

Managing the space in a small and busy sea: the Adriatic case

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ABSTRACT. Maritime Spatial Planning (MSP) is a practical way to create and establish a more rational organisation of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way (Ehler and Douvère, 2009). The so-called “Blue Economy” in the Adriatic and Ionian Region (AIR) generates an annual turnover that exceeds €21 billion, with an increasing growth trend. An effective spatial planning is an essential condition in order to guarantee a long-lasting development ensuring a sustainable use of marine resources for future generations. This is particularly true in areas such as the Adriatic-Ionian Region, where several uses are competing for the same space and the same resources and where the transboundary dimension needs to be taken into account for the best regulation of those uses. MSP is also an opportunity to connect the marine and the maritime world, essential components of Blue Growth.

The ADRIPLAN Project was focused on the main following fields developed on marine space: Coastal Defence and sand extraction Energy Environment and ecosystem Fisheries and Aquaculture Maritime Transport and Tourism Miscellanea.

Added to these it applied at the sub-regional level an overall MSP methodology entering in more details of the site-specific environmental, socio-economic, regulatory and governance conditions; allowing to propose for those areas more focused, precise, short-term and locally applicable measures or recommendations, including analysis, drafted pilot actions, as following: 1) identification a variety of conflicts and synergies that should be addressed by specific, multi-level and cross-sectoral planning measures, 2) spatially define the localization of the electricity connection between through a sub-marine cable (Italy and Slovenia), 3) compensatory actions for the fishery sector to be applied following the possible development (in Venice offshore terminal); promotion the infrastructural development of the Trieste port. ADRIPLAN Conclusions and Recommendations are included in a short manual for MSP implementation in the Adriatic-Ionian Region (PDF Download Available). Available from:

https://www.researchgate.net/publication/293581538_ADRIPLAN_Conclusions_and_Recommendations_A_short_manual_for_MSP_implementation_in_the_Adriatic-Ionian_Region [accessed Apr 27, 2017].

I. MANAGING THE SPACE IN A SMALL AND BUSY SEA: THE ADRIATIC CASE

The OECD Report “The Ocean Economy in 2030” (OECD 2016) underlines that the ocean holds great potential for boosting economic growth, employment and innovation. The

projections suggest that between 2010 and 2030 the ocean economy could more than double its contribution to global value added, reaching over USD 3 trillion. Particularly strong growth is expected in marine aquaculture, offshore wind, fish processing and shipbuilding and repair. However, the ocean is already under stress from over-exploitation, pollution, declining biodiversity and climate change.

Maritime Spatial Planning (MSP) is an enabling condition for Blue Growth. MSP is a practical way to create and establish a rational organization of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way (Ehler and Douvere, 2009). MSP provides certainty to investments, ensures transparency, multi-level /multi-sector cooperation, minimizes and prevents conflicts, identifies synergies.

According to the Directive 2014/89/EU, Member States are required to develop national maritime spatial plans by 2021.

Article 5 of the MSP Directive declares that the objective of MSP is to have sustainable development of maritime sectors (e.g., energy, transport, fishery, aquaculture, tourism and extraction of raw materials) coexisting with the preservation, protection and improvement of the marine environment, in coherence with the Marine Strategy Framework Directive 2008/56/EC (MSFD).

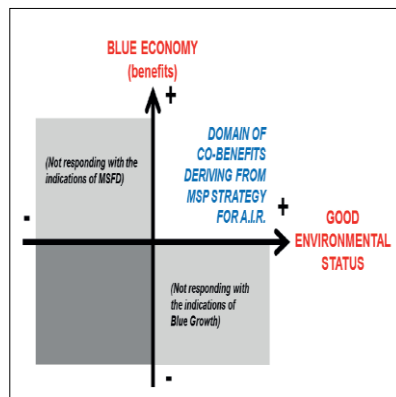


Fig. 1. Scheme representing the domain of action in which the MSP proposal for the Adriatic Ionian Region (Source: Barbanti A., Campostrini P., Musco F., Sarretta A., Gissi E. (eds.) (2015). Developing a Maritime Spatial Plan for the Adriatic-Ionian Region. CNR-ISMAR, Venice, IT.)

In 2014, the European Commission adopted a macro-regional Strategy for the Adriatic and Ionian Region (EUSAIR) (COM(2014) 357 final). The Strategy is structured around four interdependent pillars of strategic relevance for the Region: Blue Growth, Connecting the Region (transport and energy networks), Environmental quality, Sustainable tourism. One of the target of the first pillar, “Blue Growth”, is to promote the MSP implementation in order to support sustainable maritime economic development (EUSAIR Action Plan, SWD(2014) 190 final).

ADRIPLAN (ADRIatic Ionian maritime spatial PLANning) was the first Pilot Project co-financed by EC DG Mare (Grant Agreement MARE/2012/25) to test an MSP process in the Adriatic and Ionian Sea. ADRIPLAN aimed to deliver a commonly-agreed approach to cross-border MSP in the Adriatic-Ionian Region, framed in the EUSAIR. The project considers the whole Adriatic-Ionian region as its study area, with a specific attention to its transnational

dimension, and it concentrates analyses and proposals in two Focus Areas: (1) Northern Adriatic Sea; (2) Southern Adriatic/Northern Ionian Sea.

One of the main results achieved by ADRIPLAN is represented by the developed methodology for MSP, which is divided in several phases, including: pre-planning, vision and objectives definition, analysis and interpretation (coexistence among uses, cumulative impacts, compatibility among uses, socio-economic aspects, etc.), design and implementations. Cross cutting issues, such as stakeholder participation and monitoring of the planning process, take place in different steps of the methodology (Figure 2). The ADRIPLAN methodology has been applied to the whole Adriatic-Ionian Region and to the two focus areas. An Integrated Assessment including environmental, legal, administrative, economic and social aspects has been developed with the support of all institutional partners and observers and the involvement of relevant stakeholders.

ADRIPLAN realized a geo data portal for collecting and making available data useful for the MSP processes in the Adriatic Ionian Region, (ADRIPLAN Data Portal, 2016 <http://data.adriplan.eu/>). The portal includes spatial data, metadata and MSP tools: cumulative impact and conflict score tools. Data collected were divided in the following categories (layers), in order to facilitate the use: coastal defence and sand extraction, energy, environmental protection, environment and ecosystem, fisheries and aquaculture, maritime transport and tourism, miscellanea.

Some tools have been developed to support the implementation of maritime space plans, with a specific focus on the analysis of conflicts between marine uses and the analysis of cumulative impacts on marine environments (Menegon, S., Sarretta, A., Barbanti, A., Gissi, E., Venier, C., 2016).

The COEXIST - sea uses conflict analysis tool, based on a methodology developed for the FP7 COEXIST Project, has the aim to:

- 1) support MSP process through reallocation of maritime uses,
- 2) creation of collaborative conflict scores analysis,
- 3) iteration of the analysis over different time periods through integration of new conflict scores and geospatial datasets on sea uses,
- 4) sea use scenario analysis,
- 5) overlay analysis.

The analysis of cumulative impacts, intended as the combined impact of multiple pressures over space and time, gives an evaluation of the distribution in space and intensity of impacts from maritime activities on the identified environmental components. The newly developed tool provides the following outputs: cumulative impact maps, sea use overlay analysis maps, generation of statistical outputs on impact scores (plots and tables) for single sea uses and environmental components, analysis of gaps in terms of data availability and input data based on data availability maps and statistical outputs.

After this analysis, ADRIPLAN elaborated a strategic proposal for the Adriatic Ionian Region, through the identification of different types of management areas, a sort of “strategic zoning” characterized by specific management objectives.

At the focus area level, the project drafted a series of pilot actions. For the Focus Area 1 on the Northern Adriatic Sea three relevant planning issues were selected. These are related: to the need to spatially define the localization of the electricity interconnection between Italy – Slovenia through a submarine cable; to the necessity to identify compensatory actions for the fishing sector to be applied following the development of the Venice Offshore Terminal; and to the need to promote the infrastructural development of the Port of Trieste.

For the Focus Area 2 on the Southern Adriatic/Northern Ionian Sea two main planning issues emerged during ADRIPLAN: the need to promote and spatially define environmental conservation measures along the Apulian coast and the need to define cross-border cooperation measures between Greece, Albania and Italy for fishery and aquaculture.

Finally, it is important to mention that in 2017, the EC-DG MARE (Call EASME/EMFF/2015/1.2.1.3) launched two other projects supporting MSP in the Mediterranean Sea that will be completed in 2018: SIMWESTMED in the Western Mediterranean region and SUPREME in the Eastern Mediterranean.

The projects, that involve public authorities in charge of MSP and the UNEP/MAP Barcelona Convention, focus on two key objectives:

- supporting the implementation of the MSP Directive by Member States within their marine waters;
- launching and carry out concrete and cross-border MSP initiatives between Member States.

Both projects, and in particular the SUPREME project that focus on the Adriatic-Ionian region, will capitalize the results of ADRIPLAN. SUPREME will be coordinated by CORILA.

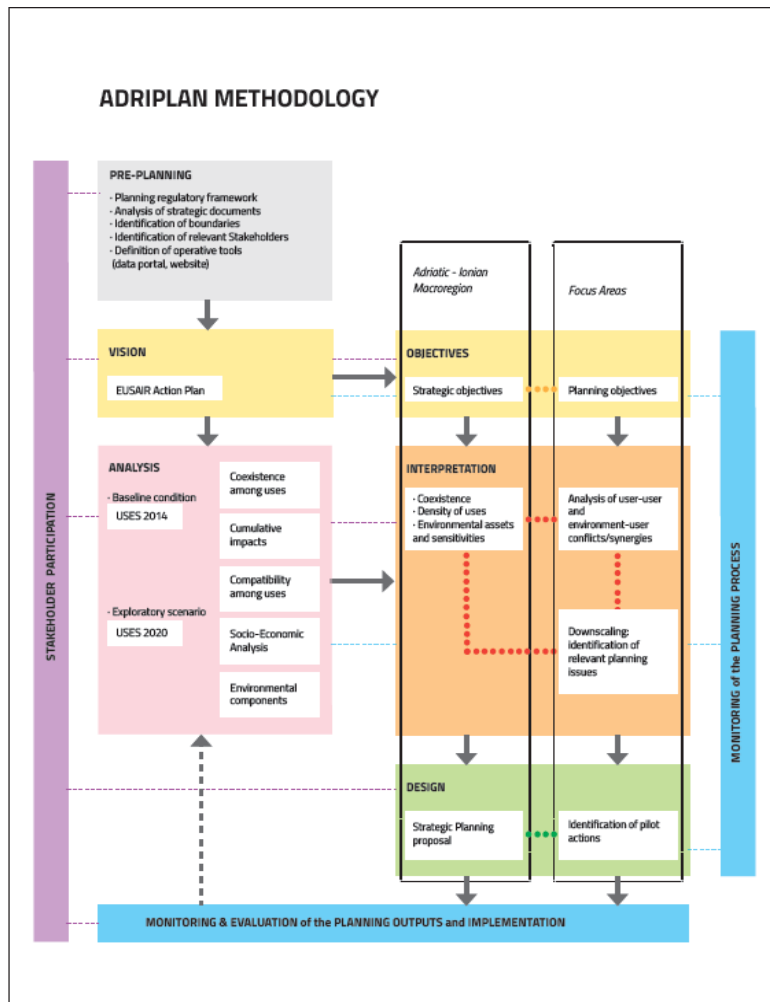


Fig. 2. Flowchart of the activities developed under ADRIPLAN methodology. (Source: Barbanti A., Campostrini P., Musco F., Saretta A., Gissi E. (eds.) (2015). Developing a Maritime Spatial Plan for the Adriatic-Ionian Region. CNR-ISMAR, Venice, IT.)

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- European MSP Platform website - <http://www.msp-platform.eu/>
- SUPREME website - www.msp-supreme.eu



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