

Development of an Integrated Framework for Marine Spatial Planning in Romania – architecture and implementation approaches

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ABSTRACT. Increasing demands on marine resources and activities taking place in the marine area are compromising the future use and viability of the marine environment. Marine spatial planning is a useful and cost-effective tool for the regulation and protection of the marine environment. The need to pursue new approaches and commitments for a sustainable utilization of marine resources has become very clear. In this respect, in this paper we will present the project entitled ‘*Development of an integrated framework for marine spatial planning in Romania*’ (MARSEA - www.geo.unibuc.ro/marsea). Within this comprehensive study, we aim at an integrated approach of the social, economic, and ecological factors affecting the Romanian Black Sea coast via implementation of the ecosystem approach to marine management. In this context, our project covers highly actual aspects concerning the way the marine spatial planning process evolves and will contribute to deliver a coherent approach to reduce conflicts of the Romanian marine environment, as well as minimizing the pressure and impact on the marine environment.

KEYWORDS. marine resources; spatial plan; ecological value; Blue Growth; regulations.

I. INTRODUCTION

Humans utilized a range of goods and services that have been derived directly or indirectly from the marine environment and they have exploited marine resources without the implementation of adequate management strategies that aimed to ensure the sustainability of these systems [1]. The lack of management strategies has led to the decline of marine resources and to high levels of pollution because of the public access of goods and benefits provided by the sea². Nowadays, there is a need to design and implement efficient management policies that prevent the excessive degradation of marine resources and their services through the full value establishment of those services and the incorporation of their values into appropriate decision-making processes [2].

About one third of the EU’s population lives within 50 km from the coast and human activities, such as expanding urban developments, are increasingly putting pressure on the diversity of ecosystems found in these regions. Climate change, with its associated impacts,

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² <http://www.prb.org/Publications/Reports/2003/RippleEffectsPopulationandCoastal-Regions.aspx>

such as sea-level rise and more frequent extreme storms and storm surges, will only increase the pressure on the coastal environment. People living in coastal areas will also become more vulnerable to the effects of climate change [3].

The use of Europe's sea-areas is increasing and gives rise to potential conflicts and competition for maritime space, both between different users, and between maritime uses and the preservation of the marine environment. This development increases the demand for Marine Spatial Planning (MSP), an instrument that is essential for resource efficiency in maritime activities. MSP is a tool used to resolve these conflicts and ensure sustainable use of the marine environment [4]. MSP provides a framework for the management of human sea uses in a context of intensifying economic activity in sea basins around Europe³. As such, it has a vital role to play both in terms of maximizing the development potential for crucial activities, such as offshore renewable energy production, and of arbitrating between human activities to ensure that the cumulative impact of ongoing activities is sustainable. By providing long-term stability, predictability and transparency, MSP encourages investments for sustainable growth and jobs and secures ongoing activities. MSP supports sustainable use of marine resources in line with the EU Sustainable Development Strategy and the requirement of the Marine Strategy Framework Directive (MSFD) on the application of the ecosystem approach by providing the means to effectively control human use of the marine space.

The European Commission's intention is to support the development of MSP processes. To this end, the Commission initiated several studies on various aspects of MSP: a study on the legal aspects of MSP (2008)⁴; a study on the economic effects of MSP (2010)⁵, which concluded that economic effects of MSP are reduced transaction costs for new maritime activities and an improved investment climate and a study considering the potential of MSP in the Mediterranean (2011)⁶. Based on these preparatory actions, the Commission proposed legislative action on MSP in 2013⁷. The EU has already co-financed four projects on MSP in the Baltic Sea⁸, in the North Sea⁹, in the Atlantic¹⁰ and is currently co-financing a project on MSP in the Adriatic Sea¹¹. One project is currently supported in the Black Sea between Romania and Bulgaria¹².

Until now, there is no MSP around Romanian Black Sea (Fig. 1), apart from some temporary fishing closure areas and some natural reserves. The Exclusive economic zone is about 22.486 km² and the territorial sea ~ 4,084 km².

³ <http://www.mspchallenge.org/call-eu-proposals-msp/>

⁴ http://ec.europa.eu/maritimeaffairs/pdf/legal_aspects_msp_report_en.pdf

⁵ http://ec.europa.eu/maritimeaffairs/study_msp_en.html

⁶ http://ec.europa.eu/maritimeaffairs/study_msp_med_en.html

⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0133:FIN:EN:PDF>

⁸ <http://planbothnia.org/>

⁹ http://www.google.be/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDoQFjAB&url=http%3A%2F%2Fdtvirt35.deltares.nl%2Fproducts%2F30020&ei=0AIMU6DdOunG0QXypoCoBg&usq=AFQjCNE6rFPyN5WVN2-j3fypdR__ssMJsw&sig2=x4I49dierlC5eduh8uqxLw&bvm=bv.64542518,d.d2k&cad=rja

¹⁰ <http://www.tpeamaritime.eu/wp/>

¹¹ <http://adriplan.eu/>

¹² <http://marsplan-bs.univ-ovidius.ro/>

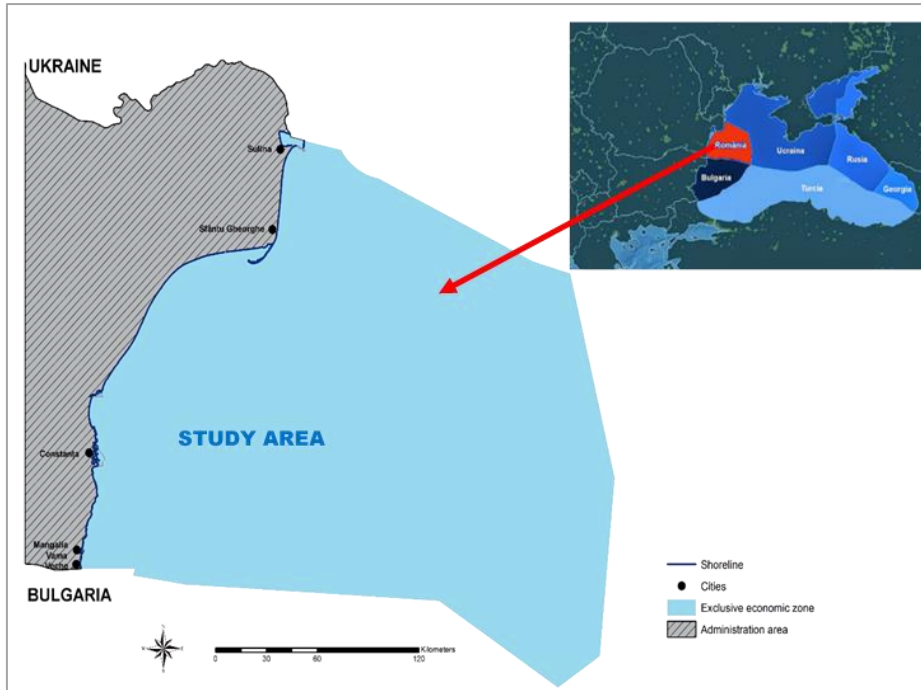


Fig. 1. Study area

For a successful and long-term implementation process, engagement with stakeholders from the start and throughout the process was identified as an essential element of any successful participatory undertaking [5]. If stakeholders do not believe there is a problem, or see how planning may improve the situation, they will be less likely to participate [6]. More specifically, research suggests that in order for MSP to achieve acceptance and success, stakeholders must be included in every stage of the process [7].

In this paper, our main goals are to present the project architecture and to propose a framework on how to apply marine zoning in management of marine areas and to illustrate how MSP could be an essential tool in implementing a long-term sustainable, ecosystem-based approach to management of human activities in the Romanian marine environment.

II. METHODS

This project architecture is based on pre-existing initiatives in Romania, namely the surveys made during last summer to assess the knowledge and implementation of MSP and integrated coastal zone management process [8] and aims to ensure public participation, self-enforcement, and long-term sustainability of the plan through the stakeholders' engagement (e.g. fishermen, divers, shipping companies, tourists, communities, NGO's representatives, authorities) from the project inception [9]. Our study shows how the work technically can be accomplished and it will not produce legally binding zoning plans (Fig. 2). The general project outline is framed around three main workshops: 1. Thinking (Setting the scene for MSP in Romania); 2. Developing (Producing the spatial analyses and scenarios for MSP in the pilot area); 3. Framing (Developing a series of guidelines and policy recommendations regarding the MSP in Romania).

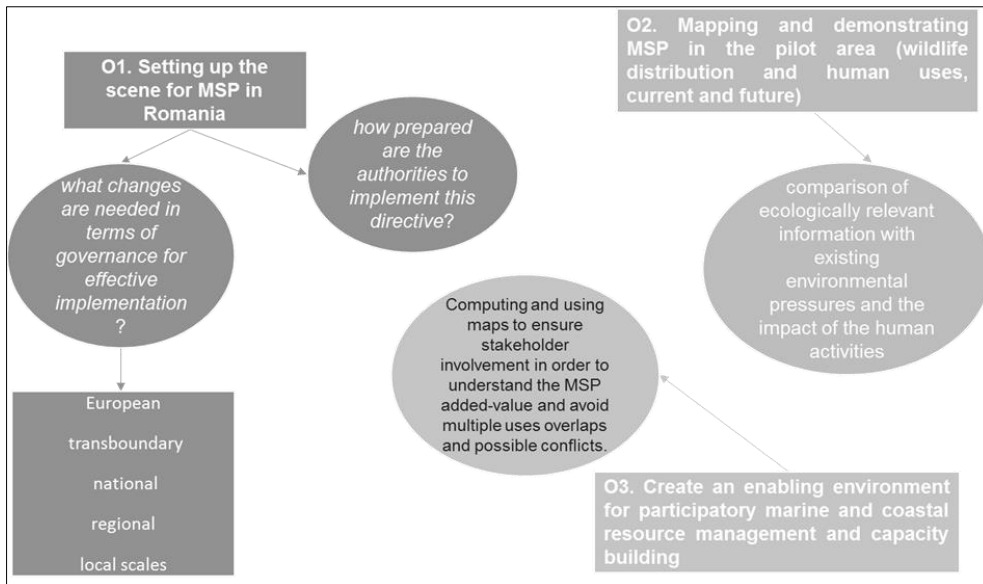


Fig. 2. Project objectives scheme

III. PRELIMINARY RESULTS AND DISCUSSION

A systematic analysis of the MSP on the Romanian Black Sea coast is missing. The aim of this project is based on identifying overlaps, potential synergies, gaps as well as obvious conflicts in the legislative framework. The analysis identifies the international obligations concerning MSP, and will help us to prioritize the work at hand and help to set the limits. The first official document on the EU MSP had been published in 2014 (Directive 2014/89/EU/23 July 2014¹³) and Member States must identify the main issues concerning MSP and to create plans until 31 March 2021.

In this context, it was an urge for a comprehensive study of legal and institutional framework dealing also with the definition of geographical boundaries. The expected outputs of this objective provide the first detailed picture of marine legislative documents, which is a missing piece in Romania. Under this objective, governance was defined as the capacity where governments keep a central but non-exclusive role. The forces involved in governance process are: Government (institutions and rules), market and civil society (actors). For a better understanding, a section for each level of action is described below.

A. *International Legal Framework*

To protect and manage the marine space, EU Member States should transpose and implement many directives related to coastal and marine areas (Fig. 3). The following regulatory instruments are used for governance in Romania:

- Convention on the International Regulations for Preventing Collisions at Sea (COLREG – IMO, 1972)

¹³ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.257.01.0135.01.ENG

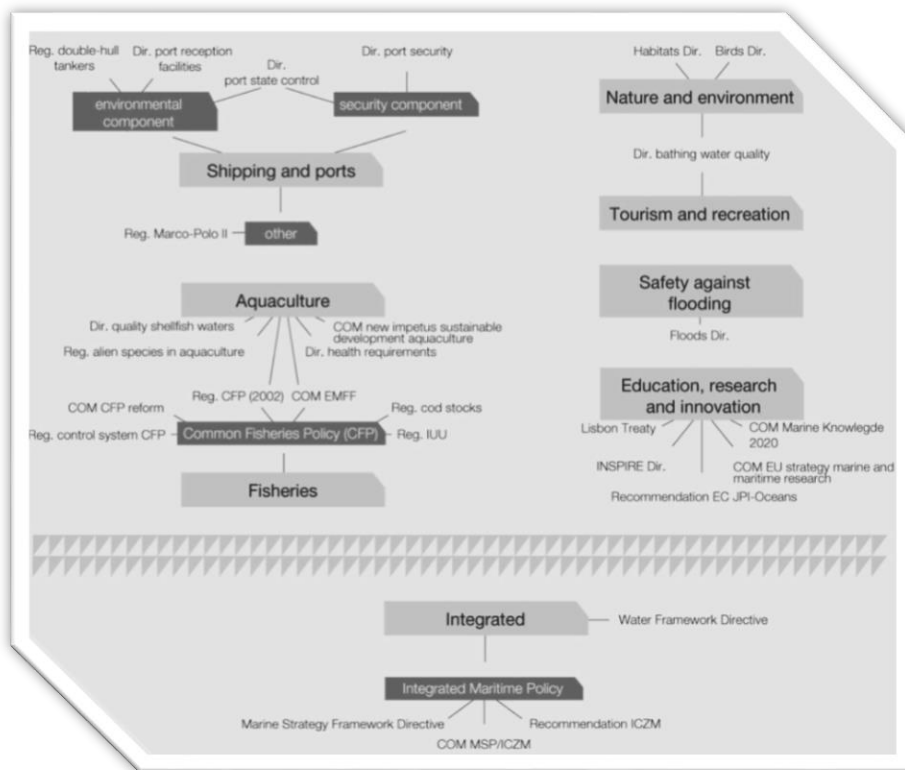


Fig. 3. Main European legal and policy instruments¹⁴

- International Convention for the Prevention of Pollution from Ships (MARPOL IMO, 1973)
- Barcelona Convention and Protocols (UNEP, 1976)
- International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW – IMO, 1978)
- United Nations Convention on the Law of the Sea (UNCLOS – UN, 1982)
- International Convention for the Safety of Life at Sea (SOLAS – IMO, 1988)
- International Convention on Maritime Search and Rescue (SAR – IMO, 1985)
- Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA – UN/IMO 1988) and the Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (SUA PROT – UN/IMO, 1988)
- Convention on Biological Diversity (CBD, 1992)
- Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic area (ACCOBAMS – CMS, 1996)
- Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (Aarhus Convention – UNECE, 1998)

¹⁴ http://ec.europa.eu/environment/iczm/index_en.htm

- Maritime Labor Convention (MLC – ILO, 2006)
- Black Sea Strategic Action Plan (2009)
- Convention on the Protection of Underwater Cultural Heritage (CPUCH – UNESCO 2012)
- Birds Directive 79/409/EC (1979)
- Habitat Directive 92/43/EC (1992)
- Water Framework Directive 2000/60/EC
- Recommendation 2002/413/EC for ICZM
- The Groundwater Directive 2006/118/EC
- Directive 2006/7/EC concerning the management of bathing water quality
- INSPIRE Directive 2007/2/EC
- Marine Strategy Framework Directive 2008/56/EC
- Directive 2009/28/EC for renewable sources
- Regulation (EU) 2015/812 on fisheries

B. National Legal Framework

In order to protect and manage the national coastal and marine zones, the following instruments are mainly used:

- ICZM law 280/2003
- Government Decision regarding the Regulations of the National Committee of the Coastal Zone 1015/2004
- Government Decision regarding the environmental impact assessment 445/2009
- Government Decision 17/2010

Main responsible authorities are: Ministry of Regional Development and Public Administration; Ministry of Transport, Ministry of Environment, with their regional branches.

C. MSP GIS Database

An important prerequisite to implement MSP is understanding the spatial distribution of environmental, social, and economic values, and of human activities. Projects and portals specialized in MSP data collection: European Atlas of Seas, EMODNET, CoCoNet, PlanCoast, Ourcoast, BaltSpace, Adriplan, TPEA on Atlantic Seas, etc. Eithin this project, we have started to gather, produce, transform, and classify the spatial data in order to create our GIS database (Fig. 4). This consists of a metadata catalogue and of datasets, in the form of shapefiles (as seen in the following sketch). The datasets are classified as follow:

- Environmental data – protected areas and NATURA 2000 sites
- Geographic data
- Transport data and ports
- Oil and gas extractions
- Oil and gas platforms
- Fisheries and aquaculture
- Cables and conducts
- Tourism – bathing areas
- Military activities
- Other anthropogenic activities data

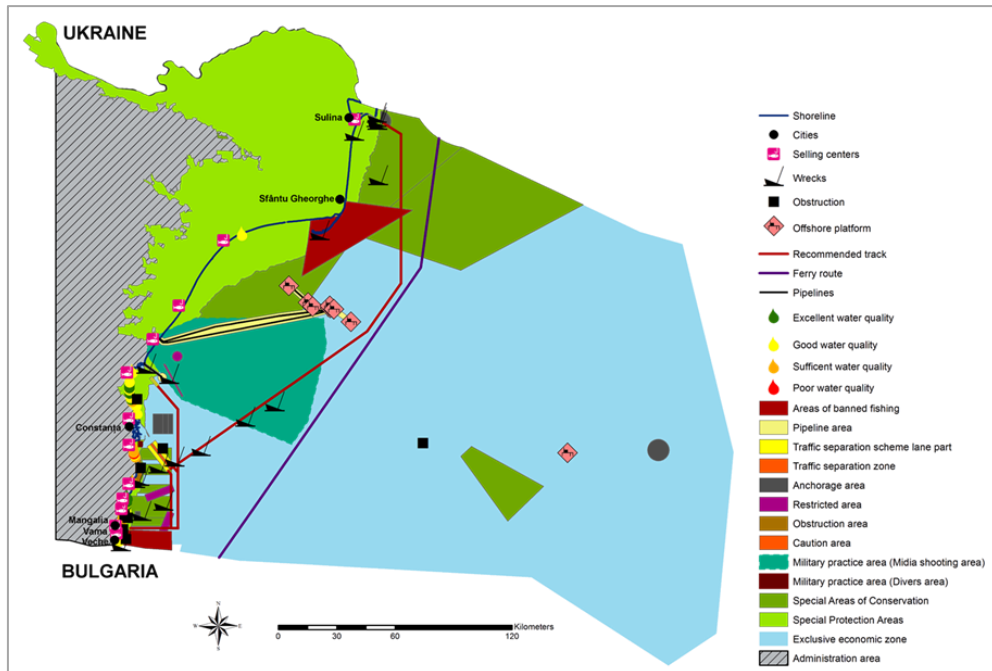


Fig. 4. GIS layers with all activities

IV. CONCLUSIONS

Maritime activities, including sources of marine degradation, are diversifying and intensifying worldwide. By resolving conflicts and regulating maritime activities, MSP can make a significant contribution to achieving Good Environmental Status in the Black Sea. From policy review it was found there was a huge need for sharing of MSP-relevant information for a coherent planning in Romania. During the discussions with Romanian authorities challenges of assessing the needs of interconnected ecosystems (including relevant EU and international legislation) were identified. Through this analysis, we found out that a clear gap in perception between the current, the ideal and the foreseen situation regarding the MSP implementation in Romania. Furthermore, although most of the stakeholders wish to participate in this process, they do find themselves in a position where they have little influence on the decision-making process. For the next step, scenarios and modelling will be developed, together with participatory actions.

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