the MPA.

Most interviewees expressed strong opinions - generally negative - on this boating issue, especially against the activity of the larger boats. These are thought to conflict with the environment through waste, noise and disturb caused to the marine biota along the coast and into the caves. Also local residents who rent their small boats suffer the strong competition from the big charterers: people from Marettimo feel already damaged by the presence of the A zone and by the geographical isolation, and would like to have exclusive rights on the guided tours around their island. Generally passengers of the large boats have a meal on board, so they do not land on the shore and as a result they do not contribute to the local economy. The buoy fields are generally regarded positively as the Egadi ports are small and cannot host all the boats arriving from mainland Sicily, although most tourists arriving with their own boats do not even know of the existence of the fields and anchor everywhere with the risk of impacting sensitive habitat such as *Posidonia oceanica* seagrass meadows.

Fisheries and tourism

Generally speaking professional fishers look with interest at those tourist-related activities (pescaturismo, boat trips, boat rental, fish retailing on the wharf, house rental) which produce an increase in their revenues. From this point of view no conflict seems to occur between fisheries and tourism. A totally different feeling arises when the topic moves to recreational fishing. While some interviewees feel that spearfishing, angling and limpet and urchin collection should be allowed in a regulated way to residents, others (namely the fishermen) appreciate the current ban because they request to be allowed to fish inside the MPA in an exclusive way. Others suggests to individuate some areas inside the MPA dedicated to recreational fishing to avoid conflicts with professional fishermen. Overall the main conflict is generated by two illegal activities sometimes carried out by recreational fishermen: (1) higher recreational catches than allowed by the law (individual daily quota: 5 kg), (2) recreational fishermen selling their fish, what's more at a low price. Both conducts are strongly blamed by professional fishers as unfair competition

Wherever possible, please describe the conflicts in the competition for sea space and related impacts in accordance with the following eight categories:

- Extractive use of living marine resources (e.g. fishing)
See primary and secondary conflicts above described.
- Extractive use of non-living marine resources (e.g. aggregate extraction, oil-and-gas exploration)

The Egadi archipelago has been for years an area of great interest for the exploration and extraction of non-living marine resources like oil and gas. The first conflict generated by such use is the subtraction of space to other activities like fishing, but there is also a strong risk for the biodiversity and integrity of the marine environment. Because of this, some interviewees declared their contrariety to any exploration. They also showed apprehension due to the influence that powerful companies might have on the political decisions related to the management of the extractive use of non-living resources. Some interviewees were worried about recent authorization to air gun exploration in two large areas close to the MPA (Fig. 6) favoured by an Italian government measure called "Environmental corrective" (15/06/2012), which prohibits any prospecting, exploration and extraction of gas and oil within 12 miles

from MPAs except for off-shore hydrocarbons licenses that were in progress at the date of entry into force of the new measure.

- **Mariculture**
No mariculture activities exist in the Egadi MPA.
- **Commercial shipping**
Commercial shipping in the Egadi area is related to ferry and hydrofoil routes aimed at the transport of passengers and supplies to the islands. Commercial routes directed or departing from Trapani pass close to the Egadi, as well as large carriers from southern French and northern Italian ports directed to Malta and Suez. This activity conflicts to some extent with both fisheries and conservation due to interaction with fishing gear, acoustic impact on fish and water pollution.
Biodiversity conservation
See primary and secondary conflicts above described.
- **Marine renewable**
- **Amenity/recreation/tourism**
See primary and secondary conflicts above described
- **Military activities**
The NATO base at Birgi is located close in the mainland and low flights are common in the surrounding area.

Maps of the distribution of different activities can be used here to illustrate the spatial scale of the conflicts. However, please describe and discuss the conflicts rather than just trying to present and address them through a matrix, as this general approach has already been followed through WP3.

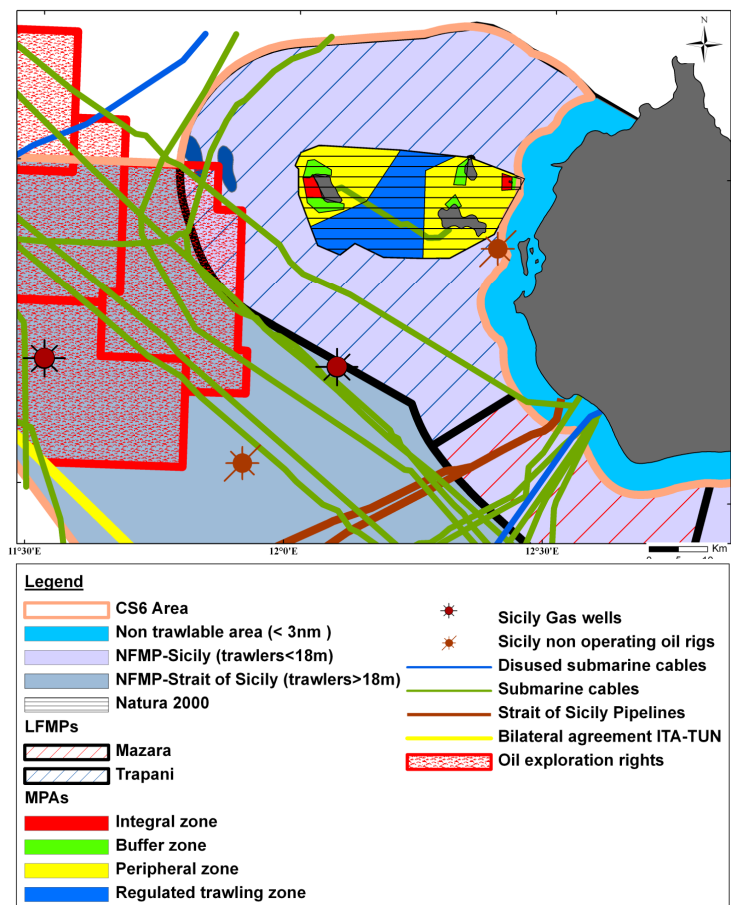


Figure 6 – Map showing the spatial distribution of the main activities and of existing sectoral initiatives in the Egadi MPA. LFMPs = Local Fisheries Management Plan. NFMP = National Fisheries Management Plan

When describing the conflicts, it may be worth exploring the influence of driving forces, *i.e.* key trends that are influencing conflicts, which may include:

- Changes in regulatory or administrative environments, which promote or restrict a particular type of marine space use, including strategic sectoral obligations, *e.g.* 20% of energy from renewables by 2020.
- Changes in market conditions, which affect (positively or negatively) a particular type of marine space use;
- Cultural changes, shifts in public perception, *etc* which support or hinder the development of a particular sector.

From the results of the interviews it is clear that nowadays more knowledge is available through mass media, and people can participate in discussions and have their opinion expressed. Research still has a very modest role in the public perception because the MPA managers have involved researchers only rarely in the management or in decision support. Some interviewees feel that research bodies (which are locally represented by the universities of Palermo and Trapani and by C.N.R.) should be strongly involved and that the MPA would benefit from scientific support.

4 Governance approach and effectiveness

The complex spatial, legislative and management system of the Egadi archipelago

The Egadi MPA and Natura 2000 sites (SPAs and SCIs, there are no SACs (Special Area of Conservation) yet) are almost completely overlapped and “spatially nested” in the Trapani LFMP (Fig. 3). All these initiatives fall in the areas of two National Fisheries Management Plans (NFMP: GSA 16 and Sicily) but they are managed under different legal frameworks.

From a legislative point of view, the Egadi MPA is regulated - like all other Italian MPAs - under two acts (no. 979/1982 and no. 394/1991) and is under the control of the Ministry of the Environment that delegates responsibility for management.

Egadi SPAs and SCIs are regulated by the EU Bird and Habitat directives, are included in the Natura 2000 network and their designation in Italy is delegated to the regions. Their management can be delegated to local institutions or NGOs.

The Egadi MPA and Natura 2000 sites (SPAs, SCIs) aim at the maintenance or restoration to a favourable conservation status of natural habitats and of biological diversity in the area. However, one of the objectives of Natura 2000 is also to take into account the economic, social and cultural requirements and regional and local characteristics.

The activities in the Natura 2000 sites of the Egadi Islands are regulated by a management plan whose beneficiary is the Regional Province of Trapani.

The current MPA management body is the Municipality of Favignana but the MPA is managed by a director helped by an advisory committee. The use of the MPA is disciplined by a regulation approved by the Ministry of the Environment but no management plan still exists.

The NFMP and the LFMP refer to the Common Fisheries Policy (CFP), to the Green paper reform of the CFP, and to the European Fisheries Fund (EFF). The NFMP is under the responsibility of the Ministry of Agriculture, Food and Forests (that includes also fisheries) while the LFMP is administratively linked to the Sicilian Department of Fisheries but it is managed by the Co.Ge.Pa. (Consortium for the Management of Artisanal Fisheries) of Trapani.

Local and national management plans are already enforced with the general objectives of preserving the stock turnover capacity, protecting fish essential habitats and enhancing the economy of the fishery workers through the increase of job opportunities in fishery-dependent areas.

In this complex system, the confusing and ineffective governance of the Egadi archipelago is the result of a mixed approach that is discussed hereafter.

- a top-down approach (relying on government power and regulation), or

- a decentralised approach, whereby a degree of autonomy to fulfil certain responsibilities is granted to lower levels of government: deconcentration, delegation or devolution (**see glossary**)
- a bottom-up (relying on user participation and community self-governance), or
- a market approach (relying on economic incentives), or
- a combination of different approaches, in which case, please try to identify the main approach (*i.e.* the approach followed in driving the decision-making process)

From a top-down towards a bottom-up process

The Egadi MPA was established by the Ministry of the Environment in 1991 with a top-down approach which did not consider any form of stakeholder participation to the design and planning of the MPA. Local residents and fishermen were not given the opportunity to comment on the MPA designation and most of them have opposed its existence from the beginning. The local politicians involved in the MPA creation process tried to meet the requests of both fans and opponents of the reserve in order to reach a “painless” compromise. The main fans were environmentalists, cultural associations, research bodies; the main opponents were fishermen from Trapani and Marsala, (especially trawlers - see conflicts section) and politicians of the opposite party to the one supporting the MPA creation. This governance approach ended in the ungovernability of the area, which was protected only on the paper until 2001 when, after a 10-year management by the Coast Guard, the management responsibility was transferred to Municipality of Favignana. As a matter of fact the first positive effects of the management change came out only in 2010, when an executive regulation of the MPA was implemented.

The ineffectiveness of the governance approach adopted during the 1991-2010 period is confirmed by the results of the interviews. All the twenty-three stakeholders stated that only after the adoption of the MPA regulations and the designation of the current director, appointed by the Ministry of the Environment, the Egadi MPA is starting to work. Some interviewees declared that they were initially worried about certain rules and, above all, about the fines to pay in case of infringement. Another positive perception which some stakeholders expressed was about the bottom-up approach that the management body is finally adopting. The adoption of such new governance approach was evident during the formulation of a proposal dealing with the re-zonation of the MPA. However, the new bottom-up consultations for the MPA re-zonation involved mainly the trade association of fishers while other stakeholders such as hotel owners, diving centres, tourist agencies and also some enforcement bodies were not consulted.

Disconnections amongst the key sectoral policies involved in the governance framework

The key sectoral policies involved in the Egadi governance framework are still disconnected. As described in the context, the Egadi archipelago is a mosaic of sectoral initiatives that aim to nature conservation and to a sustainable use of resources. However there is a clear disconnection among the legislation supporting the key sectoral policies involved in the Egadi. MPAs refer to the national legislation while Nature 2000 sites, which include the Egadi Islands itself as a SCI, follow the EU Habitat Directive for their creation and general principles and the Regional Department of the Environment for their management. An analogous disconnection exists for the management of fisheries in the area, which is split between the NFMP - which refers to the CPF and to the Ministry of Agriculture, Food and Forests, and the LFMP - which refers to the Regional Department of Fisheries and to the local management body (Co.Ge.Pa.) and is funded by the EFF (Fig. 3).

Different legislations and management bodies without any coordination or effective integration mechanism affect negatively the objective of conservation and valorisation of nature and make the solution of primary and secondary conflicts in the area difficult. These legislative and management malfunctions are clearly perceived by the interviewed stakeholders who expressed the need for a more effective integration among the key sectoral policies and for an effective coordination of the management bodies involved in the conservation and use of nature in the Egadi.

Discuss the overall **effectiveness** of the governance approach in achieving the priority objective, using both qualitative and quantitative descriptions wherever possible. This assessment of effectiveness can be based on the results from the MESMA WP2 framework.

- To what degree and extent is the priority objective in your case study being achieved?
The legislation and executive regulations crucial for reaching the priority objective in the Egadi MPA have been adopted only in the last two years. For this reason the management process which should bring to the maintaining or restoration to favourable conservation status of conservation features of the Egadi MPA is only in its initial stage.
- To what degree are primary and secondary conflicts being addressed? **If there are unsolved conflicts, how does that affect the achievement of the priority objective?**
The LFMP and the regulations of the Egadi MPA contain measures only recently adopted that are expected to attenuate both intra-sectoral (small scale fishery vs trawling) and inter-sectoral (conservation vs fisheries) conflicts. The recent Egadi Islands Management Plan, which includes the local Natura 2000 sites are expected to contribute to the reduction of the conservation vs tourism conflict. As reported in section 3, several conflicts still exist among the main activities going on in the Egadi MPA. The unsolved conflicts represent an important deterrent for the achievement of the primary objective because they involve politicians, trade associations and managers in a sort of “game of roles” aimed at defending the interests of single sectors. These unsolved conflicts are also producing negative effects even on the new bottom-up governance approach adopted for the re-zonation of the MPA (source: local newspaper articles).
- Is there any noticeable trend in terms of effectiveness (is the situation being improved, worsened, or stable)?
Thanks to the recent legislative tools adopted and according to the stakeholders perception recorded in the interviews,, the trend of the first 20 years of MPA management is now slowly being inverted with a likely improvement in the governance approach.

Specific elements of governance approaches that lead to high or low effectiveness in achieving the priority objective will be explored in detail in the next section. However, please do briefly outline and discuss the main reasons/factors (could be part of the context, policy framework, governance approach *etc*) that contribute to high or low effectiveness in achieving the priority objective.

The lack of an MPA management plan of the Egadi MPA hampers the fulfilment of the priority objective under any governance system. Without such a plan there is no clearly set objective and the measures contained in the MPA regulations are often confused; furthermore neither monitoring nor assessment of reserve effect exist to date. Some interviewed stakeholders stated that the absence of well defined and universally accepted objectives is the main deterrent against a socio-economic development related to the presence of the MPA. They also denoted the absence of a governance approach for an integrated management of the Egadi archipelago as a whole (see above). However, some positive elements of governance have been recently adopted, like e.g. the creation of a governance body inside the Trapani LFMP that includes many Egadi stakeholders, including the MPA director (Fig. 7). This is the first attempt to an integrated approach to the management of the Egadi archipelago and it might contribute to higher effectiveness in achieving the priority objective. However no strategic governance approach has been adopted to coordinate all the existing spatial-based initiatives related to nature conservation, fisheries and tourism (Fig. 3). The lack of an overarching coordinating body hampers the achievement of the priority objective.

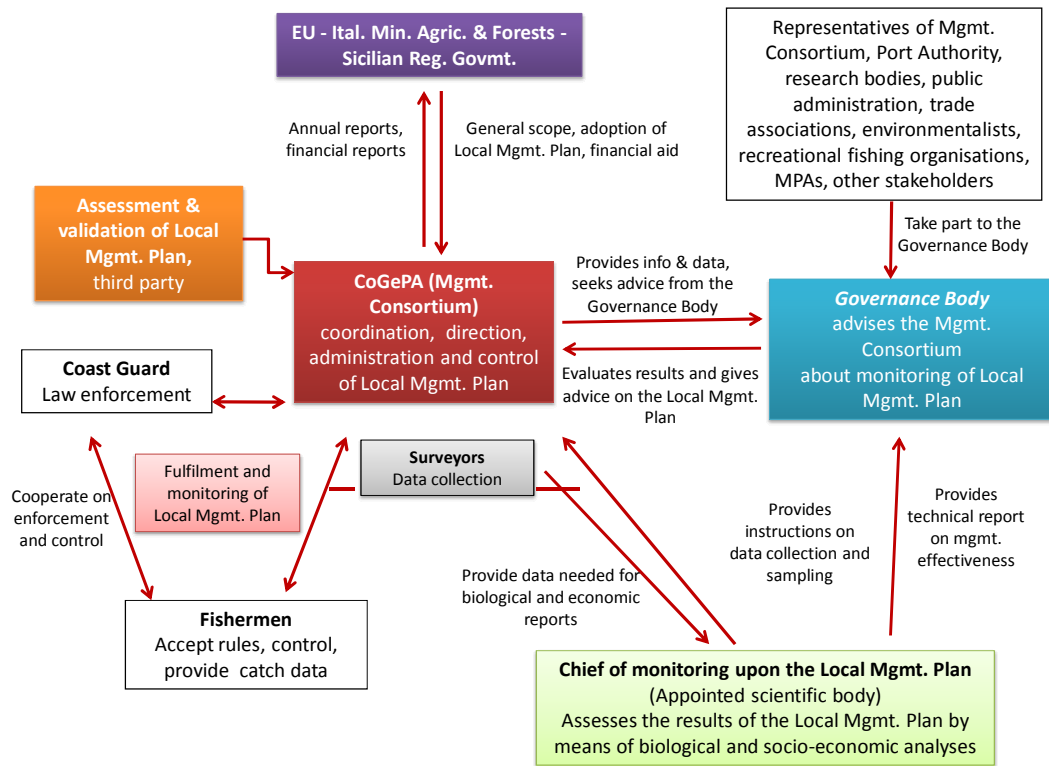


Figure 7- Governance system established by the Trapani LFMP, which includes a governance body.

5 Incentives

➡ Sub-section 5.1 feeds into Action 6.1 in the WP2 framework, and sub-section 5.2 feeds into Step 7 in the WP2 framework.

This section should include the following sub-sections:

5.1 A summary of the key incentives that have been applied to promote the achievement of the priority objective and to address related conflicts in the existing initiative you are evaluating, including how you (i.e. the person(s) conducting this governance analysis) think particular individual or combinations of incentives have been particularly effective or ineffective.

Please employ the list of incentives set out in Appendix III of this structure document. You only need to list and elaborate on the incentives that are applicable/relevant to the existing initiative you are evaluating. The description of legal incentives can refer back to section 2 (Objectives and management measures).

Economic incentives

E1 Promoting and protecting the rights and entitlements of local ‘customary’ users, *eg* through assigning fishing rights to certain marine areas and fish stocks (Tab.1, points 1 and 16).

These incentives, envisaged by the MPA regulations, concern generally rights and entitlements to local residents and deal with fishing, diving, anchoring, boat renting and boat trips. These incentives contribute to nature conservation but, in some cases, are also responsible of conflicts among MPA users (see conflicts sections).

E3 Seeking and promoting economic development opportunities and alternative livelihoods that are compatible with the priority objective and can generate sustainable income for local people (Tab. 1, point 15; Tab. 2, points 1,2,4,8,9,10).

These incentives are envisaged by several legislative tools which aim at creating opportunities and alternative livelihoods based on the valorisation and sustainable use of natural and cultural resources. In the Egadi MPA they involve the sectors of fishing (pescaturismo), tourism and green energy. As regards the latter sector, some interviewed stakeholders expressed the idea of transforming the Egadi in “Ecological Islands” characterized by the use of renewable energy. Following to the incentives provided by the sectoral legislation, a project entitled “Sole e stelle delle Egadi” (Sun and stars of the Egadi) has been funded by the Ministry of the Environment with the aim of knocking down carbon dioxide emissions and save more than 5 million KWh energy. This project meets both the priority objective and that of generating sustainable income for local people (<http://www.tuttogreen.it/isoled-egadi-il-futuro-eco-sostenibile-e-adesso>).

However these incentives are not still fully utilized due mainly to lack of information and divulgation and to the complex bureaucracy.

Interpretative incentives

I1 Using maps (paper or digital) for displaying boundaries, zones for different activities and related regulatory restrictions to support awareness and implementation of management measures related to the priority objective (Tab.1, points 1, 16).

I2 Promoting recognition of the potential resource development benefits resulting from the achievement of the priority objective, whilst being realistic about such potential benefits and not ‘over-selling’ them, *eg* displaying development zones to potential developers and investors, potential internal and spillover/export benefits of MPAs (Tab. 1- points 1, 16)

I3 Promoting recognition of the biodiversity and ecosystem conservation-restoration benefits of spatial restrictions (Tab.1, points 2, 11, 15, 16; Tab.2, points 4, 6, 10).

These interpretative incentives are neither well implemented nor organized in an integrated way. During the interviews some stakeholders involved in tourist services stated that many tourists are not aware of the MPA. They also said that online information is poor and that MPA regulations are complex and incomprehensible to foreign visitors since they are in Italian. The same interviewees reported the lack of an integrated approach to the divulgation of hard-copy or digital source information, which is mainly concentrated in the MPA offices. Also the tourist information kiosk has no sufficient informative literature to distribute to tourists for promoting and explaining the importance of complying with MPA restrictions. The absence of an efficient and integrated information network on the MPA regulations hampers the awareness and implementation of management measures related to the priority objective. For these reasons interpretative incentives should be enhanced.

5.3 Knowledge incentives

K5 Maximising scientific knowledge to guide/inform decision-making and monitoring/evaluation in relation to the priority objective. (Tab.1, points 1, 16; Tab.2, point 1).

As clearly highlighted by interviewed researchers, research organizations (namely, C.N.R. and local universities) have been rarely requested by MPA managers to carry out monitoring/assessment studies that can contribute to the increase of ecological knowledge, which can be used in management and decision-making. Research outcomes in the shape of technical reports are sent to the management body for an evaluation by the MPA committee. Conferences or thematic meetings have been sometimes organized to spread the results of scientific investigations. Most interviewed stakeholders recognized the importance of scientific knowledge for an efficient management of the MPA but they complained that scientific reports are often not properly released and are hard to understand for decision-makers who are not accustomed to such type of documents. As a result stakeholders do not know what are the effects of protection and which benefits could be used to improve they activity. Another common stakeholder perception was a lower “weight” of research if compared to economic and political priorities in the decision-making process.

5.4 Legal incentives

L1 Performance standards/conditions/criteria/requirements attached to licenses, concessions and user/property rights, *etc* in order to ensure the achievement of the priority objective, such as achieving environmental criteria and providing access rights for particular uses. (Tab.1, points 1, 16; Tab.2, points 1,2,6,7,8).

These incentives involve fishing activities and tourism for both services and structures. Based mainly on the LFMP and NFMP, fishers get some administrative and economic advantages if they convert their fishing gear to lower impact gear. The same advantages are given to tourist operators who link their activities to the respect, valorisation and sustainable use of natural resources.

L2 International-regional-national-local legal obligations that require the fulfilment of the priority objective, including the potential for top-down interventions.(Tab.1, points 6, 14).

A top-down approach has been adopted by the EU to oblige the Sicilian Region to individuate marine SCIs and provide them with a management plan. This approach started with a devolution that allowed the Ministry of the Environment to charge Sicily to designate Natura 2000 marine sites within December 2011. In order to comply with this request the Sicilian government gave the status of marine SCIs to existing Sicilian MPAs in order to accelerate the approval of the management plans of Natura 2000 sites.

L3 Adopting a sensitive but effective approach to legal interventions to address conflicts that would otherwise undermine the fulfilment of the priority objective, whilst avoiding a complete ‘command-and-control’ approach. (Tab.1, points 1, 16; Tab. 2, points, 1, 2).

These approaches are contained in the MPA regulations and in the local and national fishery plans.

L5 Effective system for enforcing restrictions and penalising transgressors in a way that provides an appropriate level of deterrence *eg* at national, EU or international level.

As it is clear from the interviews, compliance of restrictions in the Egadi MPA is still poorly enforced. However, some initiatives of the MPA management body, along with some measures contained in the LFMP (Tab.1, points 1, 15,16; Tab.2, points, 1, 2) include incentives aimed at improving the surveillance of the protected area using also local fishers and volunteers.

L9 Legal or other official basis for coordination between different sectoral agencies and their related sectoral policies, aimed at addressing cross-sectoral conflicts in order to support the achievement of the priority objective.

This important incentive is still lacking even if a first official attempting to create a inter-sectoral coordination has been recently established inside the LFMP (Fig. 4).

5.5 Participative incentives

P1 Developing participative governance structures and processes that support collaborative planning and decision-making, *eg* user committees, participative GIS, postal consultations on proposals that provide for detailed feedback, participative planning workshops, *etc*, including training to support such approaches.

A first attempt of such incentive is represented by the governance body instituted inside the LFMP (Fig. 4).

5.2 A discussion on how you think governance could be improved to better meet the priority objective and to address related conflicts through improved individual or combinations of incentives.

The command-and-control approach has not produced any positive effect mainly due to an ineffective mechanism of enforcement, patrolling and control of the various activities going on in the Egadi MPA. The idea that no certain heavy fine will be generated by the inobservance of the rules has encouraged illegal activities with negative effects on natural resources. In the absence of an integrated approach to the management of the MPA, the mechanism of the incentives is the only one that is allowing the applications of some conservation measures (point 5.1). Economic incentives are the most efficient because they raise a big interests among stakeholders. In the past, economic incentives to the fishery

sector were given in the shape of a subsidy for technical or biological fishing stop (the so called “fishing rest”) that was a form of temporary fishing effort reduction, but it did not have any positive effect on fishery resources. Currently only E1 and E3 economic incentives are applied in the Egadi. However while E1 compensates the Egadi residents for the restrictions related to the MPA, E3 involves several sectors of the local economy and stimulates them to create job opportunities and alternative livelihoods based on the valorisation and sustainable use of natural and cultural resources. This approach could be the base on which building an alternative scenario of more effective governance in the Egadi MPA. The idea that nature conservation can give an added value to the local economy might pave the road to a more active participation of stakeholders to the MPA governance. However, in this new scenario several typologies of incentives need to be integrated. Scientific knowledge and regular monitoring/evaluation activities are needed to support decision-making in relation to the priority objective (point 5.3, K5); legal incentives (point 5.4, L1, L2, L3, L5 and L9) are already contained in the “Isole Egadi” management plan and in the Trapani LFMP but are not yet fully implemented. Results from the interviews highlighted the lack of interpretative incentives (5.4, I1, I2, I3) essential to divulgate the potential benefits deriving from the conservation of nature and its biodiversity. This gap can be bridged thanks to Decree n. 83 of February 2012 of the Sicilian Department of the Environment (Tab. 2, point 7). This decree, using European funds (P.O. FESR Sicilia 2007/2013, operational objective, 3.2.2 - intervention line 3.2.2.4), provides economic support to the stakeholders involved in tourist services that carry out joint actions aimed at promoting biodiversity and at improving the protection, sustainable development and entrepreneurial promotion of the Sicilian Ecological Network (Natura 2000). But perhaps, the biggest gap in the Egadi MPA is still the absence of participative governance structures and processes that support collaborative planning and decision-making. Several municipal and provincial committees exist in the area and there is also an MPA committee, but they are often sectoral and with a scarce ability of influencing decision making. Indeed, the development of participative incentives along with other incentives is essential to support awareness of the MPA and implementation of management measures related to the priority objective. To ensure that incentives exert their maximum efficiency a clear management structure and a new governance approach are needed, which join and coordinate all the activities aimed at nature conservation that are contained in the regulations and management plans existing in the Egadi archipelago (see also cross-cutting themes section below).

- **You are encouraged to explore alternative scenarios of more effective governance in case studies, which can be more realistic or visionary, and discuss which incentives could be used under each alternative scenario**

You may include in this section discussion of different **scenarios for improving** governance in the existing initiative. The scenarios may include, for example, a key change or break-through in the planning or legislative process, more space for stakeholders to influence the policy process, or more input from scientists. Please note that such scenarios should not be purely hypothetical, and a reality base for the scenarios will be needed, for example, through grounding your scenarios on real examples in a similar context, where positive changes in the governance have been observed. You can then describe the incentives that will be needed to support these scenarios drawing on the list of incentives set out in Appendix III.

6 Cross-cutting themes

GA PA however, when discussing cross-cutting theme, the discussion can ‘go broader’ to look at wider institutional issues. The achievement of the objective(s) often cannot be isolated from the broader institutional set-up.

This section is the ‘**discussion section**’ in your case study report, which draws on results and findings in previous sections. The purpose of this section is to discuss and highlight broad thematic themes that cannot be captured under previous sections. The main difference between sections 5 (Incentives) and 6 (Cross-cutting themes) is that section 5 looks particularly at specific and individual incentives, while section 6 looks particularly at wider-scale institutional/structural issues that may underpin or affect the effectiveness of individual incentives and/or the overall governance approach as described in section 4.

- Combining top-down role of state and bottom-up participative approaches;
- Inter-sectoral integration and related power issues including compensation (in emerging MSP framework);
- Cross-border issues between different countries;
- Environmental and social justice issues and related rights of appeal;
- Influence of different knowledges and of uncertainty in decision-making. *eg* different claims to knowledge, and how uncertainty plays out in decision-making, establishing cause-effect relationships.

Please refer to the list of cross-cutting themes and sub-themes in Appendix IV, for suggestions and examples as to what this section might include. **It is envisaged that the five cross-cutting themes above will be applied to all case studies and sub-case studies, while the sub-themes will be applied where they are relevant.**

The Egadi MPA is a complex system of spatially-based sectoral initiatives which aim at nature conservation and sustainable use of natural resources in the area.

The map showing the management initiatives dealing with conservation and fisheries (Fig. 3), suggests that there is a mosaic of initiatives spatially overlapping but disconnected from an institutional and legislative aspect. Many important natural, legislative and management elements contribute at filling the mosaic but nobody really knows how to organize them in order to preserve the marine environment while exploiting the natural and cultural resources in fair and sustainable way.

The institutional framework involves a Municipality, a Province, two Departments of the Sicilian Government and the Government itself, besides two national Ministries. The legislative framework is even more complex due to the peculiar autonomous status of Sicily which has jurisdictional power on fisheries but not on MPAs, which depend from the Ministry of the Environment. To make things more complicated, the Sicilian government has been charged to designate the Natura 2000 marine sites, which were made coincident with the Sicilian MPAs. A consistent contribute to the entropy of this system has been given by the NFMP and LFMP, which refer to the Ministry of Agriculture, Food and Forests and to the Sicilian Department of Fisheries, respectively.

As regards the management only the MPA and the LFMP have a management body while it is not clear who should manage the Natura 2000 sites. The Natura 2000 management plans and the LFMP have been approved only recently.

The Egadi MPA is only one element of such complex system but it also suffers an inefficient governance approach. Established in 1991, it started to really work only in 2010 when the first regulations were approved and a new director was appointed. Regulations and a novel bottom-up approach started during the MPA re-zonation proposal, have been much appreciated by local stakeholder. Moreover, the interviews highlighted the necessity of rules and of a management plan that set how to meet the objectives of the MPA and how to individuate the measures necessary to obtain efficient nature protection in the MPA.

The new management approach of the MPA, joined to the Natura 2000 management plans and to the LFMP, can be the base on which building an alternative scenario of more effective governance in the Egadi MPA. As discussed in the incentives section, the above management plans, plus the MPA regulations and some legislation contain a mixed of incentives which could concretely support the setup of an effective governance. Actually, the incentive mechanism is the only one that is allowing the application of some conservation measures (point 5.1). But, in order to let the incentives exert their maximum efficiency, it is necessary to have a clear management structure which joins and coordinates all the activities aimed at nature conservation, already contained in the regulations and management plans existing in the area.

A hypothetic yet realistic governance scenario needs some changes to the management approach adopted in the Egadi.

- In the Egadi area all initiatives related to nature conservation have been realized through top-down processes. Such non-participative approach caused a general opposition to the initiatives

and triggered intra- and inter-sectoral conflicts with consequent negative effect on the efficiency of the initiatives. Local nature conservation policies have been often perceived as a mix of impositions for many people and of subsidies for a few, and have promoted the pursuit of personal interests as opposed to the responsibility of bearing efforts for attaining collective benefits. The re-zonation of the Egadi MPA, still underway, offers an opportunity to test a bottom-up participative approach. However some stakeholders were disappointed for the exclusion of sectors of the local economy and of surveillance bodies from the re-zonation process. Moreover, reading local newspapers it appears that the re-zonation seems a game played at the political and institutional level and between trade associations of fishers. If these problems are to be solved, the new scenario should try to balance the contribution from local stakeholders and from the national and local governments to decision making.

- The bottom-up processes in the new scenario should be coupled to a more effective form of decentralization. Although some of them have already been launched (e.g., SCIs designation, LFMP) more decisional and economic power should be transferred to regional and local institutions as regards nature conservation, fisheries and tourism.
- Another important aspect is the necessity to make the objectives contained in the “Isole Egadi” management plans and in the LFMP really operational. These plans appear formally aligned with the high level policies but the underlying concepts and ideas seem to vanish in the process toward implementation. This is particularly the case for objectives related to nature conservation and to the enhancement of fishermen welfare.
- Another aspect which affects the governance efficiency in the Egadi is the complexity inherent in all the different policies in the area. For this reason the existing initiatives must be considered in the new governance scenario as a vehicle for promoting cooperation and collaboration between different levels of government (e.g., national, regional, and local) and different sectoral agencies in developing and implementing a spatial approach to management. In this new process an important role can be played by NGOs, which could promote cooperation in fulfilling the priority objective.
- As discussed in the incentive section also scientific knowledge needs to be improved and regular monitoring programs should be carried out to evaluate the trends regarding the attainment of management objectives.
- Last but not the least, information to the public and transparency in decision making are essential pre-requisites for the effectiveness of a new governance scenario. Wide stakeholder involvement should be promoted at the early stages of any important management decision. Improvements in information, participation and transparency will realistically promote social acceptance and identification with the management system, thus facilitating the implementation of policies.

To meet the requirements of the governance scenario depicted above the governance institutions should be transversally linked, harmonised and coordinated.

A governance body able to coordinate and integrate all the management initiatives could be represented by a permanent committee that includes representatives of (i) local institutions (Egadi MPA, Regional Province of Trapani, CoGePA Trapani), (ii) research, (iii) local NGOs, (iv) local entrepreneurs, especially those involved in tourism and fisheries. Such a committee composition would assure an appropriate balance between stakeholders and institutions in relation to the priority objective. Its main role could be that of analysing and comparing all the initiatives planned in the area concerning environment, fisheries and tourism. The aim of such governance body would be the integrated coordination of activities in order to attain an efficient use of economic resources assigned at the conservation and sustainable use of natural resources. Moreover, thanks to a thorough knowledge of marine activities and uses gained from the participation of the different stakeholders, the committee could adopt appropriate management approaches for promoting interactions and dialogue between different sectors in order to reduce primary and secondary conflicts in the area. Using the “power” of the incentives, the knowledge from research and the intermediary role of NGOs the fundamental issue of intra- and inter-sectoral conflicts could be concretely resolved with benefits for the governance of the Egadi MPA. However, in order to attain an operational status the committee should be appropriately funded and its opinion should be implemented by decision makers.

7 Conclusion

Please summarise and highlight the key messages and conclusions from your case study.

The Egadi archipelago is a complex system of spatially-based sectoral initiatives that aim at nature conservation and sustainable use of natural resources in the area.

The Egadi MPA is a component of such complex system. It has proved an interesting case study that highlighted many institutional, legislative and management lacks that have determined an inefficient governance approach in the area in the last twenty years. Local policies have often been perceived as a mix of impositions to many people and subsidies to few. Such approach has promoted the pursuit of personal interests, as opposed to the responsibility of bearing efforts for attaining collective benefits.

The lack of a management plan in the MPA hampers any effective governance aiming at meeting the primary objective of maintaining or restoration to a favourable conservation status in the area. Without an implemented management plan the objectives cannot be fulfilled, the measures contained in the MPA regulations cannot be effectively enforced and a monitoring and evaluation program cannot be launched.

Several intra- and inter-sectoral conflicts exist among the main activities going on in the MPA. Unsolved conflicts represent an important deterrent to the achievement of the primary objective because they involve politicians, trade associations and managers in a sort of “game of roles” aimed only at defending the interests of single sectors.

However some positive elements of governance have been recently adopted in the Egadi. First of all the implementation of the MPA regulations and a new bottom-up approach, started during the MPA re-zonation process underway. Then, the implementation of the Trapani LFMP, which includes a governance body that involves many local stakeholders as well as the MPA director. This is the first attempt to an integrated management approach in the Egadi archipelago and it could contribute to higher effectiveness in achieving the priority objective. Also the recent implementation of the “Isole Egadi” management plan for the governance of the Natura 2000 sites represent another important step towards an integrated management of the conservation and sustainable use of the Egadi natural resources.

However, to date no strategic governance approach has been set to coordinate all existing initiatives with spatial elements related to nature conservation, fisheries and tourism. The lack of a coordinating body encompassing the whole area hampers the achievement of the priority objective.

A possible new governance scenario should be based on a clear management structure, which could be represented by a permanent committee that includes representatives of (i) local institutions (Egadi MPA, Province of Trapani, CoGePA Trapani), (ii) research, (iii) local NGOs, (iv) local entrepreneurs, especially those involved in tourism and fisheries. Such committee should coordinate and integrate all activities aimed at the conservation and sustainable use of natural resources. Moreover, thanks to a thorough knowledge of marine activities and uses gained from the participation of the different stakeholders, the committee could adopt appropriate management approaches for promoting interactions and dialogue between different sectors in order to reduce primary and secondary conflicts in the area. Using the “power” of the incentives, the knowledge from research and the intermediary role of NGOs the fundamental issue of intra- and inter-sectoral conflicts could be concretely addressed with benefits for the governance of the Egadi Archipelago. However, in order to attain an operational status the committee should be appropriately funded and its opinion should be implemented by decision makers.

D. METHODS

“Sicily” sub-case study: Egadi MPA

Priority objective: To maintain or restore to favourable conservation status of conservation features

Primary (P) and Secondary (S) conflicts: P1) between fisheries and conservation; P2) between tourism and conservation; S) between fisheries and tourism

Method: semi-structured interviews

- 1) Document analysis: going through reports, meeting minutes, policy documents, newspapers etc to collect information relevant to the research themes.
- 4) Semi-structured interviews to stakeholders of the Egadi MPA.

List of the stakeholder groups interweaved

1) Fishermen from Favignana, Levanzo, Marettimo, Trapani, Marsala, San Vito Lo Capo (Fisheries which host boats authorized to fish inside the Egadi MPA):

- Trawlers
- Small scale fisheries
- Amateurs (Recreational fishing)

2) Public administrations and politicians

- Management Body of Egadi MPA (Director, members of the MPA advisory board, others...)
- Local government (mayor of Favignana, component of town council, others)
- Regional Province of Trapani (President, Provincial Councillor of the environment, others)
- Cultural and Environmental Heritage Office

3) Consortium for Local Management Plan of Fisheries (Co.Ge.Pa)

4) Research bodies

- ISPRA (Public institution)
- University of Trapani and Palermo (Public institution)
- CNR –IAMC (Public institution)
- Private researchers

5) Enforcement

- Port Authority
- Carabinieri
- Revenue Guard Corps
- Municipal Police

6) Trade associations

- One member of the most representative trade association in the Egadi islands

7) Tourism industry

- Diving
- Pesca turismo, (Fishery tourism)
- Rent boat (taxi a mare, etc)
- Reception structures
- Restoration (restaurants)
- Tourism agencies

- 8) Non profit organizations that have some interest in the MPA
- Environmentalists
 - Lega Navale
 - Gulliver associazione sportiva culturale (scuola di vela)
 - Associazione Aegusa onlus
 - Associazione C.S.R.T (Marettimo)

APPENDIX

- All governance analysis reports should include a **statement on positionality**, which can be added as an appendix. The statement should describe what role the authors of the report play within the case study itself, or any relevant involvement/position they have in relation to it, how this might affect governance analysis in the case study and what measures were taken to reduce any bias related to your position (see below for details).
- **Giovanni D’Anna** – Contact person for the governance analysis in the Strait of Sicily, sub case study “Sicily”. Planning and coordination of the activities for the governance analysis in the Egadi MPA. Running of semi-structured interviews to the Egadi stakeholders and transcription of about one third of them. Main author of the report. Involved in the Local Fishery Management Plan (LFMP) of Trapani for scientific aspects related to the monitoring and evaluation of the plan. The involvement in the LFMP could have positively affected the governance analysis due to deep knowledge of the legislative and management frameworks on which the plan is based. Neutrality and objectivity were taken as measures to reduce any bias during the conduction of the governance analysis in the Egadi.
- **Fabio Badalamenti** – Fully involved in the governance analysis process within MESMA. Contribution to the preparation of the semi-structured interviews for the “Sicily” sub-case study, running of about half the interviews and transcription of about one third of them. Previous experience on similar approaches with Libyan MPA stakeholders. Co-tutor of a PhD thesis (Himes AH) on the perception of Egadi’s stakeholders about the local MPA. Lecturer to Lebanese, Moroccan, Syrian and Turkish scientists on the collection of information from stakeholders to assess the importance of cultural and socio-economic aspects linked to biodiversity conservation (UN SAP-BIO project). These previous experiences allowed for a neutral and objective approach during the interviews in the Egadi MPA governance analysis.
- **Carlo Pipitone** - Scientific responsible of MESMA activities for CNR-IAMC and contact person for work package 4 “Management tools”. Involved in work package 6 “Governance” as secondary author to review the governance analysis report. Transcription of about one third of the semi-structured interviews. No bias issue identified.
- **Germana Garofalo** – Contact person for work package 5 “Geomatics framework” with the task of compiling the inventory of datasets available for the sub-case study “Sicily” and creating the relative metadata used to populate GeoNetwork. Involved as a collaborator in work package 3 “Case Studies” to create maps for the sub-case study “Sicily”. Involved as a collaborator in work package 6 “Governance” to draw maps of marine space uses for the sub-case study “Sicily”.
- **Tomás Vega Fernández** – Leader of the MESMA case study “Strait of Sicily” that encompasses Sicily and Malta. Contact person for WP2 and WP3. Collaborator to WP1, WP5 and WP6. Within the WP6, provided framing concepts and information gathered during the WP2 FW, performed document analysis, helped with some interviews in Favignana and Trapani and reviewed the report. Bias was removed as far as possible by applying the FW method and perspective