

Regional analysis report

Results of the analysis of strategies and plans available at the regional level



January 2024



Grant Agreement number n° 101081219

EMFAF-2021-PIA-MSP





Co-funded by
the European Union

Acknowledgements

This document was produced for the REGINA-MSP project, which has received funding from the European Maritime and Fisheries and Aquaculture Fund of the European Union under the Grant Agreement number: 101081219

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Citation

E. Ramieri, M. Bocci (Eds.) et al, 2024. Regional analysis report: results of the analysis of strategies and plans available at the regional level. REGINA-MSP project, European Climate, Infrastructure and Environment Executive Agency.

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Project title	Regions to boost National Maritime Spatial Planning (REGINA-MSP)
Milestone/Deliverable	Deliverable 3.1 Reginal analysis report
Contractual date of delivery	31.01.2024
Actual date of delivery	31.01.2024
Document version	1.0
Diffusion	PU - Public
Work Package	WP3
Partner responsible	Institute of Marine Science of the National Research Council of Italy (CNR-ISMAR)
Contributing partners	Aristotle University of Thessaloniki (AUTH) Centre for Studies and Expertise on Risks, the Environment, Mobility and Urban Planning (CEREMA) Centro Tecnológico del Mar (CETMAR) Consortium for coordination of research activities concerning the Venice lagoon system (CORILA) Department of Housing, Local Government and Heritage (DHLGH) Institute of Oceanography of the Spanish National Research Council (IEO(CSIC)) Panteion University of Social and Political Sciences (PUSPS)
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<p>Abstract</p>	<p>EU regional authorities have played different roles in the MSP process till now; some have been fully part of the process, while others have been only partially or even marginally involved. This, together with other factors, influence the way regional and local plans and strategies are or are not integrated into MSP. This report identifies and analyses existing regional and local plans and strategies relevant for marine planning across eight case studies (Murcia and Galicia in Spain, Sardinia in Italy, Provence Alpes Côte d’Azur and Pays-de-Loire in France, Crete and Central Macedonia in Greece, Mayo in Ireland). Based on this, the report highlights the planning elements relevant for MSP and discuss whether and how these are integrated in the maritime spatial plans. Finally, the report identifies commonalities among case studies, persisting gaps in the integration of sectoral planning into MSP and opportunities for further planning developments at the regional and/or local scale, linking to other tasks developed at the case study level.</p>

SUMMARY

1. Introduction.....	6
2. Methodology.....	7
3. Region of Murcia.....	10
4. Region of Galicia.....	29
5. Sardinia Region.....	51
6. Provence Alpes Côte d’Azur – PACA.....	76
7. Pays-de-Loire Region.....	109
8. Crete Region.....	134
9. Central Macedonia Region.....	159
10. County of Mayo.....	174
11. Cross-case studies analysis: commonalities and persisting gaps and challenges.....	191
 Annex 1 - Common template for the inventory and cross-analysis of marine and coastal strategies and plans relevant for the regional and local level.....	 199
Annex 2 – Version in national language of case study chapters.....	208
Región de Murcia.....	208
Región de Galicia.....	230
Regione Sardegna.....	255
Provence Alpes Cote d’Azur - PACA.....	282
Région Pays-de-Loire.....	318
Περιφέρεια Κρήτης.....	348
Περιφέρεια Κεντρικής Μακεδονίας - ΠΚΜ.....	376

1. Introduction

REGINA-MSP (Regions to boost National Maritime Spatial Planning) is a two years project (November 2022 – October 2024) aiming at improving the participation of regions as well as local authorities and stakeholders in the development and implementation of Maritime Spatial Planning (MSP), a process which is mainly driven at the national level. In the project’s perspective, regions are considered the proper governance level to combine European and national policies with regional ones and to link to local specificities and needs. They represent a node to enable the operative implementation of MSP plans and mainstream MSP towards the objectives of the other marine and coastal policies, including those set in the frame of the European Green Deal (EGD). Strengthening of their participation in MSP preparation and implementation is expected to improve maritime spatial planning processes and to generate benefits for the coordination of different policies and plans.

REGINA-MSP combines a general analysis and discussion at European level (WP2), with an in-depth analysis (WP3) at the level of 8 regional case studies located in 5 countries and pertaining to 2 sea basins: Galician and Murcia regions in Spain, Sardinia region in Italy, Provence Alpes Côte d’Azur and Pays-de-Loire region in France, Crete and Central Macedonia regions in Greece, and County of Mayo in Ireland.



Figure 1. Distribution of REGINA-MSP case studies.

The eight case studies show remarkable differences in terms of governance systems in place, role of regions within the MSP processes and environmental and socio-economic conditions. To capture commonalities and dissimilarities, WP3 analysis is implemented through a common approach, which is structured in four tasks implemented in each case study through common methodologies:

- Task 3.1 deals with the analysis of coastal and marine (cross-cutting and sectoral) strategies and plans already in place in the case study areas, focusing on those relevant for planning and management of the sea space.
- Task 3.2 focuses on data availability and data needs for MSP at the regional level, looking at regional needs, persisting/major gaps and the way data sources at different levels can be integrated.
- Task 3.3 aims at strengthening regional and local stakeholders' engagement in MSP, focusing on key aspects of coastal and spatial planning at the regional level.
- Based on the results of previous tasks (in particular emerging opportunities, gaps, challenges and needs), task 3.4 identifies actions needed to foster contributions of the regional and local levels and stakeholders to MSP.

This report is the final outcome of task 3.1. For each case study this task aims at:

- Identifying and describing existing coastal and marine plans and strategies of relevance at the regional and local scales.
- Highlighting elements included in the studied strategies and plans relevant for MSP at the case study level and discussing whether and how these elements are integrated/considered in the MSP plans.
- Identifying opportunities for further planning developments at the regional and/or local scale.

Ultimately, the report provides a basic understanding to frame and inform the following activities of WP3, with particular concern to those addressed in Tasks 3.3 (strengthening regional and local stakeholders' engagement) and 3.4. (identify actions needed).

2. Methodology

The contents of this report are based on an inventory and analysis of marine and coastal strategies and plans relevant for MSP at the case study level. In particular the following elements were considered in the analysis:

- **Strategies** defined and implemented at the regional or local level, relevant for the management of coastal and marine systems as well as land-sea interactions (LSI).
- **Plans** defined and implemented at the regional or local level, relevant for the management of coastal and marine systems as well as LSI.
- **Other typologies of guiding documents** (e.g. action plans, roadmaps, etc.) defined and implemented at regional or local level, relevant for the management of coastal and marine systems as well as LSI.

- Where needed, **strategies and plans defined at the national level having implications for the management at regional level** of coastal and marine systems as well as LSI. This is typically the case of cross-cutting elements or sectors not considered by regional plans or strategies but addressed in national ones. In these cases, the analysis focused on the plan/strategy's provisions (e.g. vision, objectives, measures, zoning, etc.) relevant for the case study area.

Scrutinised plans and strategies refer to three categories:

- **Category 1 - Cross-cutting plans and strategies**, referring to: Integrated Coastal Management (ICM), Maritime Spatial Planning (MSP), Sustainable Blue Economy (SBE), urban plans or other cross-cutting land-based plans with implications on the coast and/or the sea, etc.
- **Category 2 - Protection and conservation-oriented plans** and strategies, referring to: coastal and marine ecosystems and biodiversity protection, restoration of marine and coastal habitats, landscape and seascape preservation, protection of maritime cultural heritage (including Underwater Cultural Heritage – UCH - sites), flood prevention and coastal protection, etc.
- **Category 3 – Plans and strategies addressing economic sectors** and other marine activities, such as: fishing, aquaculture, coastal and maritime tourism, recreation and leisure activities, maritime transport, port activities, marine renewable energy, oil and gas exploration and exploitation, extraction of marine aggregates (in particular sand extraction for beach nourishment or construction), deep sea mining, cables and pipelines, maritime defence, dumping at a sea (e.g. for sediments or munitions), research and innovation, etc.

The analysis was carried out through the compilation of three common templates (one for each category of plans and strategies) reported in Annex 1, which enabled to gather, summarise and structure the information then used to draft the case study chapters included in this report. To finalise the analysis, case study chapters have been organised according to a common structure:

- **Short introduction** on the marine and coastal planning system in place in the country where the case study is located (with particular reference to MSP). In case of countries with two case studies (Spain, France and Greece), introductions are repeated including the same, common information (for prompt reference to the reader) as well as case study specific information.
- **Summary of the analysed plans** and strategies belonging to three categories.
- **Description** of the identified cross-cutting plans and strategies, referring in particular to their provisions (vision, objectives, zoning, measures, etc.) relevant for the management of the sea space and its resources as well as to whether and how these plans and strategies are integrated into MSP. Similar sections

were drafted for “Protection and conservation-oriented plans and strategies” and “Plans for economic sectors and other marine used and activities”.

- Identification of major elements of **contribution of considered plans and strategies to the European Green Deal** (EGD) and sea-basin strategies (i.e. Atlantic Strategy, WestMED Blue Economy Initiative). This step of the analysis had not the objective to be exhaustive and detailed, action which would have required a dedicated project, but rather to intercept and report some of the major linkages (or absence of such) between planning of the sea at the regional level and marine components of the EGD.
- Short discussion on **stakeholder engagement** in the analysed planning processes.
- Identification and discussion of **persisting gaps** and challenges in the integrated planning and management of the sea space at the regional and local level.

The structure of the case study chapter reflects the main goal of this report, which is to set the knowledge basis on planning, needed for the following tasks of WP3. Some of the identified gaps and challenges are going to be addressed in other tasks (3.4 in particular), discussing actions needed to strengthen the role of the regional and local levels into MSP. These actions can relate to a diverse range of aspects, i.e.: MSP data and tools availability, engagement of regional and local stakeholders including less heard ones, improvement of the integration of existing plans into MSP, coordination mechanisms for MSP, more detailed maritime spatial planning in specific areas, etc. The diversity of challenges reflects the diversity and specificities of case studies.

3. Region of Murcia

The case study area of the Region of Murcia is located on the south-east coast of the Iberian Peninsula and it encompasses the waters facing the autonomous community of the Region of Murcia up to the edge of the continental shelf as it is represented in Figure 1. These waters belong to the levantine-balearic marine demarcation (DM-LEBA), one of the five marine demarcations in which the Spanish marine waters are divided according to the Law 41/2010 on the protection of the sea (Figure 2). This marine demarcation is located entirely in the Mediterranean Sea.

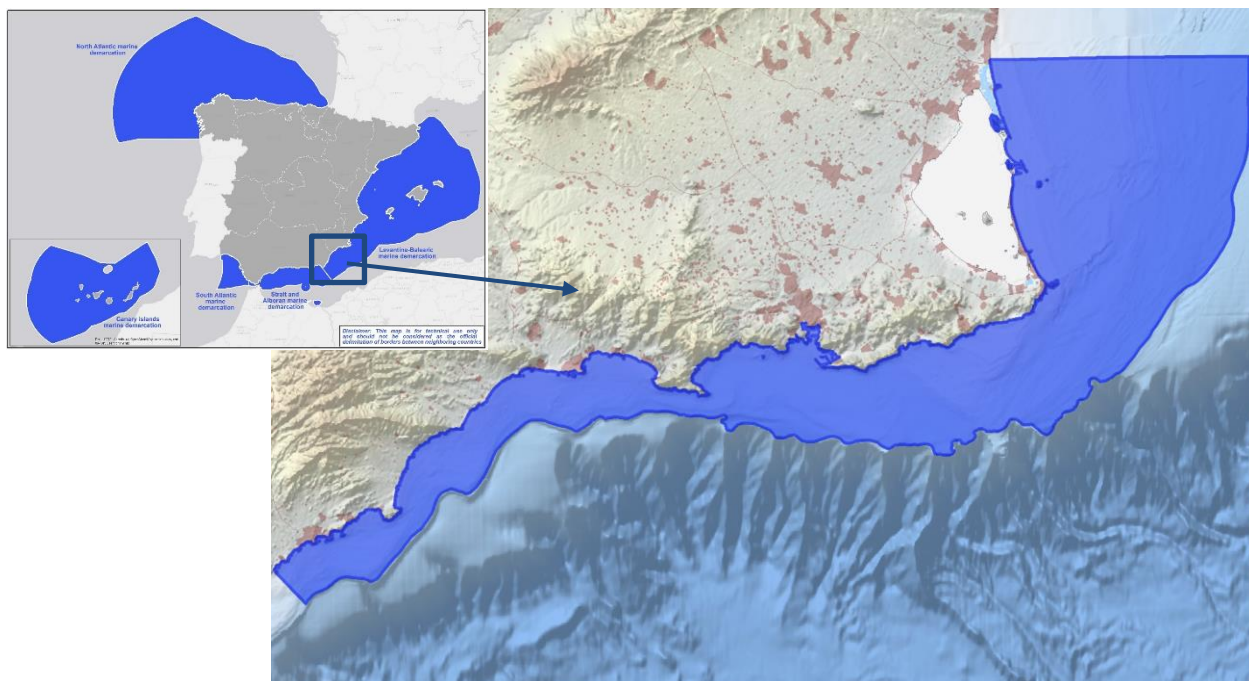


Figure 2. On the right: case study area - Region of Murcia maritime waters belonging to the Levantine-Balearic marine demarcation (DM LEBA); on the left: delimitation of the five Spanish marine demarcations (Source: own elaboration; IEO, CSIC). Disclaimer: The limits of the marine demarcations do not correspond to the jurisdictional limits of the Spanish marine waters. They should not be considered as official delimitation with neighbouring countries.

MSP competences in Spain are held by the central government through the Directorate-General of the Coast and Sea (DGCM) of the Ministry for the Ecological Transition and the Demographic Challenge (MITERD). Despite the fact that MSP is conducted at the national level, several marine uses and activities are planned and managed by the Autonomous Communities (CCAA, also referred as Autonomous Regions or Regions in this chapter), according to the distribution of competences as established in the Spanish Constitution of 1978.

In general terms, the marine space is managed by the central government, while internal waters (those encompassing from the baselines to the coastline) are managed by the Regions. On the other hand, environmental protection is, in the broad sense, a regional competence up to the limit of internal waters. Consequently, Regions are called to elaborate management documents on this aspect, such as specific biodiversity strategies, plans and specific regulations for the implementation of the national law which establishes the basis for the protection of biodiversity (Law 42/2007, of 13 December 2007 on Natural Heritage and Biodiversity). The management of the MPAs falls under national competences, unless an MPA constitutes a geological/ecological continuation of a terrestrial protected area or is located in internal waters; in such a case the MPA is managed by the respective Autonomous Region.

Regarding uses and activities at sea, the competences on aquaculture, small-scale fishing, recreational activities (including nautical activities and marine tourism), as well as urban and littoral planning, falls under Regions' responsibilities. Underwater cultural heritage (UCH), climate change, maritime surveillance, maritime transport, sand dredging at sea or within the maritime-terrestrial public domain (DPMT) and renewable energies at sea like offshore wind farms (OWF) are managed by the central government.

Although the central government is responsible to set up the basis and the legal requirements of the development of activities at sea in the frame of MSP, the Regions can elaborate more detailed plans/strategies for spheres/sectors of their competence. Respecting the national requirements, these strategies/plans can be more detailed and collect local specificities emerging at a lower scale. An example is represented by aquaculture, which is planned and managed by the Autonomous Regions. Due to its importance as a strategic sector to enhance the economic development of coastal Regions, the national advisory board for marine culture (JACUMAR –Junta Nacional Asesora de Cultivos Marinos) - part of the General Secretariat of Fisheries (SGP) of the Ministry of Agriculture, Fisheries and Food (MAPA) - elaborated five technical dossiers for the MSP of Aquaculture, one for each marine demarcation. These dossiers provided an integrative approach and are the result of an exercise of harmonization and coherence among the proposals for aquaculture planning of all the coastal Regions.

3.1 Analysed plans and strategies

Four cross-cutting plans and strategies were identified and analysed for the case study of the Region of Murcia. These include the Spanish MSP Plan (Plan de Ordenación del Espacio Marítimo – POEM for its initial in Spanish) for the levantine-balearic marine demarcation, which was approved, together with the other four MSP Plans, by the Royal

Decree 150/2023, of February 28¹, with the general objective of promoting the sustainable development of maritime sectors, while ensuring the protection of the marine environment and the sustainable use of resources. The second cross-cutting strategy analysed is the “Integrated Coastal Zone Management (ICZM) Strategy for the Socio-ecological System of the Mar Menor (SESMM) and its Surroundings”, developed at the regional scale and focusing on recovering the ecological balance of the Mar Menor lagoon and its influence area (Figure 3), while accomplishing a sustainable development of the entire area.

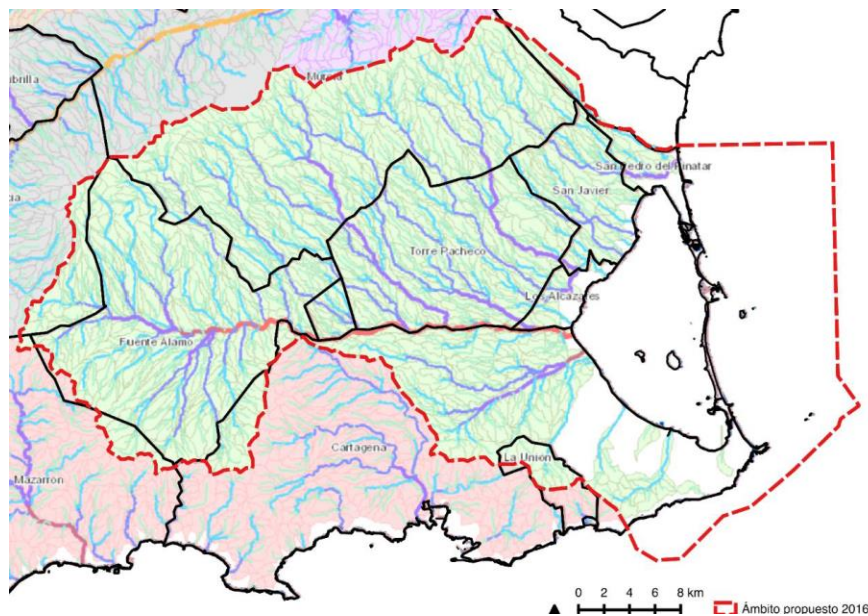


Figure 3. Geographical scope of the Integrated Coastal Zone Management (ICZM) Strategy for the Socio-ecological System of the Mar Menor (SESMM) and its Surroundings (Source: DG for Mobility and Coastal Areas - Regional Public Administration of the Region of Murcia - CARM).

The Region of Murcia experienced an exponential urban-tourist growth in the coastal area that affected the ecological balance in the maritime-terrestrial public domain as well as the coastal landscape and the seascape, in particular due to the construction of houses for tourist purposes within the coastal strip. This situation led to the elaboration of the “Guidelines and Land Management Plan for the coastline of the Region of Murcia”, through which regional authorities tried to design a new territorial model based on a more efficient socio-economic development aiming at the enhancement and conservation of natural resources. Lastly, due to its cross-cutting relevance also for the development of other coastal and maritime plans and strategies, the “Climate Change Adaptation Strategy of the Spanish Coast” was also analysed. Its

¹ https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-5704

main goal is to increase the resilience of the Spanish coast to climate change, through proper planning and management.

Protection and conservation plans and strategies referring to both biodiversity and UCH have been considered. The “Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia” (Figure 4) aims to integrate the management of all protected areas, species and landscapes occurring in the region, to ease their maintenance, conservation and/or restoration while ensuring the application of coherent approaches. This management plan refers to different typologies of protected areas, including: areas protected by international instruments (Ramsar sites, SPAMI sites under Barcelona Convention, etc.), Natura 2000 sites (Special Areas of Conservation (SAC) under the Habitats Directive and Special Protection Areas (SPA), under the Birds Directive), MPAs, marine reserves of fishing interest and other protection mechanisms defined at the national and regional levels, such as regional park, natural park, protected monument, etc.

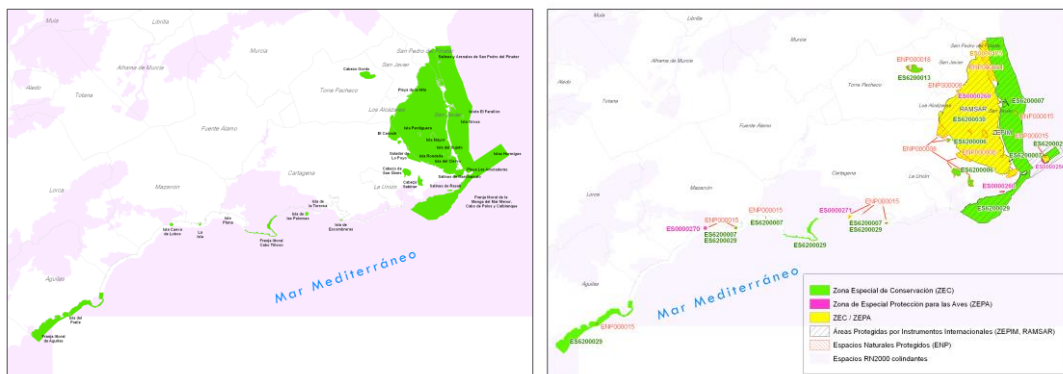


Figure 4. On the left: geographical scope of the “Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia”; on the right: protected areas of the plan. (Source: Department of Water, Agriculture and Environment, CARM).

The “National Plan for the Protection of Underwater Cultural Heritage” - under the guidelines of the UNESCO “Convention on the Protection of the Underwater Cultural Heritage” - establishes the basic criteria and actions for UCH protection in Spanish jurisdictional and sovereignty maritime waters, including the EEZ and the continental shelf. The Region of Murcia treasures a significant number of Assets of Cultural Interest (BIC) in its marine waters, which must be conserved and protected and that have become an essential attraction for underwater tourism.

Six sector-based strategies and plans have been considered, two of national and four of regional scale. Aquaculture is one of the maritime sectors with greatest future perspectives in the Region and it is rather well organized. Thus, two documents related to this sector have been analysed, including fisheries in the second one: the “Strategic aquaculture plan for the Region of Murcia 2021-2027” and the “Participatory Local Development Strategy 2014-2020 of the Region of Murcia” (the new Strategy 2021-

2027 is not published yet, being still under development). A third technical document concerning marine aquaculture in the levantine-balearic marine demarcation was released in June 2023 and is expected to feed the future POEM update. Due to its specific technical focus, this document has not been included in this analysis.

The Region of Murcia owns a high rate of seasonal tourism, especially along the coast. This is responsible of high environmental impact concentrated in a few months. The “Strategic Tourism Plan for the Region of Murcia 2022-2032” promotes a different tourism model in the region with the aim of diversifying tourism and reduce its seasonality.

Navigation and port activities are highly relevant in the Region, both, in commercial and recreational terms. The “Strategic Framework for Open Ports in the Region of Murcia 2022-2045” pretends to reinforce this sector to ease the use of recreational ports in its coastal area, with a sustainable development approach. The last two documents included in this category have a national nature, applying to the whole Spanish maritime and coastal waters. Those are the “Roadmap for the development of offshore wind and marine energy in Spain”, currently one of the most important emerging sectors in Spain and the “National Maritime Security Strategy”, regarding maritime defence, for which transboundary cooperation is needed.

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.

Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
POEM for DM LEBA			X	X				X	X
ICZM Strategy for the Socio-ecological System of the Mar Menor and its Surroundings		X			X	X			X
Guidelines and Land Management Plan for the coastline of Region of Murcia		X		X				X	X
Climate Change Adaptation Strategy of the Spanish Coast			X	X				X	X
Category 2: protection and conservation-oriented plans and strategies									
Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia.		X		X			X		X
National Plan for the Protection of Underwater Cultural Heritage			X	X			X		X
Category 3: Plans for economic sectors and other marine uses and activities									
Strategic aquaculture plan for the Region of Murcia 2021-2027		X			X	X			X
Participatory Local Development Strategy 2014-2020		X			X	X			X
Strategic Tourism Plan for the Region of Murcia 2022-2032		X			X	X			X
Strategic Framework for Open Ports in the Region of Murcia 2022-2045		X			X	X			X

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Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Marine renewable energy: Roadmap for the development of offshore wind and marine energy in Spain			X	X		X			X
National Maritime Security Strategy			X	X		X			

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
POEM for DM LEBA	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
ICZM Strategy for the Socio-ecological System of the Mar Menor and its Surroundings	X	X	X	X								X	X		X	X	X	
Guidelines and Land Management Plan for the coastline of Region of Murcia	X	X	X	X		X			X				X		X	X	X	X
Climate Change Adaptation Strategy of the Spanish	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Category 2: protection and conservation-oriented plans and strategies																		
Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia.	X	X	X	X								X	X			X		X
National Plan for the Protection of Underwater Cultural Heritage			X	X	X							X		X		X		X
Category 3: Plans for economic sectors and other marine uses and activities																		
Strategic aquaculture plan for the Region of Murcia 2021-2027		X													X	X	X	X

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Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Participatory Local Development Strategy 2014-2020	X	X	X											X		X		X
Strategic Tourism Plan for the Region of Murcia 2022-2032			X	X										X	X	X	X	X
Strategic Framework for Open Ports in the Region of Murcia 2022-2045	X	X	X	X		X								X	X	X	X	
Marine renewable energy: Roadmap for the development of offshore wind and marine energy in Spain	X	X	X	X	X	X	X							X	X	X	X	X
National Maritime Security Strategy	X	X			X	X					X	X		X		X		X

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

3.2 Cross-cutting plans and strategies

Due to their nature, the four analysed cross-cutting plans and strategies affect most of the coastal and marine sectors of interest for the Region of Murcia.

The POEMs are the result of the application in Spain of the EU MSP Directive 2014/89/EU. The POEMs address marine and coastal uses as well as land-sea-interactions (LSI). Different categories of LSI are identified within the POEMs, referring to aspects managed mainly by the Regions. The MSP process is linked to the Spanish MSFD process by law. To ease the operationalization of the MSP process and the collection of the specificities from each region and its territory, the multi-level governance framework already in place for the Marine Strategy processes was mirrored. An MSP working group was created under the umbrella of the Inter-ministerial Commission of the Marine Strategies (CIEM), supported by the 5 marine demarcations' Monitoring Committees, which include regional administrations.

POEMs objectives have been articulated around the different uses and interests in the marine environment. To define them, the Spanish MSP competent authority elaborated a questionnaire which was sent to national and regional authorities with competences on marine affairs. The aim of this survey was to identify: (i) the existence of already established objectives of economic, social or environmental nature in Spanish maritime sectoral policies; (ii) the existence of planning tools in place; (iii) the link with other European policies; (iv) main synergies and conflicts among uses, (v) available funds to implement the policies envisaged; and (vi) the system of powers that regulates these policies. Additionally, to the questionnaire, meetings between the competent authority, Ministries with competences at-sea and the Autonomous Communities were held. Furthermore, *ad-hoc* working groups were created for the discussion of specific topics. The Region of Murcia participated in ad-hoc groups related to: MPAs, port activities, OWF, nautical-recreational anchorages and the impact on benthic habitats and navigation and collisions with cetaceans. However, in the process of identifying objectives at the regional level in order to design the POEMs objectives, no information was received from the Region of Murcia.

This process led to the formulation of one general MSP objective and three categories of more specific objectives:

- *General MSP objective*: to promote sustainable growth of maritime sectors in a way that this is compatible with environmental protection and the sustainable use of marine resources.
- *MSP objectives of general interest*: these are priority objectives as they emanate from public policies aimed at protecting the common heritage, safety and health. They pertain to the marine environment; security of freshwater supply; water sanitation, purification and quality, including bathing water; national defence;

maritime surveillance, control and security; scientific research, development and innovation; and the protection of UCH.

- *Sectoral MSP objectives*: to improve the competitiveness and sustainability of different sectors, also relating to the policies that regulates them. Considered maritime sectors are: aquaculture, extractive fishing, energy sector (offshore hydrocarbons and renewable energy), electricity transport and telecommunications sector, shipping, ports and harbours, tourism and recreation.
- *Multi-sector MSP objectives*: to minimize conflicts, facilitate coexistence and promote synergies among sectors, as well as, generate certainty, improve coordination and cooperation, etc.

The POEMs establish zoning for some uses, differentiating between:

- Priority Use Areas (PUAs) defined for General Interest Activities which emanate from public policies aimed at the protection of the common heritage, safety and health; these areas are a priority and must be guaranteed; and
- High Potential Areas (HPAs) defined for certain sectoral activities in the context of the economic activity of maritime sectors whose future development is foreseeable, and in which it is also necessary to identify the most suitable space for such development. For these areas, measures have been proposed at a national level to be implemented during first cycle of MSP.

The POEM for the DM-LEBA established PUAs for security in navigation, national Defence, and protection of biodiversity (Figure 5). It designated HPAs for: aquaculture, protection of biodiversity, and sand extraction for beach nourishment (Figure 6).

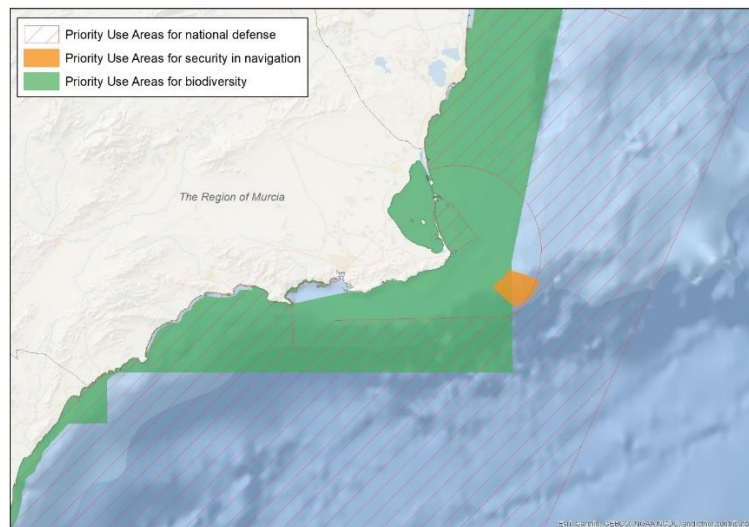


Figure 5. Priority Use Areas (PUAs) defined by the POEM in the Region of Murcia. (Source: own elaboration IEO, CSIC based on InfoMAR², MITECO).

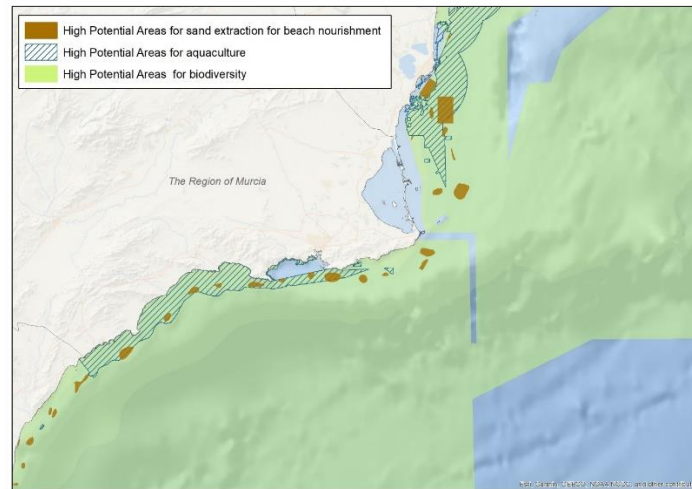


Figure 6. High Potential Areas (HPAs) defined by the POEM in the Region of Murcia. (Source: own elaboration IEO, CSIC based on InfoMAR², MITECO).

The “ICZM Strategy for the Socio-ecological System of the Mar Menor (SESMM) and its Surroundings” contains several objectives relevant for the Region of Murcia’s marine area and for LSI. Three human activities have been categorised as the main source of pollution for the Mar Menor lagoon: urban-tourist development, mining activities and the great expansion of the agricultural activities. The principal objectives of this strategy are identifying such sources of pollution and providing measures to remove them and stop their impacts on the Mar Menor, mainly due to the alteration of the coastal lagoon dynamics. The strategy’s operative objectives are focused on achieving the Good Environmental Status (GES) of the lagoon and the good state of the surrounding surface and underground waters (according to the WFD 2000/60/EC), on the one side, as well as to recover the ecosystem services provided by the whole system and take advantage of them for the coexistence of economic activities and biodiversity conservation.

The third cross-cutting plan analysed is “Guidelines and Land Management Plan for the coastline of the Region of Murcia” proposing a new territorial model based on social development, economic efficiency and the enhancement of natural resources, guaranteeing their adequate conservation for future generations. The main result is the categorisation of the coastal land into eight different typologies, based on the intended use. A responsible authority for the management of each typology is identified by the plan, which also includes measures to develop distinctive strategic actions. The

² <http://www.infomar.miteco.es/>

³ <http://www.infomar.miteco.es/>

strategic actions are thought to have the capacity to trigger a process of territorial improvement that affects the coast and the whole Region of Murcia. The Guidelines also mentions that the Regional Administration will organize the coastline of the Region of Murcia by designing “Coastal Management Plans”. In such management plans, specific measures for the Mar Menor area are included with the aim of implementing a sustainable and high-quality tourism model.

The “Climate Change Adaptation Strategy of the Spanish Coast” was finally considered, given its relevance for all the activities based at sea or in the coast in the Region of Murcia. Its main goal is to increase the resilience of the Spanish coast to climate variability and future change. There are 6 specific objectives regarding sea or LSI:

1. Apply a periodic diagnosis of vulnerability and risks on the Spanish coasts in the face of climate change by applying a common methodology to identify, characterize and describe the most vulnerable areas.
2. Promote the mobilization and participation of stakeholders, with competence and strategic interests on the coast, in the different phases of the adaptation cycle.
3. Contribute to the training, education and awareness of the different actors and administrations involved in coast management in becoming aware of the implications in the medium and long term of the effects of the climate change on the coast.
4. Promote adaptation measures in the socio-economic and the natural systems located on the coast that contribute to their resilience in the face of extreme events and climate change.
5. Incorporate a system for monitoring and evaluating the impacts of climate change on the Spanish coast and to monitor the adaptation measures implemented.
6. Favour initiatives that encourage research on climate change, especially to increase the knowledge about the main climatic factors that affect the coast and the evaluation of impacts on natural and socio-economic coastal systems.

In terms of operative measures, the Climate Change Adaptation Strategy of the Spanish coast prioritises the implementation of Nature based Solutions (e.g. the restoration and conservation of coastal ecosystems like dunes, beaches, marshes, wetlands, etc.) as well as sediment management and the protection of the watershed dynamics to hold the shoreline. Education and awareness raising on climate change of public institutions and private sectors are also considered highly relevant. Finally, the strategy calls for a comprehensive ICZM approach for the entire Spanish coast, as such, any coastal plan developed by the Region should follow the Climate Change Adaptation Strategy principles.

3.3 Protection and conservation-oriented plans and strategies

The “Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia” aims to establish a coherent and unitary approach for the management of the many different protected areas located within the geographic scope of the plan (19 in total). The majority of the protected areas included in the plan are either coastal or marine; 6 Strategic Objectives (SO) are dealing with the sea and LSI:

- SO.1. To consolidate the Natura 2000 Network.
- SO.2. To strengthen monitoring and research as management support instruments.
- SO.3. To establish measures to improve the conservation status of habitats and species.
- SO.4. To guarantee the integration of the requirements of conservation of the natural patrimony into the economic, social and cultural development.
- SO.5. To promote coordination and administrative cooperation and the participation in management.
- SO.6. To promote environmental education as a management tool and encourage public use of protected areas.

Several guidelines of the plan are oriented to maintain or restore the ecological functionality of ecosystems and the recovery of landscape, cultural and ecosystem values, including sedimentary and soil dynamics. Regarding specific measures, the following should be highlighted in terms of environmental and coastal management:

- The coastal competent authorities shall ensure that actions, projects and works promoted, authorized or financed on the Maritime Terrestrial Public Domain included in the protected areas, incorporate the necessary measures for the conservation of biodiversity and the landscape identity.
- Those actions, activities and/or uses that may alter the transport of sediments and aggravate the erosive processes, as well as the alteration of the natural coastal dynamics, should be avoided.
- The reduction of the contaminants that arrive to the watershed and, eventually, to the lagoon and the Mediterranean Sea shall be considered a must.
- Control actions and eradication of invasive alien species shall be executed.
- Measures shall be adopted to prevent the entry of discharges into the protected spaces.

The Region of Murcia owns several UCH sites which require to be preserved and protected. Due to the importance of this issue in the area, ARQVA, the National Museum of Underwater Archaeology was located in this Region, specifically in the city of Cartagena. The “National Plan for the Protection of Underwater Cultural Heritage” has a double objective: to fulfil the commitments acquired with the ratification of the UNESCO “Convention on the Protection of the Underwater Cultural Heritage” of 2001 and, to establish the basic criteria and actions for UCH protection and conservation in Spain. According to the plan, the protection of national UCH sites requires the establishment and adoption of some basic measures, which are grouped into five typologies:

1. Documentation and inventory measures (i.e. detailed underwater archaeological charts of Spanish coastal waters and the development of an Integrated Geographic Information Management program for UCH (GIS – PCS)).
2. Physical and legal protection measures.
3. Training measures involving specialists in research and conservation of the UCH.
4. Coordination and dissemination measures involving regional and national authorities, sectors, the navy and other stakeholders. These activities also include agreements with non-EU countries.
5. Awareness measures to inform citizens on the Spanish historical and archaeological underwater values and stimulate their collaboration for UCH protection.

3.4 Plans for economic sectors and other marine uses and activities

There is a high number of uses and activities that occurs at sea or in the coast within the case study area, implying planning and management to minimise conflicts and improve coexistence among uses and between uses and the conservation of the environmental values. This is pursued both, through cross-cutting plans addressed in previous paragraphs as well as the following sector-based plans or strategies.

The “Strategic aquaculture plan for the Region of Murcia 2021-2027” was developed to strengthen the competitiveness and sustainability of the aquaculture sector in the Region; all Strategic Objectives (SO) of this plan focus on these two issues. These SOs will be canalized into different action lines (measures) to strengthen the sector at the regional level. To this regard, the “definition of the best new locations for the aquaculture activity” is considered one of the most important spatial measures of the plan, together with the non-spatial measures aiming to “provide a regulatory framework and consolidated procedures” for the aquaculture development. Other relevant measures provided by the plan are: the monitoring and control of the entire production process, the definition of new possible locations for aquaculture in line with

the MSP process, the improvement of animal health and the improvement in the knowledge-base for aquaculture planning and management.

The “Participatory Local Development Strategy 2014-2020”, prepared by the Local Action Group for Fisheries and Aquaculture of the Region of Murcia (GALPEMUR) aims to increase the employment and the territorial cohesion of the Region. Some of the main objectives of the strategy are: strengthen R&D&I, diversify jobs along the entire supply chain of the fishing and aquaculture sectors, enhance the role of fishing communities in the local development, and the promotion of environmental quality and social welfare. Several measures included in the strategy are relevant for the sea and LSI, as in particular:

- Valuing, promoting and consolidating the artisanal fishing and aquaculture through improved sustainability and technological innovation.
- Capacity building for the workers of the whole production chain in terms of innovation and improved sustainability.
- Promotion of operators’ participation in the preparation of management and protection plans for fishing/aquaculture activities and marine protected areas.
- Actions aimed at mitigating pollution of the marine environment, its protection and conservation.
- Promotion of ocean literacy in relation to the fishing culture and tradition.

The coastal area of the Region of Murcia, also known as the “Warm Coast”, concentrates a high rate of seasonal “sun and beach” tourism during summer months. The main goal of the “Strategic Tourism Plan for the Region of Murcia 2022-2032” – which applies to the whole Murcia Region - is to re-distribute the tourism all along the year and strengthen it, by enhancing the different valuable features of the region, such as gastronomy, nautical-recreational activities and nature tourism. The plan focuses on the improvement of the quality of tourist operators and activities through innovation and digitalization, actions improving the long-term sustainability of tourist destinations, the reduction of tourism seasonality, promotion of conservation activities in protected areas of high environmental value, establishment of synergies between tourism and other sectors, such as local commerce, air transport or local gastronomy, the improvement of public transport and connectivity and promotion of tourist activities respectful of the high environmental value of protected areas. One of the main goals of the plan is to reformulate and diversify the “sun and beach” tourism mainly characterising Murcia coasts and favour the nature-based and nautical-sport-based tourism, also to avoid massive tourism concentration in summer months.

In relation to port activities, the “Strategic Framework for Open Ports in the Region of Murcia 2022-2045” was released in 2022 to boost the ecological transition of Murcia ports, specifically the fishing and recreational boating ports managed by the

Autonomous Community. The main specific objectives of this Strategic Framework are to: (i) promote the role of the port system as a generator of wealth and tourism for the Region, (ii) re-focus the port activities and the state of infrastructures towards the ecological transition and the principles of the Blue Economy, (iii) advance in universal accessibility to port facilities, (iv) satisfy the social demand for nautical uses to enjoy Murcia coastline, providing more and better services taking advantage of digitization, (v) improve the social perception of ports and nautical activities as elements open and valuable to society and (vi) establish frameworks for the coexistence between the different uses and better use of port infrastructures. Digitization is considered the foundation for the fulfilment of these objectives.

In line with the EU commitment about carbon neutrality for 2050, the development of renewable energies is of key importance for Spain as well. The “Roadmap for the development of offshore wind and marine energy” was published in 2021 to ensure the effective deployment of Offshore Renewable Energies (ORE) in the country. The main objectives of this roadmap are to turn Spain into a reference hub for technological development and environmental innovation associated with renewable energies in the marine environment, to develop a framework for OWF and marine energy commercial deployment, to strengthen the value chain as a whole and to enhance the social and environmental sustainability, highlighting the passive and active monitoring of the marine environment that will be carried out in the OWF. Regarding the Region of Murcia, the POEM has not established any zoning as suitable for OWF, due to the weather conditions, biodiversity and/or the conflicts with other uses, but the development of other renewable marine energies or even OWF under future technological developments is not excluded.

Finally, the “National Maritime Security Strategy” aims at leveraging the sea opportunities in the present and the future for the benefit of Spain’s well-being and prosperity. Its basic principles are: (i) unity of action (harmonisation and coordination), (ii) anticipation and prevention, (iii) efficient and sustainable use of resources and (iv) resilience or ability to resist and recover. The geographical location of Murcia gives the Region the opportunity to become a strategic site for maritime transport and navigation but, cooperation among all the national and international authorities and an appropriate control of maritime routes to access the Spanish coasts, together with the collaboration of the private sectors operating at sea and the improvement of cyber-security in the marine environment are needed to avoid the potential conflicts that shall rise

3.5 Elements of contribution to the EU Green Deal and sea-basin strategies

The vast majority of the analysed cross-cutting plans and strategies include some references to the objectives promoted by the EGD and the WestMED Initiative. None of

them mention the WestMED initiative explicitly; however, the latest published plans and strategies (after 2019) that have been analysed referred explicitly to the EGD.

The POEM is the plan that goes deeper into the EGD challenges, mentioning explicitly the conclusions of the EU Council on the Sustainable Blue Economy, adopted on 26 May 2021, and establishing that “the application of MSP should be used to achieve the ambitions of the European Green Deal”. The MSP plan including the Region of Murcia specifically mentions the EGD placing aquaculture as a driving force in terms of making food systems fair, healthy and environmentally friendly and participating in the objectives of the “Farm to Fork Strategy” (i.e. to mitigate climate change and adapt to its impacts; to guarantee food security, nutrition and public health; to ensure access to sufficient, safe, nutritious and sustainable food and generate fairer economic benefits). Indeed, the “Strategic aquaculture plan for the Region of Murcia 2021-2027” also provides the vision of contributing to the accomplishment of the EGD goals through low carbon emission productions, efficient technologies, food of the highest quality and reliable and biodiversity protection.

More in general, sustainable production, especially regarding food production tackled by both the EGD and the WestMED initiative, is highly discussed in several of the considered strategies and plans, within the wider frame of sustainable blue economy. However, despite the fact that the latter is highlighted and fostered by numerous plans and strategies, “Blue Circular Economy” is totally absent. Goal 2 of the WestMED Blue Economy initiative (i.e. “maritime cluster development”) is addressed by the two regional strategies related to aquaculture where the creation of multi-disciplinary groups throughout the entire production chain becomes essential to create a solid and resilient market.

Climate change is the most mentioned topic among the analysed strategies and plans. While mitigation measures are usually dismissed, adaptation measures are broadly developed. The most important mitigation measures addressed both in the POEMs and in the “Marine renewable energy roadmap” is the deployment of OWF to help the decarbonisation of the EU economy. The “Roadmap for the development of offshore wind and marine energy in Spain” specifically refers to the EGD vision of achieving a sustainable blue economy with the required increase in OWE production. It also establishes that measures must be developed to allow “the maritime space to be managed more sustainably, especially to facilitate access to the growing potential of marine renewable energies”.

Biodiversity conservation and protection measures, which constitute a common goal in the EGD, the WestMED Initiative and the EU Biodiversity Strategy, are widely mentioned and addressed by all the strategies/plans analysed.

In summary, the POEMs are the plans that integrate the greatest number of EGD and WestMED initiative’s elements, proposing measures to accomplish the objectives set.

The “Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia” also includes numerous references to the EGD topics. In relation to climate change adaptation, the importance of the evaluation, monitoring, control and study of the impacts associated with climate change is highlighted. Biodiversity and ecosystem protection and restoration are mentioned, especially regarding the need of avoiding toxic discharges, by regulating the contaminants that are present in the watershed, restoring the ecological functionality of the different protected spaces and controlling the alien invasive species, among others. The plans and strategies latest developed consider and tackle increasingly the EGD and WestMED topics and objectives. As time and experience move forward, the EU policies and strategies are being integrated in a more effective and efficient way in the national and regional regulations.

3.6 Elements about stakeholder engagement

The analysis of the plans and strategies revealed three typologies of situations relating to information on the stakeholder engagement process. For some of the plans, a detailed explanation of the stakeholder engagement process is available, including information on tackled topics, involved sectors and used methodologies. This is the case of the “ICZM Strategy for the Socio-ecological System of the Mar Menor (SESMM) and its Surroundings”, the “POEMs”, the “Comprehensive management plan for the protected areas of the Mar Menor and the Mediterranean coastline of the Region of Murcia” and the “Participatory Local Development Strategy 2014-2020 for the Region of Murcia”.

Some plans and strategies clearly mention the implementation of proper stakeholder engagement process, but documented information is not available. This the case of the “Guidelines and Land Management Plan for the coastline of Region of Murcia (OT 1/2002)”, the “Climate Change Adaptation Strategy of the Spanish Coast”, the “Strategic aquaculture plan for the Region of Murcia 2021-2027”, the “Strategic Framework for Open Ports in the Region of Murcia 2022-2045” and the “Roadmap for the development of offshore wind and marine energy in Spain”.

Finally, some of the considered plans and strategies do not mention the topic; thus, there is no evidence of engagement processes although they might have been occurred. This is the case of the “National Plan for the Protection of Underwater Cultural Heritage”, the “Murcia Region Strategic Tourism Plan 2022-2032” and the “National Maritime Security Strategy”. It becomes evident from the second and third cases, that there is a lack of information regarding stakeholder engagement and public participation processes for most of the considered strategies and plans.

3.7 Persisting gaps in the integrated planning and management of the sea space

The achievement of an integrated planning of the sea space, which includes several coastal and maritime activities and uses, is a complicated task; even more, considering the complex governance system in Spain. This requires going beyond the first MSP cycle, also by filling the existing data and knowledge gaps and improving coordination between (national and regional level) administrations and sectors. The POEMs were recently approved and their implementation has just started. In this perspective, monitoring is essential to assess whether the effects of the plans implementation at the regional scale is the expected one in relation to the set visions and policies. This is particularly relevant for the maritime waters of the Region of Murcia, given the high concentration of uses and activities and the need to improve their coexistence; several gaps should be considered in this perspective. Most of the maritime sectors occurring in the study area do not have specific regional/local strategies or plans, with the exception of aquaculture, which is probably the most organized maritime sector in Spain, and recreational ports. These two sectors count on specific strategies at the regional level where measures and objectives aiming at improving the socio-economic and ecological components of these sectors are proposed. The rest of sectors are considered, either in a national strategy which could barely include any regional feature, or in none. Therefore, there are no objectives or measures established for the majority of sectors at the case study area level. This same issue could be applied to UCH, which lacks a regional plan in spite of the number of sub-aquatic assets of cultural interest present in the Region and the possibility of finding synergies with other sectors, as maritime tourism. The development of more specific sector-based strategies considering regional specificities is needed and would allow to have a clear vision of the sustainable blue economy development in the Region of Murcia. It would enable a more accurate consideration of potential impacts (including cumulative ones) on the marine environment, as well as to properly address synergies and conflicts among different uses which would ease a more detailed MSP at the regional level.

The analysis of the strategies and plans raised another major gap. The integration of European and international strategies, plans and conventions at the regional level is not optimized in some cases. It is true that the recently approved strategies and plans have considered and named these European strategies, however there is still an absence of specific measures to pave the way for the achievement of the European objectives. More important is the absence of legal implication of most plans/strategies, which are non-binding and/or that do not contain specific actions or measures to be implemented at the regional level.

4. Region of Galicia

The case study area of the Region of Galicia is located in the Autonomous Community of Galicia (North-western of Spain). It is bordered by Portugal to the south, the Atlantic Ocean to the west, and the Cantabrian Sea to the north. Galicia is the region of Spain with the most extended coastline (around 1,660 km) which is characterized by deep inlets (Rías). The Galician margin comprises a narrow continental shelf. The 200 m depth isobath lies 15-30 km offshore from the land. All its waters belong to the North-Atlantic demarcation (DM-NOR), one of the five marine demarcations in which the Spanish marine waters are divided according to the Law 41/2010 on the protection of the sea (Figure 7).

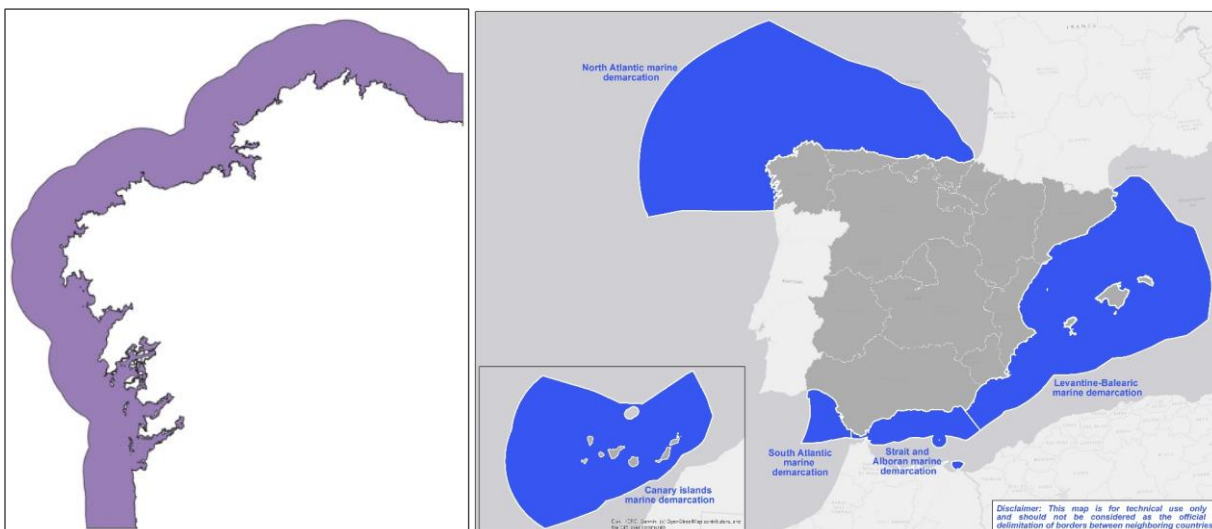


Figure 7. On the left: case study area - Region of Galicia territorial waters belonging to the North-Atlantic demarcation (DM-NOR); on the right: delimitation of the five Spanish marine demarcations (Source: own elaboration; IEO, CSIC). Disclaimer: The limits of the marine demarcations do not correspond to the jurisdictional limits of the Spanish marine waters. They should not be considered as official delimitation with neighbouring countries.

MSP competences in Spain are held by the central government through the Directorate General of the Coast and Sea (DGCM) of the Ministry for the Ecological Transition and the Demographic Challenge (MITERD). Despite the fact that MSP is conducted at the national level, several marine uses and activities are planned and managed by the Autonomous Communities (CCAA, also referred as Autonomous Regions or Regions in this chapter), according to the distribution of competences in Spain as established in the Spanish Constitution of 1978.

In general terms, the marine space is managed by the central government, while internal waters (those encompassing from the baselines to the coastline) are managed

by the Regions. On the other hand, environmental protection is, in the broad sense, a regional competence up to the limit of internal waters. Consequently, Regions are called to elaborate management documents on this aspect, such as specific biodiversity strategies, plans and specific regulations for the implementation of the national law which establishes the basis for the protection of biodiversity (Law 42/2007, of 13 December 2007 on Natural Heritage and Biodiversity). Management of the MPAs falls under national competences, unless an MPA constitutes a geological/ecological continuation of a terrestrial protected area or is located in internal waters; in such a case the MPA is managed by the respective Autonomous Region.

Competences on aquaculture, small-scale fishing, recreational activities (including nautical activities and marine tourism), as well as urban and littoral planning, falls under Regions' responsibilities. Underwater cultural heritage, climate change, maritime surveillance, maritime transport, sand dredging at sea or within the maritime-terrestrial public domain (DPMT) and renewable energies at sea like offshore wind farms (OWF) are managed by the central government.

Although the central government is responsible to set up the basis and the legal requirements of the development of activities at sea in the frame of MSP, the Regions can elaborate more detailed plans/strategies for spheres/sectors of their competence. Respecting the national requirements, these strategies/plans can be more detailed and collect local specificities emerging at a lower scale. An example is represented by aquaculture, which is planned and managed by the Autonomous Regions. Due to its importance as an strategic sector to enhance the economic development of coastal Regions, the national advisory board for marine culture (JACUMAR –Junta Nacional Asesora de Cultivos Marinos) - part of the General Secretariat of Fisheries (SGP) of the Ministry of Agriculture, Fisheries and Food (MAPA) - elaborated five technical dossiers for the MSP of Aquaculture, one for each marine demarcation. These dossiers provided an integrative approach and are the result of an exercise of harmonization and coherence among the proposals for aquaculture planning of all the coastal Regions.

4.1 Analysed plans and strategies

The Spanish MSP plan (POEMs) were approved in February 2023 by Royal Decree with the general objective of promoting the activity and sustainable growth of maritime sectors in a way that this is compatible with environmental protection and sustainable use of resources goals. In Spain, MSP is a national issue; in any case as part of the elaboration of these plans (including the one for the North-Atlantic demarcation), both Ministries with competences at sea and the Autonomous Communities provided needed data and information.

Well before the approval of POEMs, Galicia has been managing and regulating its coastline through other planning instruments, such as the Plan of Management of the Galician coastline (“Plan de Ordenación del Litoral”- POL; Decree 20/2011, of February 10). This is a territorial planning instrument whose purpose, in accordance to Law 6/2007, was to establish the general criteria, principles and standards for urban planning in the coastal zone based on criteria of durability and sustainability, as well as to define the necessary regulations to guarantee the conservation, protection and enhancement of coastal areas. The recently published Law 4/2023 (July 6) for the Planning and Integrated Management of the Galician Coast is especially remarkable, as it aims to plan and manage the coast through an ecosystem and integrated approach, to guarantee the sustainable development of coastal and marine activities, within the framework of the competences attributed to the Autonomous Community of Galicia by the Spanish Constitution and the Statute of Autonomy.

Also relevant for MSP under an operational point of view is the “Galician Mapping and Geographic Information Plan” that is the basic cross cutting instrument for the production of the necessary cartography and geographical information for the management of the whole Galician territory, including its coasts. Its purpose is to guarantee the coherence and interoperability of spatial data, promote efficiency in public investments and ensure the quality of cartographic production and its usefulness as a public service.

In the framework of Research and Innovation the Marine Sciences Program of Galicia (definitive website still under construction) tackles all Galician economic sectors related to blue economy and will provide key knowledge and data relevant for MSP. This Programme is part of the Joint Program in Marine Sciences, within which different coastal regions of Spain collaborate, to deploy a joint strategy of research and innovation in marine sciences and to address the new challenges in the monitoring and observation of the marine environment, climate change, aquaculture and other sectors of the blue economy.

Four plans related to the protection and conservation-oriented category have been identified and analysed. The Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration regulates the implementation and development of Green Infrastructures in the region. These are conceived as an ecologically coherent and strategically planned network of natural and semi-natural areas and other environmental elements, designed and managed for the conservation of ecosystems and the maintenance of the ecosystem services.

Aligned with conservation goals, the integral management plans of the two Galician Marine Reserves - “Os Miñarzos” and “Ria de Cedeira” - offer a management model aiming to ensure protection and maintenance of biological diversity in the long term, also providing a sustainable flow of natural products and services to satisfy the needs of the local fishing communities. The exploitation of natural resources such as fish,

molluscs, sea urchins, barnacles, anemones, worms or algae, are regulated by these two management plans.

Regarding Natura 2000 sites, the Master Plan of Galician Natura 2000 Network (PORN) was approved by the decree 37/2014 on March 27, 2014. This plan aims to declare Sites of Community Importance (SCI) present in Galicia as Special areas of Conservation (SAC) as well as setting up a management instrument establishing a set of objectives and measures for the natural spaces that are included in its scope of application. It also ensures a favourable conservation status of the natural habitats and species of Community interest (Council Directive 92/43/EEC of 21 May 1992) and of the bird species referred in the article 4 of Directive 2009/147/EC.

Finally, the Landscape Strategy of Galicia assumes that landscape is an important economic and social resource. The strategy provides integrated measures to protect and preserve the most significant and characteristic landscapes of the autonomous community, according to sustainability and landscape integration principles. Such strategy includes provisions related to several sectors: recreational activities, tourism, research and innovation, renewable energies, telecommunications, among others, most of them being developed along the coast.

Concerning the latter category of analysis, three plans dealing with the use of marine resources have been selected for the analysis. They affect key sectors such as aquaculture and fishing. The Galician Strategy of Aquaculture constitutes the fundamental tool to guide the management and organization of aquaculture in the region. It provides a conceptual and methodological framework, serving as a roadmap to guide the actions of the government, other administrations, and directly or indirectly related organizations in the field of aquaculture. Although it is not strictly binding due to its strategic nature, it is important to recognize its value as a reference framework that should guide and rationalize actions in this sector, aiming to achieve the anticipated results and promote coordination, coherence, and effectiveness in each of the adopted measures.

Tackling other important coastal resources, the “Shellfish exploitation and management plans” establish the necessary regime to ensure that shellfish exploitation in Galicia is carried out in line with sustainable goals, considering environmental, social and economic aspects. Areas for exploitation of bivalves, invertebrates and algae with commercial interest (clams, cockles, razor clams, goose barnacle, rayed artemis, abalone, algae, sea urchin, anemones, polychaete worms, sea snails, etc.) are public administrative concessions where banks are spatially delimited, classified and regulated. Other marine resources of interest are the subject of “Management plans for marine species of interest in Galicia” that regulate fisheries catch (octopus, eel, sardine shrimp and decapod crustaceans) and the use of fishing gears.

In relation to the tourism sector, it is worth mentioning that Galicia, characterised by over 750 beaches and their traditional estuaries or rias that are navigable areas, offers many recreational and leisure activities linked to the sea. After the outbreak of COVID-19 pandemic the regional government promoted the tourist reactivation of Galicia through the “Master Plan 2021 – 2023 Galicia Safe Destination”. This is a roadmap where the administration and the tourism sector, advance together in a transformation process to provide a consolidated offer to recover occupancy, profitability and spending indicators prior to the crisis in 2023.

Regarding offshore energy sector, in addition to the “Marine renewable energy: Roadmap for the development of offshore wind and marine energy in Spain”, which has a National scope, Galicia Region created the Galician Offshore Wind Observatory. Its main aim is to serve as a forum for dialogue, meeting and analysis for the search for the coexistence and compatibility of the potential development of offshore wind in Galicia with all existing maritime uses, especially fishing activities. The plenary session of the Observatory is made up of the Autonomous Administration (Departments of Economy, Business and Innovation, the Department of the Sea and Department of Environment), fishing sector (Fishermen’s Guilds and the Galician Fisheries Council) and industrial sector (Association of Metal Industries and Associated Technologies).

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.



Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
POEM for North-Atlantic demarcation			X	X				X	X
Plan of management of the Galician coastline (POL)		X		X			X		X
Planning and integrated management of the Galician coast		X		X				X	X
Galician Mapping and Geographic Information Plan		X			X	X			X
Marine Sciences Program of Galicia		X			X	X			
Category 2: protection and conservation-oriented plans and strategies									
Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration		X			X	X			X
Comprehensive management of the two Galician marine reserves.		X		X				X	X
Master Plan of Galician Natura 2000 Network		X		X			X		X
Landscape Strategy of Galicia		X			X			X	X
Category 3: Plans for economic sectors and other marine uses and activities									
Galician Aquaculture Strategy		X			X	X			X
Shellfish exploitation and management plans		X		X				X	X
Management plans for marine species of interest in Galicia		X		X				X	X

Deliverable 3.1. Reginal analysis report



Regions to boost
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Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Master Plan 2021 – 2023 “Galicia Safe Destination”		X			X	X			X
Galician Offshore Wind Observatory		X			X	X			

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
POEM for North-Atlantic demarcation	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Plan of management of the Galician coastline (POL)															X	X	X	
Planning and integrated management of the Galician coast	X	X	X	X		X	X							X	X	X	X	X
Galician Mapping and Geographic Information Plan	X	X	X	X	X	X								X	X	X	X	
Marine Sciences Program of Galicia		X				X								X	X			
Category 2: protection and conservation-oriented plans and strategies																		
Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration			X	X											X		X	
Comprehensive management of the two Galician marine reserves.	X	X												X	X		X	
Master Plan of Galician Natura 2000 Network																X		
Landscape Strategy of Galicia			X	X											X		X	
Category 3: Plans for economic sectors and other marine uses and activities																		
Galician Aquaculture Strategy		X				X								X	X			

Deliverable 3.1. Regional analysis report



Co-funded by
the European Union

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Shellfish exploitation and management plans	X	X				X												
Management plans for marine species of interest in Galicia	X	X				X												
Master Plan 2021 - 2023 “Galicia Safe Destination”				X														
Galician Offshore Wind Observatory							X											

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

4.2 Cross-cutting plans and strategies

The Spanish MSP plans (POEMs) are the result of the application in Spain of the EU Directive 2014/89/EU. The POEMs address marine and coastal uses as well as land-sea-interactions (LSI). Different categories of LSI are identified within the POEMs, referring to aspects managed mainly by the Regions. To ease the operationalization of the MSP process and the collection of the specificities from each region and its territory, the multi-level governance framework already in place for MSFD was mirrored. An MSP working group was created under the umbrella of the Inter-ministerial Commission of the Marine Strategies (CIEM), supported by the 5 marine demarcations' Monitoring Committees, which include regional administrations.

POEMs objectives have been articulated around the different uses and interests in the marine environment. To define them, the Spanish MSP competent authority elaborated a questionnaire which was sent to national and regional authorities with competences on marine affairs. The aim of this survey was to identify: (i) the existence of already established objectives of economic, social or environmental nature in Spanish maritime sectoral policies; (ii) the existence of planning tools in place; (iii) the link with other European policies; (iv) main synergies and conflicts among uses, (v) available funds to implement the policies envisaged; and (vi) the system of powers that regulates these policies. Additionally, to the questionnaire, meetings between the competent authority, Ministries with competences at-sea and the Autonomous Communities were held. Furthermore, ad hoc working groups were created for the discussion of specific topics.

This process led to the formulation of one general MSP objective and three categories of more specific objectives:

- *General MSP objective:* to promote sustainable growth of maritime sectors in a way that this is compatible with environmental protection and the sustainable use of marine resources.
- *MSP objectives of general interest:* these are priority objectives as they emanate from public policies aimed at protecting the common heritage, safety and health. They pertain to the marine environment; security of freshwater supply; water sanitation, purification and quality, including bathing water; national defence; maritime surveillance, control and security; scientific research, development and innovation; and the protection of UCH.
- *Sectoral MSP objectives:* to improve the competitiveness and sustainability of different sectors, also relating to the policies that regulates them. Considered maritime sectors are: aquaculture, extractive fishing, energy sector (offshore hydrocarbons and renewable energy), electricity transport and telecommunications sector, shipping, ports and harbours, tourism and recreation.

- *Multi-sector MSP objectives*: to minimize conflicts, facilitate coexistence and promote synergies among sectors, as well as, generate certainty, improve coordination and cooperation, etc.

The Case Study of the Galicia Region is located in the North-Atlantic demarcation (DM-NOR). It holds a strong legacy of maritime activity, being the main fishing region in Spain and a key fishing sector within the EU. Galicia also plays a major role in aquaculture production, providing more than 80% of the aquaculture products generated in Spain. The high increasing of activities as tourism and maritime recreational activities and the possible installation of offshore wind farms due the high wind potential, among others, could represent a conflict or overlap between the uses of existing or potential activities in the same sea area. At this regard, MSP became an essential tool to manage this situation. Similarly to the MSP plan for the Levantine-Balearic marine demarcation (DM LEBA), the POEM of DM-NOR identifies Priority Use Areas for General Interest Activities and High Potential Areas for certain sectoral activities whose future development is foreseeable, and for which it is also necessary to identify the most suitable space for their development.

Well before the approval of POEMs, Galicia has been managing and regulating its coastline through other planning instruments. The Plan of Management of the Galician Coastline (POL) emerged as an instrument to promote comprehensive management of the Galician coastal territory, considering aspects such as sustainability and landscape preservation. Its general aims included the achievement of effective protection of the coast, considering the coastline as a spatial entity endowed with value, which must be protected from a comprehensive perspective. This plan promoted two main objectives: (i) to establish a reference framework for the urban planning of the coastal area through a set of criteria, principles and general rules and (ii) to approve the regulations for the conservation, protection and enhancement of coastal areas. In order to achieve the objectives aforementioned, it was necessary to establish a new territorial model that identifies and characterizes its different areas and elements, establishes the relationships between them, determines the criteria, principles and general rules for each of these elements and specifies the regime of uses of areas with recognized values. To carry out the detailed characterization and management, specific cartography was prepared considering habitats associated with intertidal dynamics (plains and marshes) and other recognized geological forms such as cliffs, sandbanks, dunes, lagoons and coastal wetlands.

The recently approved Law 4/2023, of July 6, for the planning and integrated management of the Galician coast intend to take another step further, aiming to implement coastal planning and management through an ecosystem-based and integrated approach. This will be clearly relevant in terms of planning and management of the sea space and the related land-sea interactions. The law aims to establish an administrative organization of the coast that guarantees integrated

management, through adequate coordination, collaboration and participation and to regulate coastal planning instruments. The law also pursues to determine the legal regime of the different uses and socio-economic activities that are developed on the coast, the granting and management of the enabling titles for the use of the coast and the identification of strategic actions for the sustainable development of the coast. It also includes the adoption of additional measures for the protection of the coast that take into consideration the maintenance of the quality and environmental objectives of the Galician coastal waters, the degree of coastal resilience to climate change and the economic and social impact of the actions that are projected on the coast. This law is a regional instrument different and independent of the national-level POEM. It states in its articles, that the entire Galician maritime-fishing sector is strategic and its access to resources, locations and fishing grounds must be prioritized over any other type of possible use.

Among relevant measures included in the Law 4/2023, it is worth mentioning specific instrument foreseen for coastal planning such as the Galician blue economy strategy, the guidelines for planning the Galician coastline, the Coastal Management Plan, the marine management plan, special estuary plans, special beach plans, sectoral plans and the plans for the prevention and fight against the pollution of the coast. Moreover, three kinds of spaces have been defined and based on their conditions and on actions to be undertaken:

- a) Environmental protection areas, including areas that preserve singular and irreplaceable natural or landscape characteristics and exceptional environmental values, which must be specially protected and preserved
- b) Environmental and landscape improvement areas, including areas spaces that, without meeting the conditions of the above, remain mostly free from urbanization or degradation processes, or have undergone reversible denaturation processes, and therefore require actions for the protection, recovery and improvement of their conditions
- c) Redevelopment area, including areas transformed by urbanization or by the development of uses and economic activities, as well as areas degraded by any cause and of impossible or difficult renaturation, which require rearrangement actions, aimed at not aggravating the deterioration, humanizing the spaces and renewing the elements and their environment.

The Galician Mapping and Geographic Information Plan, launched in 2022, has a remarkable cross cutting approach and a close and wide relationship with the sea and land-sea interactions. Being its main objective the production of geographic information for the characterization and protection of the Galician territory, including the coastal area and the evaluation of its land uses, the Plan is clearly relevant in a MSP and LSI perspective. The information developed under this plan can be used in the

following aspects: marine and coastal planning and management, coastal marine environment (including marine protected areas, preservation of the coastal environment, and mitigation and adaptation to the effects of climate change), water management, national defence, maritime surveillance (control and security), scientific research, protection of cultural heritage (including underwater), aquaculture development, fisheries management, renewable energies suitability, shipping management strategies and sustainable tourism development. The information generated under the implementation of this plan could be used for zoning and spatial analysis. The development and maintenance of several geographic information webpages and viewers foreseen by the plan is considered a fundamental tool for decision-making and evaluation and provide data for an ICZM and MSP.

In the field of Research and Innovation, the Programme of Marine Sciences of Galicia launched in 2022 will provide key knowledge and data relevant for MSP. This Programme is part of the Joint Program in Marine Sciences, inviting coastal regions of Spain to collaborate to deploy a joint strategy to address the new challenges in the monitoring and observation of the marine environment, climate change, aquaculture and other sectors of the blue economy. The Programme is organized in 11 ambitious projects whose outcomes will be especially relevant for MSP. Among them, it is worth highlighting the development of a Strategy and Planning for marine monitoring governance including: the definition of a Coastal Observation Strategy for Galicia, mechanisms for the implementation of a large-scale monitoring program, decision-making products and services and the identification of monitoring networks that support the sustainable management of marine resources. This Strategy will be supported by the development of new monitoring technologies and tools with a high degree of automation for the massive and systematic collection of data essential for the management the sea. Other expected results include genomic tools for sustainable management and improvement of aquaculture productivity, procedures and tools to improve and strengthen the aquaculture of bivalve molluscs, improvement of diagnostic capacity in aquaculture and sustainability in fish production, development of new systems of Integrated Multi-Trophic Aquaculture (IMTA) and interventions for the resilience of the coastal environment in Galicia.

4.3 Protection and conservation-oriented plans and strategies

The Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration was submitted to a wide consultation process and it should be approved and therefore launched by 2024. It is expected to regulate the implementation and development of Green Infrastructures in Galicia, which are conceived as an ecologically coherent and strategically planned network of natural and semi-natural areas and other environmental elements, designed and managed for the conservation of ecosystems and the maintenance of the ecosystem services they provide us. The

Strategy contemplates eight goals that are relevant for the sea and for land-sea interactions and that have a spatial component:

1. Identify and spatially delimit the basic network of the Green Infrastructure
2. Reduce the effects of fragmentation and loss of ecological connectivity caused by changes in land use or the presence of infrastructures
3. Restore habitats and ecosystems in key areas to favour biodiversity, connectivity or the provision of ecosystem services, prioritizing nature-based solutions
4. Maintain and improve the provision of ecosystem services of the elements of the Green Infrastructure
5. Improve the resilience of the elements linked to the Green Infrastructure, favouring mitigation and adaptation to climate change
6. Guarantee the territorial coherence of the Green Infrastructure by defining a governance model that ensures coordination between the different administrative levels and institutions involved
7. Effectively incorporate Green Infrastructure, the improvement of ecological connectivity and ecological restoration to sectorial policies, especially in terms of territorial planning and maritime space planning and environmental assessment and
8. Ensure adequate communication, education and participation of interest groups and society in the development of the Green Infrastructure.

Still with protection and conservation purposes, the Landscape Strategy of Galicia aims to mainstream landscape preservation into land use planning and urban development policies as well as other cross-cutting and sectoral policy that may have a direct or indirect impact on landscape. Regarding measures, The Landscape Strategy of Galicia is articulated through three key actions that can be assimilated to measures: (i) drafting instruments for protection, planning and management of landscapes (catalogues, guidelines and actions plans in protected areas), (ii) landscape integration (integration of architecture and landscape) and (iii) awareness, training, and dissemination about landscape protection. All these actions are developed in coastal zones, so they are relevant for the sea and LSI.

Two MPA plans integrate the analysis of this category, i.e., the plans for the integral management of the marine reserves of “Os Miñarzos” – a Marine Reserve of Fishing Interest located in north-west of Galicia (Figure 8) - and of “Ria de Cedeira” located in the North. These MPAs were designed and developed by scientists and members of the regional government of Galicia in close partnership with fishermen through a highly participatory process. Their management and control body is made up of

representatives of the Ministry of the Sea and Ministry of Environment, the local fishermen’s association (“Cofradía”) and the Galician federation of fishermen’s guilds.

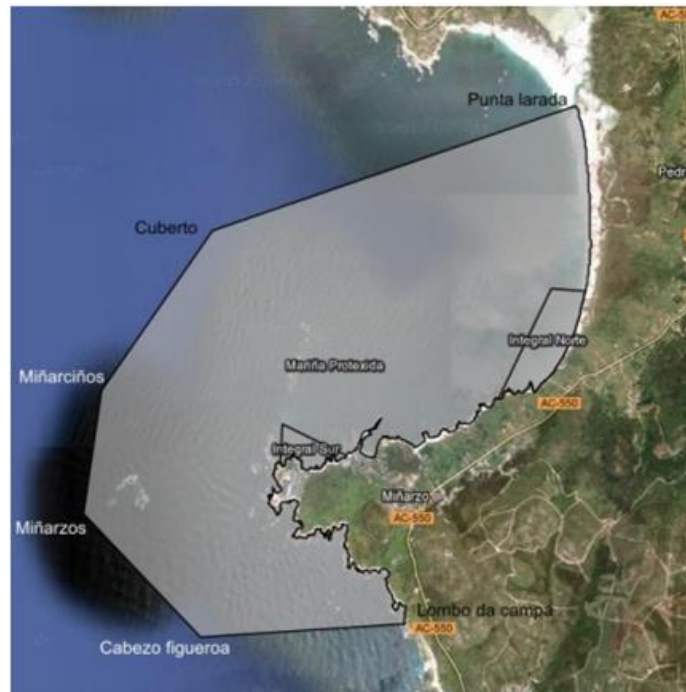


Figure 8. Map of the marine reserve of “Os Miñarzos” (Source: <http://ww3.intecmar.gal/Sigremar>)

The plans aim at the sustainable management of human activities to ensure the protection of biological diversity in the long term and to maintain the sustainable flow of natural products and services to satisfy the needs of the local fishing community. Within the scope of the two reserves, special areas of integral protection are established. These are high-value habitats, where maritime fishing, fauna and flora gathering and underwater activities are fully prohibited. A scientific monitoring protocol has been put in place to control fishing landings, catches and effort. Fishing activities carried out in the waters of the two marine reserves are subject to the measures established in the Comprehensive Management Plan, which are regulated by a legal decree. This includes the delimitation of the MPAs and its zoning, allowed fishing gears, management measures for the different exploited species and control measures.

Finally, the Master Plan of Galician Natura 2000 Network (PORN) constitutes the basic instrument for a planning, organization and network management of the protected areas of the Natura 2000 Network complying with the requirements established in European directives, state and regional regulations. Conservation objectives proposed by this plan for Galicia’s Natura 2000 areas are classified into three typology groups: a) coastal area, b) wetlands and river corridors, and c) mountain area. It establishes objectives and measures grouped by spaces with habitat types of similar typology. This management plan can have a future development and establish additional

conservation and management measures for each SAC and SPA, habitats and species or for certain uses and activities.

4.4 Plans for economic sectors and other marine uses and activities

For this specific category, plans and strategies related to aquaculture, fishing, tourism and offshore energy were considered.

The Galician Aquaculture Strategy aims to provide the aquaculture activity in Galicia with a dynamic, sustainable, balanced, and high-quality development model considering environmental, social, and economic aspects. Its main objectives are:

- Promote environmental sustainability in aquaculture through biodiversity preservation, proper integration of aquaculture facilities into the landscape, and improvements in the efficiency of energy and water consumption.
- Boost aquaculture activity by diversifying productions, strengthening productive structures, promoting the marketing of aquaculture products, and fostering research and technological development.
- Generate quality employment and wealth in peripheral coastal areas, ensure high-quality and food-safe aquaculture products, strengthen food supply capacities, and promote specialized training and association in the sector.

This aquaculture strategy promotes comprehensive planning of the aquaculture sector, including the development of a Coastal Aquaculture Master Plan, a Cultivation Planning Plan for the maritime zone (water-based systems), and another for the maritime-terrestrial zone (land-based systems). These plans are complemented by the ongoing plan for the recovery of unproductive shellfish areas. It also seeks the integration of aquaculture into the spatial planning of the Galician region, linking its objectives to the general guidelines established in other strategic planning tools of the Galician territory, such as the Territorial Planning Guidelines and the Coastal Planning Plan. The development of aquaculture activities in the maritime domain will be managed through the Maritime Cultivation Planning Plan (POCUMA), which will establish the compatibility of fish and shellfish aquaculture with fishing and with environmental protection in Galicia. In the maritime-terrestrial zone, the main tools integrated into the Galician Aquaculture Strategy to develop aquaculture activities in this area will be the Cultivation Planning Plan for the Maritime-Terrestrial Zone. This will include the Unproductive Zone Recovery Plan, supported by the reformulation of regulations on fishermen's associations (cofradías). Also linked to the Galician Aquaculture Strategy, the new Aquaculture Parks Planning Decree will regulate and organize the activity, providing maximum legal certainty.

For more than 30 years, Regional Shellfish Exploitation and Management Plans have been regulating the gathering of this type of resources. Plans are legally binding and

refer to administrative concessions with georeferenced spatial delimitation. Different species have been progressively incorporated as exploitation targets. This includes bivalves, invertebrates and algae with commercial interest (as clams, cockles, razor clams, goose barnacle, rayed artemis, abalone, algae, sea urchin, anemones, polychaete worms, sea snails, etc.). Each shellfish bed has a code depending on the type of extraction that is carried on (on foot, on boat, etc.); its limits are established by law. The plans state the species that can be exploited and the beds in which this exploitation can be carried out. Any species that is not included in the plan cannot be exploited. The plans also establish the regime for shellfish exploitation in Galicia to guarantee the sustainable gathering of resources, considering environmental, social and economic aspects. Measures for the conservation and sustainability of the shellfish resources as well as marketing strategies to improve the sale prices of shellfish are included in the plans. They must be aligned with the EU MSFD Directive, including actions related to the following descriptors: 1. Biodiversity is maintained, 2. Non-indigenous species, 3. the population of commercial fish species is healthy, 10. Marine litter. They also include semi-intensive aquaculture practices: algae accumulation clean-ups, planting seed clams and protecting with nets, transfers to areas of low production, substrate conditioning, and etc.

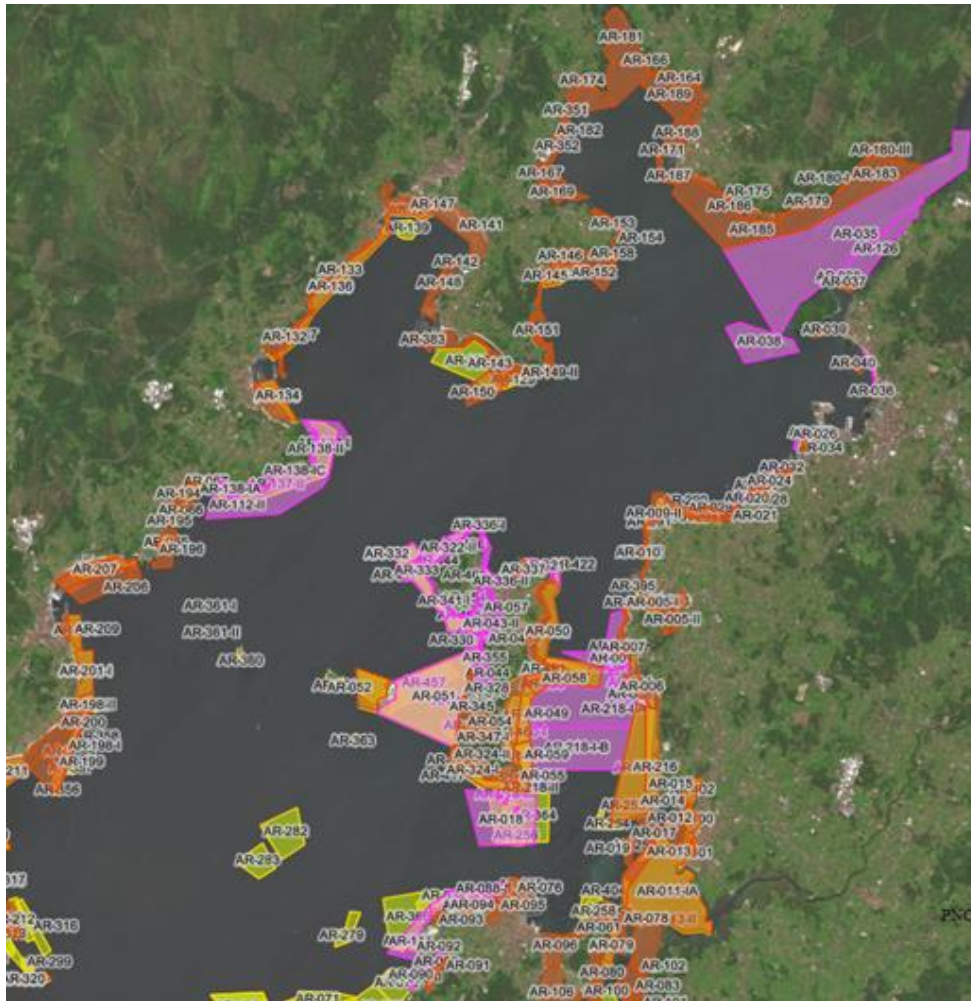


Figure 9. Shellfish beds identification - by type of shellfish bank and fishing gear used - and delimitation in Ría de Arousa (Source: <http://ww3.intecmar.gal/Sigremar>).

Similarly to the previous plan, the Management Plans for Marine Resources of Interest in Galicia have been established to regulate fisheries catch for specific species (octopus, eel, sardine, shrimp and decapod crustaceans) and the use of fishing gears. They apply to small-scale fisheries and other coastal fleets. Depending on the plan the geographic scope can be the sea waters under the regional regulations or specific areas like “rias”. Most of these production banks are located in areas falling under environmental protection regimes (special protection areas - SPA, Natura 2000, and Ramsar) even within the only existing national park in Galicia “Atlantic Islands of Galicia National Park” (e.g., guilds of Bueu, Cangas and Aguiño). Fishing activities and environmental protection normally coexist without major conflicts. Some other production areas are located on beaches, where during the summer month’s tourist activities are carried out. The coexistence fishing and tourism has reported problems derived from poaching exercised on shellfish resources, which can only be collected by

members of the fishing guilds, who have the corresponding exploitation permit to carry out the professional harvesting activity.

The Master Plan 2021 – 2023 “Galicia Safe Destination” was established with the objective of promoting the tourist reactivation of Galicia after the health, economic and employment crisis caused by COVID-19 in the sector. This plan has 4 cornerstones: I) quality as a sign of identity of the sector, II) the safety and hospitality of the destination, III) the intensive use of technology and the promotion of innovation, and IV) sustainability as a backbone element. Based on these strategic pillars, the plan is structured in 7 strategic objectives and 42 actions. One of these strategic objectives focuses on “water as a touristic resource”, considering that the sea gives Galicia an important potential when articulating tourist experiences. Different operational actions were proposed, among others: (i) impulse of the Territorial Plan of tourism sustainability of the Galician coast, highlighting the value of nautical sports, (ii) support for the main sporting events held on the Galician coast, (iii) promotion of maritime tourism and tourist experiences that value the sea heritage, (iv) presence at international nautical fairs, and (v) promotion of the Galician Sailing Centre as the epicentre of nautical activity.

In July 2021, the Ministry for the Ecological Transition and Demographic Challenge (MITECO) released the draft of “Marine renewable energy: Roadmap for the development of offshore wind and marine energy” for public information. Its main objective is to ensure the effective deployment of ORE in Spain. In addition, it is expected to ensure an orderly deployment of facilities in territorial waters being respectful with the environment and compatible with other uses and activities. The Galician Offshore Wind Observatory arises in this context, including the following functions: (i) promote technical knowledge forums for the analysis of compatibilities and uses of maritime space, (ii) create an information space between public administrations and economic sectors on regulatory, normative or planning issues, both in the maritime space and in infrastructure, and (iii) prepare studies on opportunities, impact and industrial potential related to OWE in Galicia. For the development of its technical activity, the Observatory approved in June 2021 the creation and start of the activity of three working groups focusing on: Regulatory Analysis and Planning, Technology and Innovation and Social Impact.

4.5 Elements of contribution to the EU Green Deal and sea-basin strategies

Most plans and strategies analysed directly or indirectly contribute or will contribute to achieve the objectives of the EGD, including those of the EU Biodiversity Strategy. The Law 4/2023, of July 6, for the planning and integrated management of the Galician coast aims to improve the management of human activities on the coast to guarantee sustainable use of its resources and the good state of coastal ecosystems from a triple

perspective (environmental, social, and economic), thus contributing to one of the key EGD goals: preserving and restoring ecosystems and biodiversity. With an operational approach, the Galician Mapping and Geographic Information Plan aims to provide a robust geospatial data infrastructure to solve issues related to the availability, quality, organization, accessibility, and sharing of geographical information. It acts as a supporting and cross cutting tool for developing public policies aligned with the EGD scope.

Similarly, both, the Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration and the Landscape Strategy are also aligned with the EU Strategy of Biodiversity, with NBS being one of the main tools for achieving the EU's environmental objectives. The creation of green infrastructure networks, such as ecological corridors, enhance connectivity between habitats and facilitate the movement of species. This strategy highlights the importance of integrating biodiversity considerations into spatial planning and infrastructure development, linked to an ecosystem-based management approach. Coherently, the Landscape Strategy of Galicia develops integrated measures to protect and preserve the most significant and characteristic landscapes of the autonomous community, according to sustainability and landscape integration principles.

The expected outputs of the Marine Sciences Program of Galicia, such as the improvement of monitoring technologies and methodologies for data collection, have the potential to generate a positive impact on various EGD aspects, including for example the reduction of greenhouse gases emissions or the improved climate change adaptation of coastal areas.

Most components of the Galician Aquaculture Strategy contribute to EGD goals: reduction and improvement of energy consumption or water utilization, development of new forms of feed in aquaculture, minimization of waste and effluents while promoting their reuse will contribute to sustainable seafood production as well as climate change mitigation and adaptation. The Strategy also aims at job creation through aquaculture, contributing to some of the fair and just transition components of the EGD. Eventually, Shellfish exploitation and management plans and the Plans for the integral management of marine reserves in Galicia including measures for the conservation and sustainability of shellfish resources and production areas are contributing to combine sustainable seafood production with biodiversity and ecosystem protection and restoration and therefore to EDG and EU Biodiversity goals.

The regulations and plans above also contributes to Pillar IV of the Atlantic Strategy that aims to achieve healthy oceans and resilient coasts. More specifically, they may potentially contribute to goal 6 “Stronger coastal resilience” and within this goal to the following actions: (i) Develop test spaces, pilot areas to test methods of coastal protection and promote nature-based solutions; (ii) Promote sustainable practices in coastal and maritime tourism, (iii) Share best practices on the application of maritime

spatial planning to coastal adaptation, resilience, and applicable environmental assessments , and (iv) Map coastal wetlands for preservation and to monitor their role as carbon sinks.

4.6 Elements about stakeholder engagement

Most of the analysed regional level plans and strategies have included stakeholder engagement and consultation processes and remarks the relevance of this aspects also for the future.

The Galician Aquaculture Strategy includes a section titled "Development and Participation," which emphasizes its intention to serve as a participatory framework for all initiatives and communities linked to aquaculture. The strategy included the launch of a public participation process allowing interested stakeholders and the general public to contribute to the Galician Aquaculture Strategy document. It was publicly exhibited for a duration of one month, providing ample opportunity for feedback and input. With similar mechanisms, the initial proposal of the Galician Mapping and Geographic Information Plan, drawn up by the Commission for the Coordination of Geographic Information Systems and Cartography, was transferred to the different public administrations and instrumental entities of the regional public sector, to local entities and, when appropriate, to other bodies of different public administrations. The Marine Sciences Program of Galicia involved from its definition phase all Galician marine research institutions related to the marine development. The degree of interaction with stakeholders will be kept very high also in the implementation phase of this program, as their engagement is considered crucial to define the objectives and expected outcomes of the Coastal Observation Strategy for Galicia.

Concerning the Galician Strategy for Green Infrastructure and Connectivity and Ecological Restoration two types of consultations were established: (i) presentations and meetings, intended to involve citizens, organizations, public and private institutions in general and associated sectorial bodies and (ii) consultations made to the different regional ministries of the Galicia regional council. In the process of preparing this strategy, there was a public participation process through a form made available at the beginning of the process on the web page created for this purpose. Moreover, the ecological plans/projects linked to this Strategy must integrate measures that ensure the information and effective participation of the different territorial actors, especially local communities and authorities, as well as state and regional administrations, non-governmental organizations as well as Research Institutions.

Similarly, the Law 7/2008 on Landscape Protection, establishes the participation of the social actors in the different phases of the elaboration of the instruments of protection, management, and landscape planning, with the purpose of incorporating their considerations and aspirations about their landscapes. Throughout the development

of the Landscape Strategy of Galicia different participation processes were designed and implemented as well as public consultations.

The Plans of the two Galician Marine Reserves were the result of a co-generation process which involved local fishermen operating in the MPAs areas. Meetings were held to this scope. Plans were also submitted for consultation and a process of allegations were opened. Finally, plans were approved by the regional Ministry of the Sea. Only a small number of shellfish exploitation and management plans are directly managed by the extractive sector itself. For the most part, they depend exclusively on the administration bodies, which finally determine and coordinate its exploitation activities. Some of the management plans for marine species of interest in Galicia have set up monitoring committees made up of representatives of the fishing sector and the administration; these committees hold regular meetings

4.7 Persisting gaps in the integrated planning and management of the sea space

Although relevant regulations, plans and strategies and geographical information have been developed or will be shortly launched, there are still a number of gaps that concern both regional and national levels.

The implementation of MSP plans in Galicia as well as of other cross-cutting and sector-based planning and management of the sea space should be based on robust, updated and reliable data and information. The generation of knowledge, data and tools that support decision making and facilitate the assessment of the impact of economic activities on marine resource and ecosystems is crucial. In addition, studies on cumulative pressures and impacts must be carried out at an appropriate resolution to provide a correct distribution of areas subject to high levels of pressure.

Galician coasts, characterized by numerous coastal inlets called “rias” with an exceptional high productivity due to the upwelling phenomenon, concentrate a high number of fishing and aquaculture professionals in a restricted area. Particularly in the south part of the Galician maritime territory both uses coexist with tourism, recreational and leisure activities, so detailed planning and regulation is required to avoid conflicts and support synergies. In the case of potential overlapping of uses and associated conflicts, advanced data and knowledge on the economic value of maritime uses is of great importance for decision making and to define potential compensation mechanisms. Despite the fact that some uses are well characterized in Galicia and their social importance in economic terms is known (aquaculture, fishing, etc.), other activities such as tourism are very fragmented and their characterization from an economic point of view requires more detailed studies.

Furthermore, in a future-oriented perspective possible effects of wind farms on fisheries and aquaculture represent one of the main issues for the management of the

Galicia territorial sea. The narrow continental shelf and wind conditions implies that high potential areas for wind energy production are projected in the same zones where traditional fishing is carried out. Therefore, it would be necessary to know the ecological and economic impact that the establishment of wind farms would represent for this activity. Offshore aquaculture activities could also be established in the same areas in the near future if the technical means allow it. In order to identify the most suitable offshore areas for aquaculture systems, gathering and analysing of available historical data series (physical, chemical and biological parameter) should be performed in-depth.

Climate change mainly also affects uses such as fisheries and aquaculture, altering the redistribution of marine ecosystem conditions and of important commercial species. There is a general consensus that climate change must be incorporate in the MSP process for a better preparedness, and to reduce vulnerability of marine habitats and maritime sectors. At regional level is highly required to promote the development and implementation of models and tools to project the impact of climate change on actual and future maritime uses and integrate adaptation measures.

Advancements at the regional level on the availability and uses of data and knowledge on MSP are being made through the existing geoportals and the current development of MARPLAN tool to support the decision-making of maritime spatial planning in Galicia, but more efforts and investments are required to complete them and improve spatial and temporal resolutions. Moreover, the development of compatibility analyses and ecosystem services valuation could support MSP decision-making and site selection especially in areas where overlapping or conflicts of uses (e.g. wind energy vs fishing). Mechanisms and incentives to foster collaboration and information exchange between regional and national authorities on MSP process and to foster participation of all social actors involved with the coastal management from the very beginning of the process will be of paramount importance together with training and awareness raising activities involving different stakeholders.

5. Sardinia Region

The statutory Italian MSP process has its roots in the transposition of the MSP Directive through the Italian legislative decree 201/2016. This decree designated the MSP competent authority within the Ministry of Infrastructure and Transport. Article 6 established an Inter-Ministerial Coordination Table, chaired by a representative of the Presidency of the Council of Ministries (Department for European Policies), with participation of various Ministries with competences on marine and maritime affairs. Main tasks of the Inter-Ministerial Coordination Table are:

- Defining the maritime areas for the development of the Italian maritime spatial plans, these were identified in accordance with those identified for the implementation of the MFSD, i.e.: the Adriatic, the Ionian and Central Mediterranean, and the Tyrrhenian and Western Mediterranean (Figure 10).
- Elaborating guidelines including principles and criteria for the implementation of MSP and the elaboration of related plans in Italy; such guidelines were formalised through the Decree of the President of the Council of Ministers of 1st December 2017.
- Certifying that the MSP plans developed for Italy are compliant with above MSP guidelines.

Competences on marine and maritime issues in Italy is rather complex and some-what fragmented. The State has legislative power on environmental protection as well as landscape and cultural heritage preservation. The State and Regions share legislative competences on several issues, such as: ports, maritime transport, production and distribution of energy, spatial planning, enhancement of cultural and environmental goods, scientific and technological research and support to business innovation. The Regions have legislative power over fishery, aquaculture, coastal defence and tourism, which can also be regulated by the State in terms of implementation of international and EU obligations. Fragmentation of administrative competence among different governance levels is even higher; these competences are shared between the State and the regions, involving for some specific sectoral aspects (e.g. related to issuing of licenses and concession) also the local level. For example, the State can establish national parks, national nature reserves and MPAs, while the Regions can establish parks and natural reserves of regional and local interest.

Also in consideration of this distribution of competences and responsibilities on marine and maritime issues, the implementation of the MSP process and the operational elaboration of the MSP plans has been appointed to a Technical Committee coordinated by the MSP competent authority and involving other five Ministries (Ministry of the Environment and Energy Security; Ministry of Agriculture, Food Sovereignty and Forestry; Ministry of Enterprises and Made in Italy; Ministry of Culture

and Ministry of Tourism) and the fifteen coastal Regional administrations. This Committee is in charge of developing the three MSP plans, with the operational support of a scientific-technical team formed by CNR-ISMAR, CORILA and IUAV university. Three plan proposals, one for each of the three identified maritime areas, have been developed and were submitted to public consultation in September 2022, in parallel to the consultation on the documents drafted as part of Strategic Environmental Assessment (SEA). The SEA procedure was concluded in October 2023 and MSP plans are being finalised based on received feedbacks. Such finalisation will also have to take in consideration the input of the National Plan for the Sea (*Piano Nazionale del Mare*) approved on the 31st of July 2023 by the Inter-ministerial Committee for the Sea Policies (CIPOM). This high-level plan defines the strategic directions for the development of sustainable blue economy in Italy, recognising the important role that MSP can play to this regard.

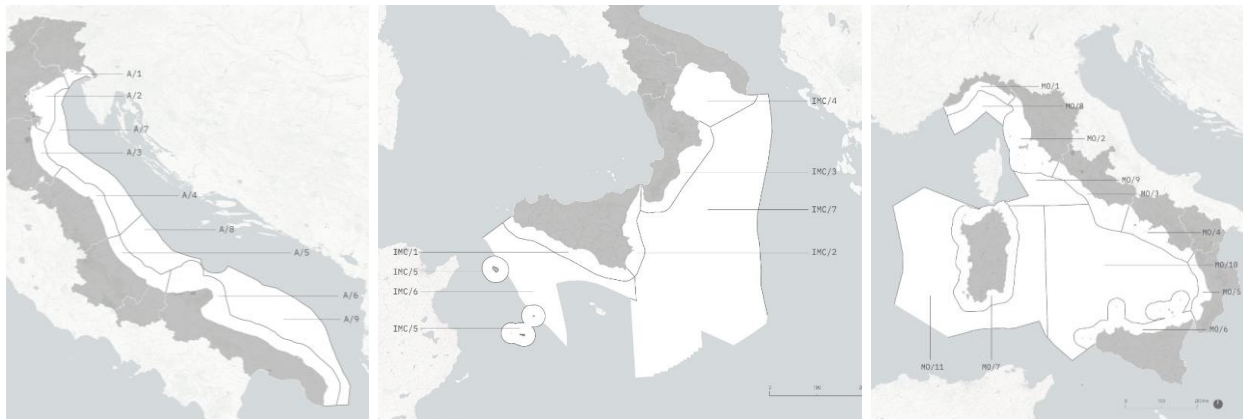


Figure 10. Geographic scope of the three Italian MSP plans; form left to right: Adriatic, Ionian and Central Mediterranean, and Tyrrhenian and Western Mediterranean (Source: MSP plan proposals available at <https://www.sid.mit.gov.it/login>).

The Italian MSP plans aim at integrating and harmonizing existing and future cross-cutting and sectoral plans. They have a prevalent strategic nature, however being legally binding. Each Italian MSP plan is divided in several sub-areas, including those within territorial water delimitation (so-called coastal sub-areas) and those extending beyond territorial waters to the delimitation of the continental shelf (so-called offshore subareas). Being part of the Technical Committee, Italian coastal Regions have had a direct role in the elaboration of the MSP plans. With the support of the scientific-technical team, Regions have developed the plan's elements relevant for their coastal subarea, i.e.: a regional vision, a set of specific objectives (coherently with the strategic ones defined for the whole Italian marine space), a zoning of the coastal area subdivided in several planning units with different vocations, and a set of region-specific measures aimed at implementing the defined vocations as well as minimising

conflicts and exploiting synergies among uses (coherently with measures identified by the MSP plan at the national level).

5.1 Analysed plans and strategies

The case study focuses on the area of Northern Sardinia, included between the Asinara island at North-West and the gulf of Olbia at South-East (Figure 11). This is an extended and highly diversified coastal area, characterised by high-value landscape and coastal and marine habitats. This area hosts important economic activities as well, some depending on the integrity of landscape and natural assets. The most relevant economic activities are tourism (including several typologies, as seaside tourism, recreational and sport activities, cruising, eco-tourism and other forms of experiential tourism), recreational boating, shipping and port activities (in Porto Torres and Olbia harbours), fishing and aquaculture including both fish and shellfish farming.

The MSP plan proposal of the Tyrrhenian and Western Mediterranean maritime region includes planning provisions (vision, specific objectives, zoning and measures) for the Sardinian maritime subarea (identified as MO/7 by the coding system used in the Italian MSP plans) extending from the coastline to the delimitation of territorial waters. The MSP plan has a prevalent strategic, although binding, nature. It is based on a multi-scalar approach (Ramieri et al., 2024)⁴. It stands from a national level definition of a common vision for the whole Italian maritime area and the identification of related strategic objectives. These elements are further detailed at the level of subareas, in terms of specific vision and objectives as well as of measures relevant at the region scale. In turn subareas are divided in several planning units (sub-regional scale) where more detailed zoning is defined, as better illustrated in the following section. For its cross-cutting nature, the Italian MSP plans deal with all the sectors present in the area, also including those to be further developed. The analysis of cross-cutting strategies and plans is complemented with other two regional documents: (i) the Action Plan of Sardinian Coasts dealing at the strategic level with major coastal hazard and risks, and (ii) the Regional Strategy for Adaptation to Climate Change (SRACC), that in its 2019 version poorly addresses the coastal system without considering the sea at all. Both have a strategic nature and do not include proper measures relevant for the marine area or for LSI.

⁴ Ramieri, E., M. Bocci, D. Brigolin, P. Camprotrini, F. Carella, A. Fadini, G. Farella, E. Gissi, F. Madeddu, S. Menegon, M. Roversi Monaco, F. Musco, F. Soffietti, L. Barberi, A. Barbanti (2024). Designing and implementing a multi-scalar approach to Maritime Spatial Planning: The case study of Italy. *Marine Policy* 159 (2024) 105911. <https://doi.org/10.1016/j.marpol.2023.105911>

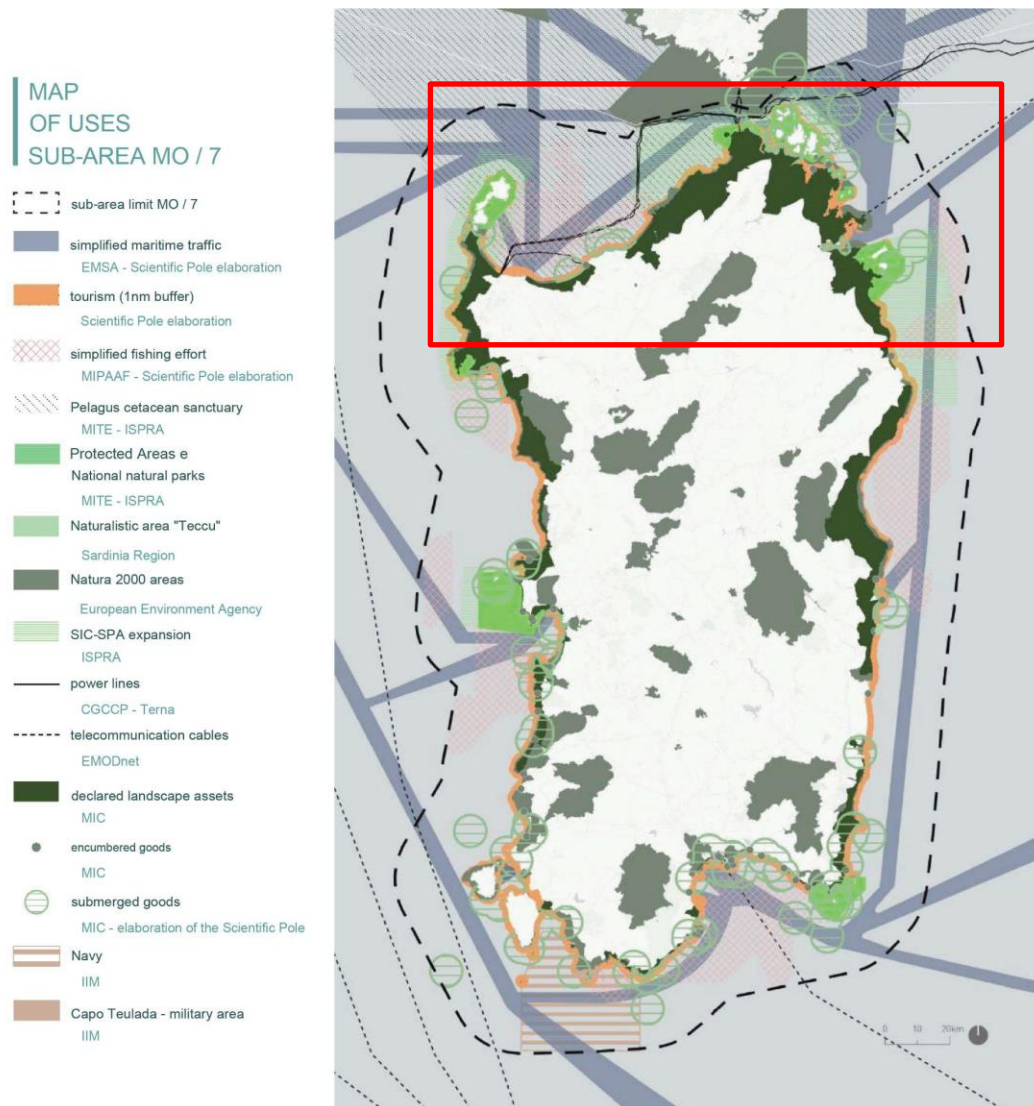


Figure 11. Summary map of main maritime uses in the Sardinia maritime subarea MO/7. The box in red identifies the case study area (Source: MSP plan proposal for the Tyrrhenian and Western Mediterranean maritime area, available at <https://www.sid.mit.gov.it/login>).

Given its significant landscape and natural value, Northern Sardinia hosts several areas falling under different conservation regimes, specifically including: two National Parks extending to the marine area (the Asinara one also including an MPA), other two MPAs, and several coastal and/or marine Natura 2000 sites (some overlapping with national parks and MPAs). Conservation of habitats and related biodiversity is the primary goal of all these instruments, where binding measures are defined to regulate human activities according to the specific vulnerability of different protected zones. The area of Northern Sardinia falls within the Pelagos Sanctuary, established through an agreement between France, Italy and Monaco, which has a more strategic nature still including some measures (e.g. related on monitoring of cetaceans). The analysis of protection and conservation oriented plan is completed by the Regional Landscape

Plan, which main scope is the preservation of the environmental, historical, and cultural identity of the Sardinian territory, in consideration of the high landscape value and its role in supporting key economic activities, as tourism in particular. This regional scale plan has a dual strategic and binding nature, including measures to ensure landscape protection.

The analysis is completed by five sector-based strategic or planning elements. Two of them pertain to maritime transport (the plan of the Port System Authority of the Sardinian Sea and the Particularly Sensitive Sea Area in the Strait of Bonifacio), one to tourism (the Strategic Plan for Tourism Development and Marketing), and another one to the specific tourism segment dealing with recreational boating (the Regional Plan of Tourism Port Network). A final one, still under development, refers to the identification of Allocated Zones for Aquaculture.

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below. All considered strategies and plan directly apply at the regional or local scale. The MSP plan has a national geographic scope; however, being based on a multi-scalar approach it defines objectives, spatial provisions (zoning) and measure directly relevant for the regional and sub-regional scales. The majority of the plans has a regulatory nature. Cross-cutting plans tend to be more strategic and to cover all sectors.

Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
MSP plan proposal of the Tyrrhenian and Western Mediterranean maritime region		X	X	X		X			X
Action Plan of Sardinian Coasts		X			X	X			
Regional Strategy for Adaptation to Climate Change (SRACC)		X			X	X			
Category 2: protection and conservation-oriented plans and strategies									
Asinara Island National Park	X			X			X		X
Maddalena Archipelago National Park	X			X			X		X
Tavolara - Punta Coda Cavallo MPA	X			X			X		X
Capo Testa -Punta Falcone MPA	X			X			X		X
Coastal and marine Natura 2000 sites	X			X			X		X
Pelagos Sanctuary Agreement and plan			international		X	X			X
Regional Landscape Plan		X		X				X	X
Category 3: Plans for economic sectors and other marine uses and activities									
Plan of the Port System Authority of the Sardinian Sea		X		X				X	X
PSSA of Strait of Bonifacio	X	X (transboundary)		X			X		X



Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Regional Plan of Tourist Port Network		X			X	X			X
Strategic Plan for Tourism Development and Marketing		X			X	X			X
Allocated Zone for Aquaculture (AZA) plan		X		X				X	X

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
MSP plan proposal of the Tyrrhenian and Western Mediterranean maritime region – Sardinia subarea	X	X	X	X	X	X					X	X		X	X	X	X	X
Action Plan of Sardinian Coasts			X												X			
Regional Strategy for Adaptation to Climate Change (SRACC)			X												X	X		
Category 2: protection and conservation-oriented plans and strategies																		
Asinara Island National Park	X		X	X	X									X	X	X	X	X
Maddalena Archipelago National Park	X		X	X	X									X	X	X	X	X
Tavolara - Punta Coda Cavallo MPA	X		X	X	X									X		X		
Capo Testa -Punta Falcone MPA	X		X	X	X									X		X		
Coastal and marine Natura 2000 sites	X		X	X	X									X		X		
Pelagos Sanctuary Agreement and plan			X	X	X									X		X	X	
Regional Landscape Plan																X	X	
Category 3: Plans for economic sectors and other marine uses and activities																		

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Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Plan of the Port System Authority of the Sardinian Sea					X	X												
PSSA of Strait of Bonifacio					X													
Regional Plan of Tourist Port Network			X	X	X	X												
Strategic Plan for Tourism Development and Marketing			X															
Allocated Zone for Aquaculture (AZA) plan		X																

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

5.2 Cross-cutting plans and strategies

The analysis focusing on Sardinia and specifically on its northern portion have considered three cross-cutting planning documents. The first is the MSP plan proposal for the Tyrrhenian and Western Mediterranean maritime region, which includes among the others the Sardinia sub-area (MO/7). As described in the introduction, planning elements for this subarea have been developed by the regional administration. Similarly to other regional experiences, a working group on MSP involving departments with different competences was set up for this scope. The plan proposal for Sardinia includes:

- A regional level vision, recognising the strategic importance of sustainable blue economy for the region, while ensuring the protection of the environment and landscape, two key assets for several regional economic activities as tourism in particular.
- A set of thirty specific objectives related to: maritime safety, navigation and surveillance; fishing; aquaculture; maritime transport and ports; energy (production and distribution); coastal protection, coastal and maritime tourism; environmental protection and natural resources management; landscape and cultural heritage; and scientific research and innovation.
- The identification and delimitation of 40 planning units (Figure 12). For each planning unit of the Italian MSP plans, vocations of use are defined. Planning units can be of four typologies of increasing level of exclusive use:
 - Generic; no vocations are defined for these planning units as all uses are equally important and considered by the plan.
 - Priority; planning units for which the MSP plans identify priority vocations for existing or developing uses, also indicating the other uses to be guaranteed.
 - Limited; planning units where a prevalent use is indicated and where other uses may be present - with or without specific limitations - only if compatible with the prevalent one
 - Reserved; areas reserved for a specific use. Other uses are permitted exclusively for the needs of the reserved use or in case of specific concessions provided by the manager of the reserved use.

The case study area (Northern Sardinia) includes several planning units of limited and priority typology with defined vocation on environmental protection (green ones in Figure 12); these overlap with existing protected areas, i.e. national parks, MPAs and Natura 2000 sites described in the following section of this chapter. Narrow planning units along the coastline prioritise tourism and landscape

preservation, recognising the strict interrelation between the two, while priority vocations on maritime transport are defined for planning units located in front of the ports of Olbia and Porto Torres, in this second case in combination with aquaculture. Development of aquaculture is considered highly relevant for the entire Asinara Gulf, where also the importance of fishing is remarked in terms of priority.

- About 40 measures specifically defined at the regional level to support the implementation of the identified vocation of uses.

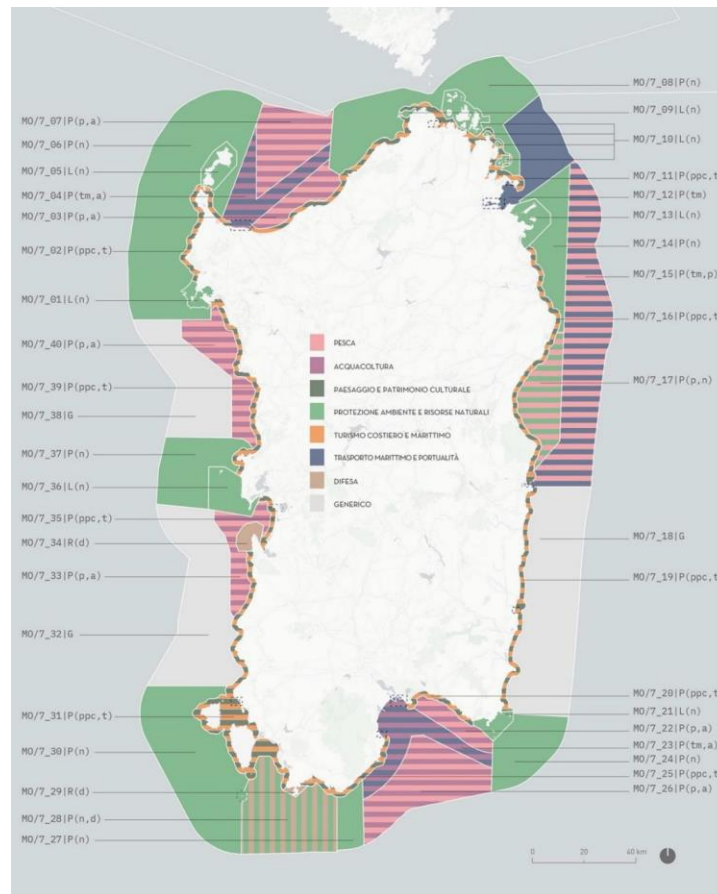


Figure 12. Planning units and related vocations of use for the Sardinia maritime subarea MO/7 (Source: MSP plan proposal for the Tyrrhenian and Western Mediterranean maritime area, available at <https://www.sid.mit.gov.it/login>).

Cross-cutting strategies and plan elaborated at the regional level include other two documents. The Action Plan of Sardinian Coasts (2013) provides an extensive knowledge basis for the strategic planning of the coastal system in the region, particularly in relation to coastal hazards (erosion, flooding and landslide), protection of coastal ecosystems and urban planning. The plan identifies most critical areas at risk and provides knowledge supporting the planning and implementation of coastal defence interventions, both in beaches and rocky coastlines.

Hazards and risks – although not coastal - are also addressed by the Regional Strategy for Adaptation to Climate Change (SRACC; 2019), which includes them in a wider strategic framework looking at the overall vulnerability of the Sardinian territory, environmental assets and economic activities to climate change effects. The SRACC provides a methodological framework for the evaluation of climate change implications for 5 sectors: agriculture, farming, forest, hydrogeological instability, and internal waters. For the same sectors it identifies possible adaptation approaches. The Regional administration has planned the extension of the SRACC to other macro-sectors of priority relevance, i.e.: (i) the urban environment, considered for several aspects (urban planning, infrastructure, urban services and functions, health and well-being), and (ii) coasts and land-sea transition systems, referring to biodiversity protection, ecosystem services, coastal defence, and tourism development and focusing on the potential implementation of nature based solutions. The elaboration of 2019 SRACC and the expected development of the new strategy are supported by an interdisciplinary group of experts from the academia and national and regional protection agencies.

A direct link to these documents is not included in the MSP plan for the Sardinia subarea; however, the plan addresses - both at the national and regional level, through objectives and related measures - the issues of climate change adaptation in coastal areas, framing it in the wider context of Integrated Coastal Zone Management. One of the specific measures (MO/7_MIS|22) defined for the Sardinia sub-region foresees the elaboration of guidelines to support the ICZM process for the sustainable development and management of the island coastline. Measure MO/7_MIS|24 calls for the elaboration of a regional strategy to contrast coastal erosion, which is expected to be coherent with the Action Plan of Sardinian Coasts.

5.3 Protection and conservation-oriented plans and strategies

The northern part of Sardinia is known for its rich biodiversity and high-value habitats and consequently for the high number of protected areas. These include two national parks. The plan of the Asinara Island National Park (and the related MPA) aims to protect and conserve biodiversity, landscape and cultural and historical values of this island as well as to promote education, scientific dissemination and sustainable use of environmental resources. To ensure the protection of the marine and coastal environment, the park has defined restrictions to human activities as well as actions to mitigate impacts on and improve recovery of land and marine habitats (e.g. *Posidonia oceanica*).

Measures set by the park includes: bathing and diving limitations, partial ban of recreational motor boating, limitations to sailing boats, regulation of fishing-tourism, waste discharge prohibition, non-treated wastewater and bilge water discharge prohibition, airborne noise limitations, mooring and anchorage limitations, cruise ships

ban, shipping limitations, professional fishing limitations, aquaculture ban and recreational fishing ban. Such restrictions apply through a three-level zoning system, including: A-type zones of strict protection (or no-take zones); no human activities are allowed except for scientific research; B-type zones of high protection; only traditional activities are allowed, tourism is permitted according to Park's regulations; C-type zones of partial protection with agriculture or urban vocation (Figure 13). The plan also refers to actions aiming at the adaptive management of Asinara natural resources, highlighting the relevant role of research in this context.

Similarly to the Asinara park, the Maddalena Archipelago National Park has defined measures to regulate, restrict or even ban human activities (tourism, fishing, agriculture, farming, mining, construction, shipping). Main criticalities are linked to excessive anthropic pressures during the summer season due to tourism, implying an increase in wastewater discharge, uncontrolled waste discharge, and direct impact of recreational boating (e.g. on seabed habitats and beaches). Three different levels of protection for land and two for the marine environment are foreseen. The latter include zones of general protection (MB zones) where unauthorized navigation, anchoring, mooring, sport fishing and diving is prohibited, as well as zones of integral protection (MA zones) where sailing, stopping, anchoring, or mooring of all types of watercraft is strictly forbidden and where MB regulations also apply for other human activities.

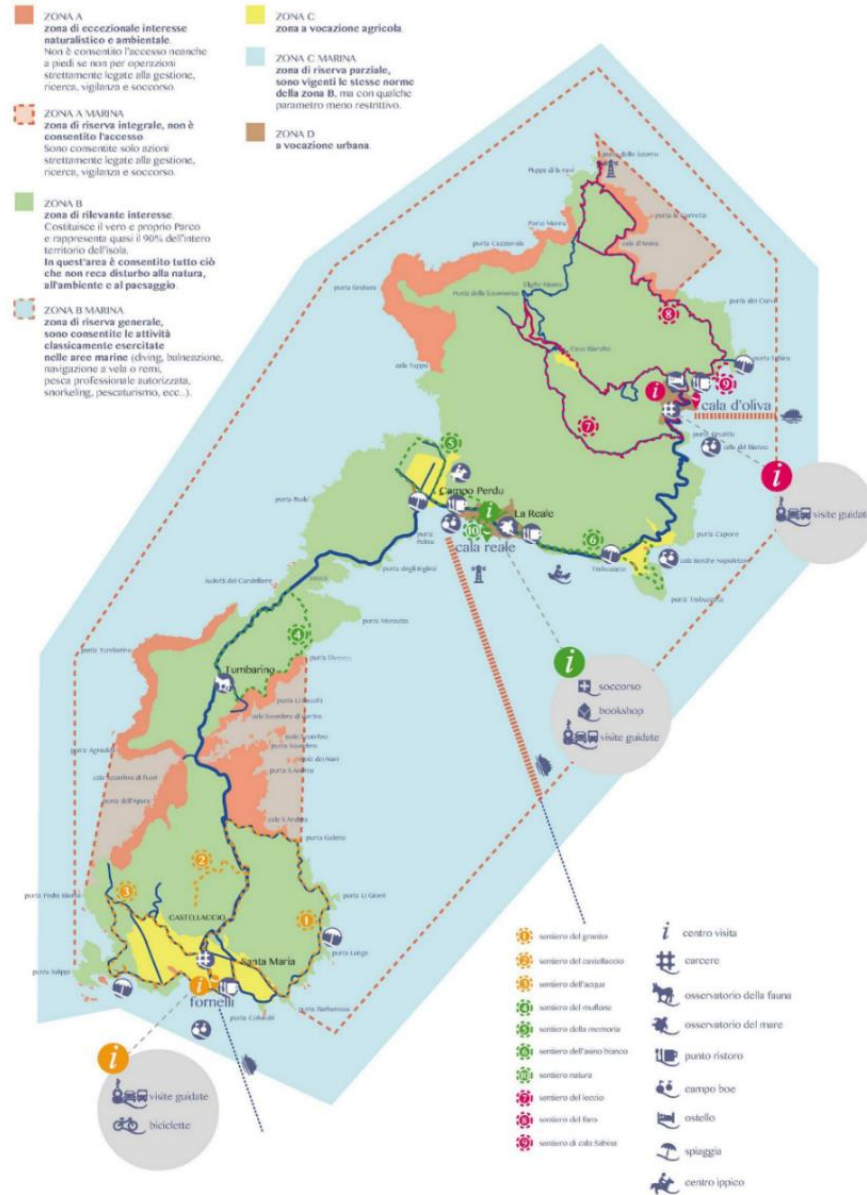


Figure 13. Map of the Asinara Island National Park; orange: A-type zone, green: B type zone, yellow and brown: C type zone. The light blue area within the read dotted line identifies the B-type zone at sea (Source: <https://www.parcواسinara.org>).

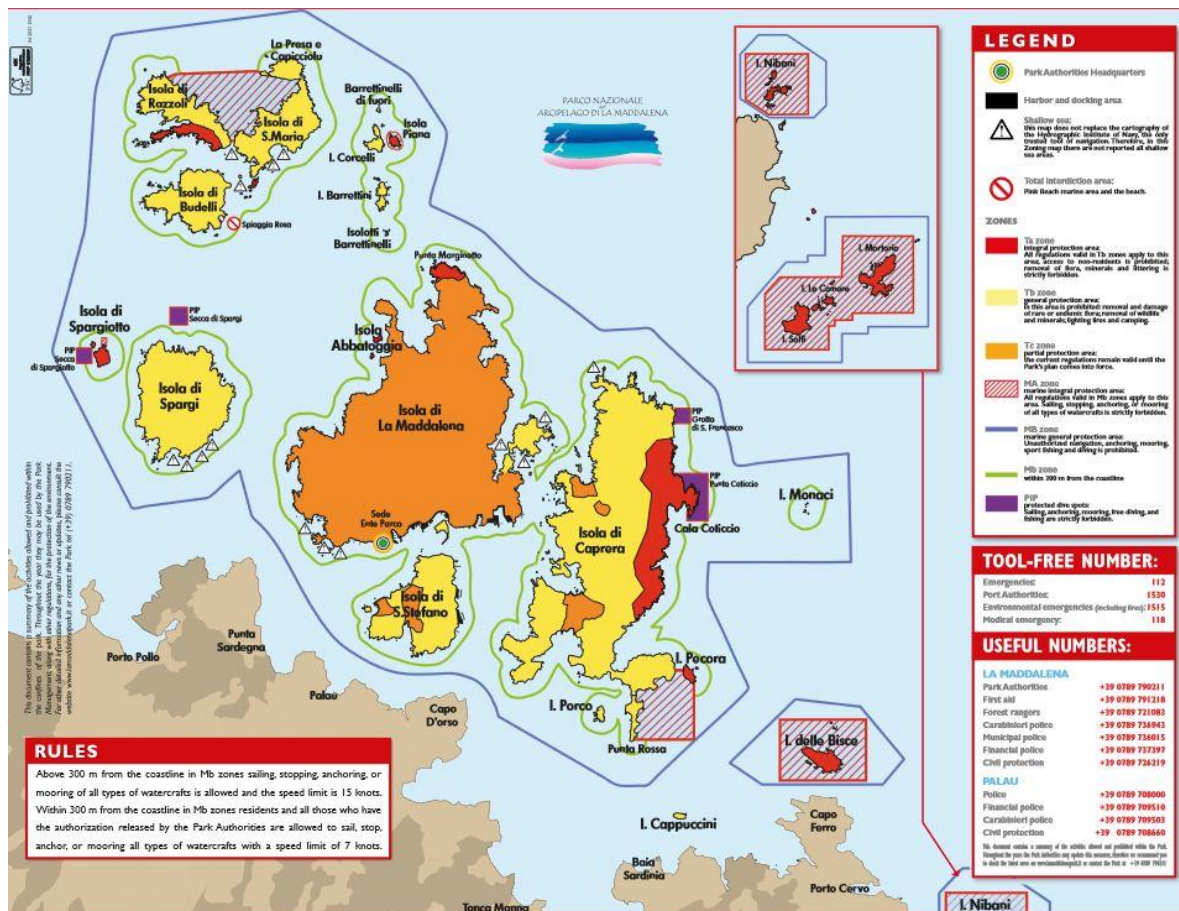


Figure 14. Zoning of Maddalena Archipelago National Park (Source: www.lamaddalenapark.it).

Protection of sea biodiversity in northern Sardinia is also ensured by other two MPAs. The plan of Tavolara - Punta Coda Cavallo MPA includes several objectives and measures aiming at reducing anthropogenic pressures, such as:

- prohibition of tourist access to dune and cliff areas, introduction of pets, collection of geological material, introduction of alien flora, waste discharge, non-treated wastewater and bilge water discharge, aquaculture activities, etc.
- limitations to bathing and diving activities, sailing, motor boating, mooring and anchorage, professional fishing, recreational fishing, fishing-tourism.
- regulation of some human activities to reduce their environmental impacts, e.g. use of fishing gear limiting by-catch or ship and boat speed limitations to limit collision with megafauna individuals.
- limitations to light and noise pollution as well as to atmospheric emissions.

Similar site specific bans, limitations and regulations are also defined by the plan of Capo Testa - Punta Falcone MPA. In this area a great focus is on threats on the

environment generated by recreational boating, including anchorage and mooring. In both MPAs limitations and restrictions apply through a three-level zoning system (Figure 15).

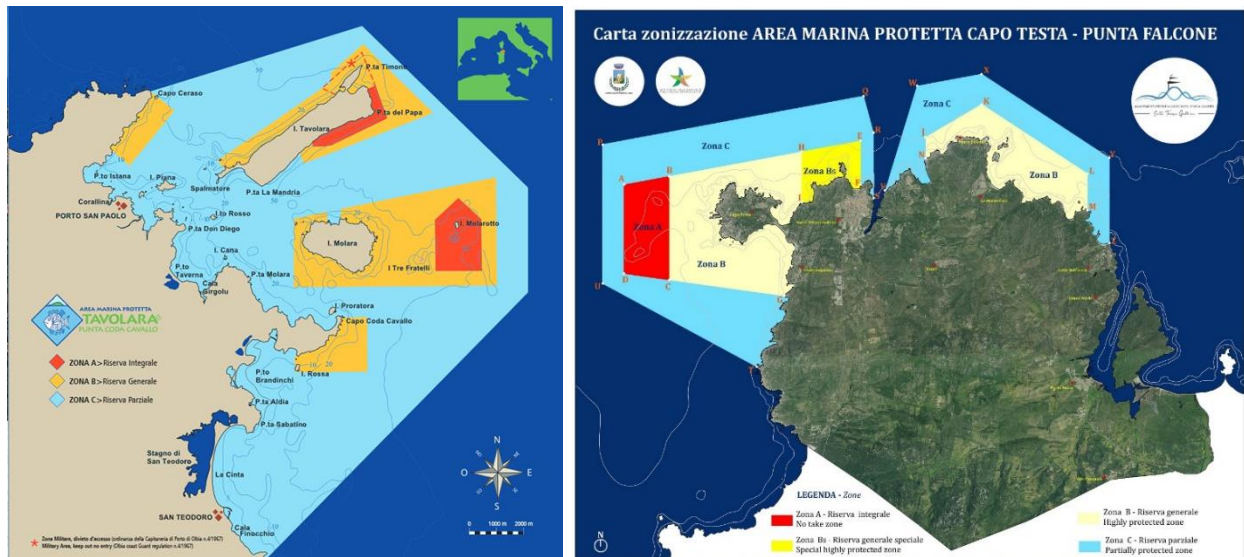


Figure 15. On the left, zoning of Tavolara - Punta Coda Cavallo MPA; red: A-type zone, orange: B-type zone, light blue: C-type zone. On the right, zoning of Capo Testa – Punta Falcone MPA (Source: www.amptavolara.com; red: A-type zone; yellow and light yellow B-type zone, light blue C-type zone (Source: areamarinaprotettacapotestapuntafalcone.it).

The northern coast of Sardinia also includes several coastal and marine Natura 2000 sites (Figure 16), some of them overlapping with the previously described natural parks and MPAs. Some of these sites are provided with management plans all aiming at ensuring conservation of habitats and species of community importance, while promoting education, research, awareness raising (for both citizens and tourists) and sustainable socio-economic development in line with the primary scope of environmental protection. s. Examples of measures foreseen by the SCI management plans include: protection of areas relevant for key species (e.g. nesting areas for avifauna), regulation of access to specific marine and land areas, limitation or regulating of boat mooring and anchorage, continuous monitoring of habitats and species at risks as well as of human activities generating environmental pressures. For several Natura 2000 sites, specific objectives and measures are set with the aim of improving the protection of *P. oceanica* meadow, also highlighting their several environmental services.



Figure 16. Natura 200 sites in Northern Sardinia (Source: www.sardegnanatura.com).

In relation to biodiversity conservation it shall be also remarked that the case study area is almost entirely included in the Pelagos Sanctuary, established through an Agreement set by France, Italy and Monaco. To achieve its objectives, the Pelagos Agreement relies on a Management and Action Plan (2022-2027), including objectives and measures related to the assessment of the status of key biodiversity elements as marine mammal populations in particular, the evaluation of existing pressures on marine mammals (pollution, noise, accidental capture, injury from collision with ships, etc.), the identification and implementation of mitigation measures, the harmonisation of national policies on marine mammals as well as the dissemination of information and best practices for the sustainability of shipping and port activities. The plan also highlights the importance to engage with a wide array of stakeholders at different levels for governance and capacity building purposes. To meet its overall objectives, the Pelagos Agreement supports countries to be in line with the requirements of MSP, ICZM, EIA, MSFD, and other policies related to the marine environment.

All typologies of protected areas have been fully considered and integrated into the MSP plan proposal for the northern portion of the Sardinia subarea. Delimitation of national parks at sea and of MPAs have been used to identify planning units of limited typology with a prevalent vocation on nature conservation. The presence of already established and planned coastal and marine Natura 2000 sites has determined the delimitation of planning units of priority typology for which the main vocation is still on

nature conservation. The Pelagos Agreement is recalled in several parts of the MSP plan for the Tyrrhenian and Western Mediterranean and its extension has been considered in the delimitation of planning units with priority vocations on environmental protection in the Tyrrhenian Sea, including the area facing the northern Sardinian coast.

The analysis of protection and conservation-oriented plans is completed by the Regional Landscape Plan (2006). Its main goal is the preservation and enhancement of the environmental, historical, and cultural identity of the Sardinian territory, including cultural and natural landscape and biodiversity. Given the remarkable high landscape value of Sardinian coastlines, the plan has some implications also for MSP aspects, in particular related to LSI. To this regard, the Regional Landscape Plan includes objectives focusing on the limitation of urban development and its pressure in coastal areas, the conservation and restoration of wetlands, the management and restoration of marine ecosystems. The elaboration of the MSP plans has reserved great attention to aspects related to the protection of landscape and cultural heritage. Thanks to a constant dialogue with the superintendence regional offices of the Ministry of Culture, most important landscape and cultural heritage elements on land and under the sea have been identified and mapped. In line with the Regional Landscape Plan, the component of the MSP plan on Sardinia includes specific objectives and measures aiming at ensuring the protection of the coastal and marine landscape, mapping and preserving underwater cultural heritage, restoring coastal structure of high historical and architectural value and preserving and promoting the regional culture and tradition on navigation and the sea in general. Moreover, the MSP plan identifies planning units of priority typology with vocation on landscape protection (in combination with tourism) along the entire coastline of Sardinia, including its northern portion.

5.4 Plans for economic sectors and other marine uses and activities

Sector based strategies and plans of regional relevance have been identified and analysed for the three major economic sectors relevant for the case study area: port activities and shipping, tourism and aquaculture.

The overall goal of the operational plan of the Port System Authority of the Sardinian Sea (2021-2023) is the management of Sardinian port areas and of related shipping activities, including operational, logistics and regulatory aspects. Such plan refers to all Sardinia ports, including those part of the case study area, i.e. Porto Torres and Olbia ones. The regional plan prescribes that port areas shall develop without causing damage to natural ecosystems and the landscape, as well as favouring the integration of port facilities with urban planning schemes (e.g. in relation to minimisation of negative effect of urban traffic and pollution). Moreover, the plan describes a series of interventions aiming at making port operations safer and more efficient (e.g. through infrastructure requalification). Finally, remediation projects, also for minimizing

environmental impacts of port operations, are considered by the plan for both land and sea areas.

The area of Northern Sardinia overlaps with the Strait of Bonifacio, which separates the Italian island of Sardinia from the French island of Corsica. This is a sensitive area for navigation, due to the presence of numerous reefs and small islands; indeed, navigation is possible along a narrow three-mile wide stretch and ships are asked to take a recommended route wide just over one mile. Given these considerations, the importance of the area for shipping and its high-value biodiversity, a Particularly Sensitive Sea Area (PSSA) has been defined in the Strait of Bonifacio, aiming to minimise the risk of damage resulting from ship groundings, reduce pollution caused by shipping activities and preventing the degradation of the significant habitats present in the region. The PSSA regulation includes stringent measures such as the complete prohibition of French and Italian ships carrying hazardous materials from transiting the Bonifacio Strait. Moreover, ship routing reporting is made mandatory for vessels, while it is strongly recommended that masters of vessels navigating through the Strait utilize the services of a qualified pilot. Strait of Bonifacio PSSA is included in the much wider Particularly Sensitive Sea Area of the Northern-Western Mediterranean Sea, as designated by the Marine Environment Protection Committee of the IHO with the resolution MEPC.380(80) adopted on 7 July 2023. This new PSSA encompasses the existing Spanish "Mediterranean Cetacean Migration Corridor" and the Pelagos Sanctuary.

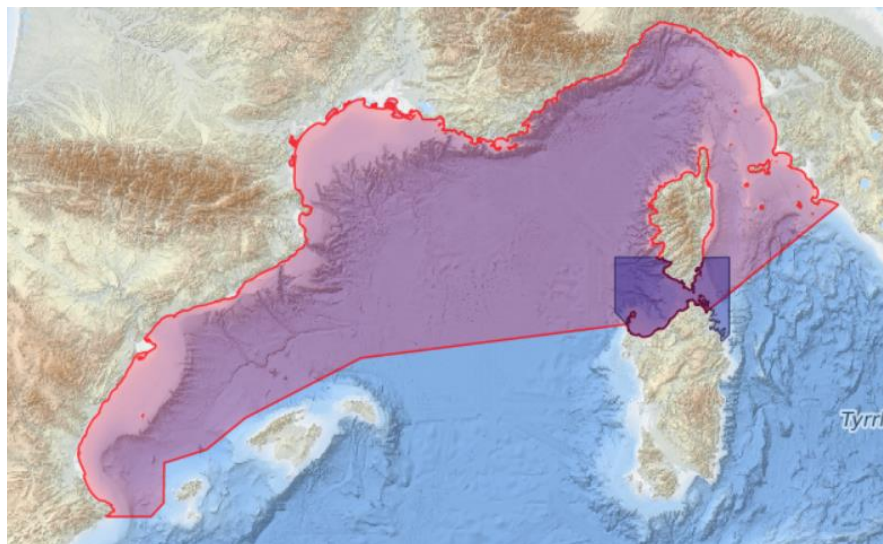


Figure 17. PSSA of the Northern-Western Mediterranean Sea (in pink) and PSSA of Strait of Bonifacio in blue (Source: Tools4MSP geoportal).

Sardinia has also a specific plan dedicated to tourist ports. The main scope of the Regional Plan of Tourist Port Network is the development of a regional network connecting ports dedicated to tourism in the island, with the overall objective of increasing the quality and attractiveness of the sector and improving its safety. The plan aims to implement a system of access points (port structures and their connections) to increase tourist usability at regional level. It covers existing and new tourist port infrastructures, dealing with their optimisation in terms of accessibility, usability, efficiency and safety. The operationalisation of port structures is strongly linked to the concept of “green ports”; several provisions are defined to improve facilities for the proper management of wastewaters, prevention and management of sea, land, and atmospheric pollution, management of solid waste, avoid the alteration of the quality of landscape, decrease energy and freshwater consumption, etc.

The Strategic Plan for Tourism Development and Marketing (2018-2021) recognises the great importance of this economic activity for the island economy. Being a strategic, marketing-oriented plan, its main scope is the increase of the regional competitiveness and attractivity of the tourism sector. The promotion of Sardinia as a tourist destination is framed within sustainability principles, including specific objectives aiming at protecting natural resources and biodiversity through defined measures and actions to be implemented by public authorities at different levels and by private players of the tourism sector. They consist in the promotion of the efficiency in the use of resources (water and energy) and in waste management, installation of green facilities for tourists on beaches, sensibilisation and education activities, and improvement in environment certification schemes (e.g. EMAS) for tourist structures.

The Allocated Zone for Aquaculture (AZA) plan, currently under finalisation, will identify the areas suitable for aquaculture activities in Sardinia regions. The plan development has included a comprehensive assessment of existing and expected environmental, social and economic conditions. It aims at fostering sustainable aquaculture development in Sardinia (on both coastal areas and inland waters), while ensuring environmental protection and minimizing potential conflicts between various maritime activities. The ultimate goal is to encourage the integration and promotion of economic and social interests in the designated aquaculture areas. The plan also aims at strengthening the coordination among different administrations involved in the issuance of permits for aquaculture activities in water bodies. According to the AZA plan, coastal and inland waters are classified in three typologies: zone 1, areas suitable for aquaculture activities; zone 2, areas suitable for aquaculture activities subject to regulation/limitation; zone 3, areas not suitable for aquaculture activities. This regional plan is expected to be approved by 2024.

Several of the elements defined by the above mentioned plans and planning processes have been taken into account in the elaboration of the Sardinian components of the

MSP plan, either directly (referring to the specific plan or process) or indirectly. Some examples are here reported:

- Specific objectives and related measures focusing on ports aims at: improving the attractiveness of Sardinian commercial ports within a Mediterranean perspective, developing measures to improve the sustainability of port infrastructure (in particular on energy production and efficient use) in line with the “Green port” concept, promoting the reconversion of suffering economic activities in ports towards shipbuilding and circular economy opportunities.
- A specific objective and its related measure promote the compulsory use of qualified pilotage in the PSSA of the Strait of Bonifacio (currently just recommended and used on a voluntary basis).
- The plan includes a diversified and rich package of objectives and measures addressing the tourism sector, aiming at improving the quality of tourist services, extend the tourist offer in particular through cultural attraction on the coast and inland, integrate the existing network of tourist ports and marinas with new ones and encourage the modernization of existing ones as part of wider urban regeneration projects.
- The draft outcome of the AZA plan elaboration has been considered in the identification of priority areas with aquaculture vocation. Moreover, two regional level measures address this issue, requiring the AZA plan to be finalised coherently with the contents of the MSP plan and the creation of a monitoring system to evaluate and mitigate the environmental impacts of aquaculture and its conflicts with other marine activities.

5.5 Elements of contribution to the EU Green Deal and sea-basin strategies

The Italian MSP plans include several references to the EGD and its packages of policies and strategies. This occurs at various levels, from the overall plans’ vision, to the level of strategic and specific objectives and to that of national and regional level measures for some aspects. A specific strategic objective (OS_SS|03) remarks the intention of the Italian MSP plans to actively contribute to the transition of the marine and maritime economy sectors towards a sustainable blue economy paradigm, fully in line with the expectation of the EGD. Several of the EGD-related policies (e.g. the EU strategies on offshore renewable energy, climate change adaptation, biodiversity, and farm to fork, or the communication (2020) 98 on circular economy) are directly referenced in the MSP plans and were considered for the definition of the plans’ objectives and measures. One of the national measures (NAZ_MIS|08) focuses on the establishment of a cross-regional working group aimed at identifying common needs and strategies to fully exploit the opportunities offered by the EGD for the sustainable development of coastal

and maritime areas within the MSP framework. These explicit links between the EGD and the Italian MSP plans are likely due to their strategic nature and the timing of their preparation that operatively started in 2021, therefore allowing for the possibility of directly refer to the most recent policy processes and related documents. A detailed analysis about whether and how marine elements of the EGD are integrated into the Italian MSP plans (and in plans of other EU countries) is included in Deliverable 2.1 of the EMFAF-funded MSP GREEN project⁵.

EGD marine components are also recalled in several elements of the maritime spatial planning provisions for the Sardinian subarea, starting from the regional vision and a framing objective linking the MSP plan to the goals set by the Regional Strategy for the Sustainable Development (for a smarter, greener, more connected, more just and closer to citizen Sardinia). Several specific objectives and regional-level measures set for the Sardinian sub-area refer directly or indirectly to the EGD components, e.g. in relation to the:

- adaptation of coastal areas to climate-related risks, including sea-level rise;
- green transition of shipping and ports and reconversion of economic activities in crisis in ports towards circular economy initiatives;
- extension of protected areas in line with the targets set by the EU biodiversity strategy as well as the improvement of conservation measures in place;
- improvement of the sustainability of fishing activities also through the support to small-scale fisheries,
- development of sustainable aquaculture, through the identification of most suitable areas (AZA), management of conflicts with other uses and the environment, diversification of productions, support to multi-trophic and low-trophic practises, technological innovation, sustainable use of resources and circular economy opportunities;
- contribution to decarbonisation through offshore renewable energy productions (avoiding conflicts with other uses and impacts on the environment and landscape/seascape) and the improvement in energy efficiency for the blue economy sectors;
- promotion of circular economy opportunities based on the recycle of marine litter and port wastes.

Several of the other analysed plans refer to some of the EGD elements only indirectly. This is surely due to the fact that many of them were adopted before the formulation of the EGD package. However, also their regional dimension plays a role in this perspective. While EGD mainstreaming into national level plans and strategies is

⁵ MSP-GREEN. Cornet, A., Arki, V., Bocci, M., Ramieri, E., et al., 2023. The Green Deal Component of the EU MSP Plans.

somehow progressing (although with differences and challenges), it is likely that its penetration into regional and local strategies and plans is still limited and mainly indirect. Regional and local level processes might still find difficult to link to such ambitious goals from an operational perspective. Evident connections to sustainable food production and the objectives of the Farm to Fork strategy can be highlighted for the AZA plan currently under finalisation, actually aiming at supporting the sustainable development of the sector in Sardinia. The plan of the Port System Authority of the Sardinian Sea and the Regional Plan of Tourist Port Network refer to the “green port” concept, including measures aiming at the reduction of greenhouse gases emissions (use of renewable energy sources, cold ironing, proper management and recycling of waste, etc.) and circular economy. The articulated system of national parks, MPAs and Natura 2000 sites of Northern Sardinia primarily aim at biodiversity and habitat conservation, through the regulation of human activities and related pressures. This system provides the basis to contribute to the 2030 targets set by the EU Biodiversity Strategy. In any case, the possible extension of marine areas under protection and their improved connection need to be framed into a national perspective. In the case study area, the transboundary dimension of nature conservation plays a great role too, given the proximity of Corsica and of its protected areas. The MSP plan for the Sardinia subarea includes a specific objective and a measure aiming at promoting initiatives towards the creation of a transboundary MPA in the Bonifacio Strait. The 2019 Adaptation to Climate Change (SRACC) addresses the coastal systems only partially without considering the sea at all. Its future integration shall fill partially this gap, including analysis on coasts and land-sea transition systems.

Links to the WestMED Blue Economy Initiative are not expressly considered in the analysed plans. Objectives, measures and spatial elements of the MSP plan and the other considered cross-cutting and sector-based plans and strategies refer indirectly to some of the WestMED pillars, as: biodiversity and marine habitat conservation and restoration, development of coastal communities and sustainable fisheries and aquaculture, maritime safety and the fight against marine pollution (v) skills development and circulation. Examples can be found in the previous sections of this chapter.

5.6 Elements about stakeholder engagement

The Italian MSP plans are the results of a co-design process involving Ministries and coastal Regions, aiming at getting benefits from both national and sub-national knowledge and expertise, as well as at coherently responding to the needs and objectives of the two governance levels. To actively contribute to the MSP process, several regional administrations (including Sardinia) established MSP working groups involving different regional departments and having diverse levels of formalisation. The involvement of different regional experts also provided the opportunity to somehow

link (directly or indirectly) to regional stakeholders (e.g. port authorities, tourism operator representatives, fishing sector representatives, etc.), although only partially. In such a context, coastal regions played the double role of participants in the co-planning process and stakeholders within the MSP process. Regional experts were engaged through a series of on-line workshops, supported by the sharing of information including mapping of the distribution of main environmental components and marine uses in their areas of interest. In addition, the identification of coastal and underwater cultural heritage sites and values as well as of protected landscape areas at the regional and local level benefited from the continuous collaboration with the superintendence regional offices of the Ministry of Culture.

As foreseen by the national legislation, the Italian plan proposals were submitted to formal consultation, open to all stakeholders and the public in general. This run in parallel with the consultation part of the Strategic Environmental Assessment procedure. Despite the aforementioned multilevel co-design approach and the effort put in promoting the planning process via dedicated on-line events and websites (also within the framework of EU projects, such as the MSP-MED) the formal process of engagement of stakeholders in MSP was not considered as sufficient, as remarked by several feedbacks received within the public consultation. To tackle this issue, the MSP plans include a national-level measure aiming at developing and making operative a long-term strategy for the participation and involvement of stakeholders in the process of implementation, monitoring, evaluation, and revision of the MSP plans. In this regard, it is stressed that particular attention should be paid to the engagement of the sectors of major social relevance, local administrations, and the general public (civil society).

For some of the other analysed plans and strategies, information on stakeholder engagement process is documented and therefore available, at least to some extent. For example, representatives of public institutions, economic operators from the private sector, members of trade associations, members of the civil society, researchers and members of NGO's were actively involved in the consultation and co creation process of the Regional Strategy for Adaptation to Climate Change. The development of the Sardinia Strategic Plan for Tourism Development and Marketing foresaw the organisation of 17 engaging events (workshops and roundtables, involving more than 600 participants), organised across the Region and covering different thematic areas relevant to tourism development, including capacity building, sustainability, environment and landscape protection, innovation and technology. The study supporting the planning process of Allocated Zone for Aquaculture (AZA) has included the organisation of several public events in various zones of Sardinia, open to public participation and seeking the involvement and contribution from different typologies of stakeholders.

In several other cases the engagement and consultation of stakeholders is not properly documented (or at least such documentation is not immediately available), although

this might have occurred. This happens in particular for older and/or local scale planning processes, as those dealing with nature protection and conservation.

5.7 Persisting gaps in the integrated planning and management of the sea space

The Italian MSP plans are based on a multi-scalar approach, including three spatial levels (maritime areas, sub-areas, and planning units). Such an approach enabled the definition of planning objectives, zoning options and measures with different resolution or details. The number and size of planning units vary in consideration of the local characteristics of the marine environment and system of uses, the local needs and goals and the availability of data and knowledge. The Italian MSP plans aim at integrating and harmonizing existing plans and those under development. The analysis of the cross-cutting and sector-based strategies and plans relevant for the case study has revealed that such an integration has essentially occurred for the Sardinia region and its northern area in particular (i.e. through the definition of vocations for planning units, specific objectives and/or of regional measures). In any case, some mismatches still exist, being related to the MS process itself or the same nature of other plans addressing only marginally the sea space, as in the case of the current version of the regional Strategy for Adaptation to Climate Change.

The Italian MSP plans have a prevalent strategic nature and do not provide detailed and regulatory provisions. In this perspective, the plans might appear too general to meet the needs of local communities. The adopted flexible, multi-scalar approach enables the incorporation of new data and knowledge and the progressive adaptation and integration of the MSP plans, for example to further detail zoning for specific areas and/or sectors. This is a common challenge for most of the coastal subareas, which are characterised by high density of maritime uses and in some case by conflicts among different uses. This is also the case of Northern Sardinia where some of the major conflicts can be identified between: (i) aquaculture and port activities in the Olbia Gulf, (ii) maritime transport and environmental protection, small-scale fishing and maritime transport, and recreational fishing and small-scale fishing in the Asinara Gulf, (iii) tourism/recreational boating and environmental protection around La Maddalena archipelago.

A more detailed analysis of these conflicts - also through stakeholder engagement - and the identification of possible solutions through new zoning options and measures are challenging objectives of the Sardinian case study. These activities are expected to further align MSP to the provisions of local and regional strategies and plans, improve social licensing at local level of the MSP plan and contribute matching local level

expectations and ambitions. In this sense, a good example on progressive plan's integration into MSP is represented by the on-going process of AZA identification. The draft outcome of the AZA plan elaboration has been considered in the identification of priority areas with aquaculture vocation. Once the AZA plan will be finalised and approved, the MSP plan could need some adjustment to better align with the spatial and regulatory provisions included in this plan.

Availability of some data for the detailed analysis of interactions might still represent an important gap. This is for example the case of the spatial and temporal distribution of some human activities at sea as small-scale fishing, recreational fishing or leisure boating, as well as of environmental components, as typically benthic habitats (such as *Posidonia oceanica* meadows distribution). This limitation can be partially overcome through the expert knowledge provided by stakeholders and sharing of data collected through different projects.

Differently from several other EU countries, the Italian Regions have had a direct and active role in the MSP process. It is essential that such role is maintained and reinforced, to further link the national level stakes with needs and objectives relevant at the regional and local scale. In this perspective, the MSP working group created within the Sardinia regional administration should be consolidated. At the same time, one of the major challenges is represented by effective and wider stakeholder engagement on MSP at the regional level (but the same could be advocated for the national scale). The creation of an intra-regional community of practice on MSP could help aggregating regional and local stakeholders of different typologies.

6. Provence Alpes Côte d’Azur – PACA

Articles L 219-1 et seq. of the Environmental Code stipulates the principles for an integrated management of sea and coastline. The State elaborates a National Maritime and Coastline Strategy in consultation with the National Council for the Sea and Coastal Areas and, in application, a strategy for each sea basin in consultation with the Council for the Sea Basin. The objective is to achieve an optimal use of the sea and the coastline from a sustainable development perspective and to improve mutual consideration of all its issues.

At sea, the Maritime Public Domain (DPM) is mainly dedicated to the direct use of the public or to the reception of public services related to the use or exploitation of maritime resources. The DPM is inalienable and indefeasible. The natural DPM⁶ must be used in accordance with its public utility purpose: any construction or installation project destined to be built on this domain must first obtain a State authorization, which is temporary, precarious, and revocable and which gives rise to the payment of a fee. The artificial Maritime Public Domain is composed of port installations and security works for navigation. The condition of uses of the DPM are set in The General Code of Property of Public Persons.

On land, the Urban Code is the regulatory corpus related to the land use and development and sets the requirements on the urban plans’ development at the different levels. It includes the *Loi littoral* - coastal law on the development, protection and enhancement of the coastline which objective is to preserve natural spaces and ecological balance on the seashore, develop economic activities close to the sea, put in place a scaled protection depending on proximity to the shore.

At the façade level⁷, four Interregional Directorates for the Sea (DIRM) depending on the State Secretariat for the Sea are responsible for adapting the Sea and coastal national strategy to their façade specificities elaborating a façade strategy, including a marine spatial plan. The façade strategic documents (DSF) include a spatial dimension, specified as part of the measures transposing the EU Directive of 24 July 2014 on MSP. They also comprise the elements required by the MSFD. All plans, programs, schemes and projects at sea and on the land-sea interface must be compatible with the DSF. On land, if they have an influence on the sea, they must consider the guidance and provisions of the DSF. Additionally, there should be a reciprocal compatibility between the Water planning and management master scheme (SDAGE) and the environmental objectives of the façade strategy. The

⁶ The natural Maritime Public Domain (DPMn) is made up of the seashore, the ground and subsoil of the sea up to the limit of territorial waters, the soil and subsoil of salt ponds in direct, natural and permanent communication with the sea, as well as the sea lays and relays, up to 12 nautical miles.

⁷ France is divided into 4 maritime façades (East Channel North Sea, North Atlantic West Channel, South Atlantic and Mediterranean).

compatibility or consideration is done at the time of the revision of the documents concerned or in any case within three years.

The Maritime Prefect is responsible for delivering concessions and holds police power beyond the 12 nautical miles limit. At the region level, the Regional council of elected representatives - mentioned as the Region in this document - is responsible for the regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) which is binding on local urban plans. The territorial reform undertaken at national level, through the MAPTAM (2014) and NOTRe (2015) laws, strengthens the Regions' powers in terms of economic development and regional planning, and gives them the role of leader in terms of climate, air, energy, preservation of biodiversity and regional planning. It also transfers the management of European funds from the State to the Regions.

The State regional de-concentrated service in charge of environment, planning and housing (DREAL) is responsible among other competences for animating water policy, Natura 2000 sites network, green and blue corridors.

At the department⁸ level, the Department council of elected representatives is responsible for the improvement of services accessibility to the public, department roads and of some ports when they have received the competences from the State. The State services operating at department level (DDTM) are responsible for the natural maritime public domain management and for the occupation and environmental authorisations of works at sea until the 12 nautical miles limit.

At the intermunicipal level, elected representatives of groups of municipalities are responsible for the definition of the Territorial Coherence Scheme (SCoT), which can apply until the 12 nautical miles limit, but which in general only applies to the coast limit or the 3 nautical miles limit (or even 1 nm). Municipalities are then responsible for elaborating the local urban plan (PLU) on their territory which has to be compliant with the SCoT or with the urban code if there is no SCoT defined for the territory. The municipality is responsible for the security on beaches and police for nautical activities and bathing sites until the 300m line from the coastline. Municipalities are invited to plan light equipment and mooring areas and offered generally the possibility to act as Natura 2000 sites' managers. The ports can be managed by different stakeholders at different levels: from State services for the main commercial ports (Marseille and Saint-Nazaire) to metropolis (Metropolis of Nice ports) to department or joint association (Toulon ports). The management of the artificial maritime public domain is delegated to the authority responsible for the port. Marinas are managed by municipalities or

⁸ The Department is an administrative district and the area under the jurisdiction of the State departments' services and the local authority composed of elected representatives responsible for leading the missions under its competences. There are 3 departments in the PACA region: Bouches-du-Rhône, Var and Alpes-Maritimes.



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department authorities in some cases. Figure 18 provides a schematic representation of competences at sea and on coast in France.



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		Limits	Main applying Codes	Authorisations, management, police power	Planning
Sea	Exclusive Economic Zone (beyond territorial waters)	12 - 200 miles	Environment Code; Transport Code; ORE* : Energy Code; Fisheries : Rural and maritime fishing Code	Maritime Prefect : concessions (for ORE: single authorisation including environmental evaluation), police power (including for implementing ministerial plan for fisheries' control)	<p>Interregional Directorate for the Sea (DIRM) responsible for MSP at the façade level under the co-responsibility of the Maritime Prefect and the Region Prefect</p> <p>Binding on</p> <ul style="list-style-type: none"> Public agencies responsible for greater maritime port strategic plan Other ports : local authorities (from regional to municipalities) Regional authority responsible for the Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) Groups of municipalities responsible for the Territorial coherence scheme (SCoT) Municipalities responsible for the Local urban plans (PLU)
Land – sea interface	Public maritime domain**(DPM) – up to 12 miles	0 - 12 miles	General Code of Property of Public Persons; Environment Code; ORE : Energy Code; Port : Transport Code & Seaport Code General Code of Local Authorities; Fisheries : Rural and maritime fishing Code	<p>Region Prefect: fisheries' & risks' management</p> <p>Department prefect: concessions (including for ORE), temporary occupation permits</p> <p>State environment services: Projects under environmental evaluation</p>	
Land	Coastal territory	Seashore	Urban Code (including the Coastal Law); Environment Code; General Code of Local Authorities	<p>Mayors: building permits, uses' regulation for bathing and nautical activities (up to 300 m)</p> <p>State environment services: Projects under environmental evaluation</p>	

*ORE: Offshore Renewable Energy

**the DPM is essentially made up of land that was historically covered by the sea but from which it has retreated, as well as land that is still submerged between the sea shore and the limit of territorial waters.

Figure 18. Schematic representation of competences at sea and on the coast in France (Source: own elaboration; CEREMA).

6.1 Analysed plans and strategies

Several cross-cutting strategies and plans were identified and analysed. The national strategy for the sea and seashore was operationalised through the drafting of a façade strategic document (DSF) for each of the four maritime regions or *façades maritimes* (East Channel North Sea, North Atlantic West Channel, South Atlantic and Mediterranean) by the national authorities, in consultation with concerned maritime and coastal stakeholders. Thus, a marine spatial plan exists for the Mediterranean façade. As all DSF, the Mediterranean one consists in two documents: a strategic one (adopted in 2019) and an operational one (adopted in 2022). The DSF is binding on lower level urban plans.

There are two Strategies for the natural Maritime Public Domain management (DPMn) for two out of the three departments of the region. The Var department's Strategy for the DPMn which was elaborated in 2014 has not been revised since the release of the DSF. The Bouches-du-Rhône department strategy which was elaborated later in 2019 could consider the DSF environmental guidance. The Alpes-Maritimes department started elaborating his DPMn strategy which has not been approved yet.

At the region level, the current version of the Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) includes, among others, general guidance and rules regarding the development of economic activities requiring the immediate proximity of the sea and considering climate change impacts and ecological corridors. It is currently being revised to better account for climate change, as well as to consider the DSF. At the local level, 2 out of the 11 existing intermunicipal land planning documents - the Territorial coherence schemes (SCoT) - have a dedicated sea development plan. 41 out of the 43 coastal municipalities have elaborated a Local urban plan PLU or PLUi, only one of them was analysed as the same approach applies to all. One Beach development plan was analysed (Ramatuille beach plan).

The PACA Region defined its Sea and coastal plan (2019) which details economic or protection actions for the coastal area. This plan is voluntary as it is an initiative that is not provided by law. One out of the three coastal Departments in PACA has developed a voluntary Plan for the Mediterranean Sea for the Alpes-Maritimes (2023), but which is not based on the Region's Sea and coastal plan nor the DSF.

The Water planning and management master scheme (SDAGE) stemming from the implementation of the WFD and its adaptation at local watershed level - the Water planning and management local scheme (SAGE) - aim to halt deterioration of water bodies and achieve good status for rivers, lakes and groundwater. Cross compliance of strategic guidance of the DSF and the SDAGE is mandatory so the DSF was built taking into consideration the SDAGE. There are three coastal SAGE in the region which only cover part of the territory as they were elaborated because of local specific water

management challenges, with a perimeter defined according to a consistent hydrographic unit. The SAGE can address some marine environment issues such as fostering ecological anchoring. Finally, there are three Bay contracts which are integrated contract tools for preservation and protection of coastal ecosystems. They ensure funding of local actions in line with the SDAGE and SAGE by associating various stakeholders.

Regarding the plans for the protection of marine and coastal ecosystems, the Mediterranean strategy for the management of small and large yachts anchoring (2021) and the Diving sites strategy (2019) at the façade level identify best practices to be implemented at the local level to limit the impacts of marine tourism and leisure boats anchoring. The Strategic document for the implementation of artificial reefs was elaborated to ensure consistencies and synergies among the authorisations for artificial reefs installations granted by the DDTM.

In the case study area, three territorial schemes for ecological restoration (STERE) are validated and three are under elaboration. They are stemming from the Ecological restoration strategy for the French Mediterranean basin (2019). The STERE should be integrated as much as possible with existing plans or management tools (SCoT's sea and coastal chapter, bay contracts, N2000, Marine Protected Areas - MPAs), while they also take into account the Anchoring strategy. The set of conservation-related plans and strategies is complementary with the regional land conservation strategy and MPAs management plans : (i) the Regional strategy of the Coastal Conservatory⁹ which aims at guiding the Conservatory's action to protect and restore coastal areas; (ii) two National park charters with a marine area (Calanques and Port-Cros), (iii) one Regional natural park charter with a coastal area (Camargue), (iv) one Marine park management plan (Côte Bleue) and (v) 13 Natura 2000 marine sites document of objectives (DOCOB).

Regarding the economic plans, the Regional plan for economic development, innovation and internationalisation (SRDEII) is elaborated by the Region. Several maritime sector plans apply to the PACA territory, including the Marine aquaculture development plan (SRDAM), the Structural department plan for aquaculture operations, the National port strategy, the Charter on sustainable cruising in the French Mediterranean, the Ports charter, the Logistics and intermodal plan for the Mediterranean-Rhône-Saône Axis, and the Seaport of Marseille strategic plan. The National strategy for the sustainable management of land and marine aggregates and materials and substances from quarries was analysed. Contrary to other façades, there is no marine aggregates commercial exploitation in the French Mediterranean basin so this national document was not adapted at the Mediterranean level.

⁹ The Coastal Conservatory (*Conservatoire du littoral*) is a State agency responsible for acquiring coastal plots threatened by urbanisation or degradation to safeguard coastal areas, respect natural sites and ecological balance.



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Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.

Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regiona l	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
DSF for the Mediterranean façade			X (façade)	X				X	X
Sea and coastal plan for the PACA Region		X			X	X			
Strategy for natural Public Maritime Domain management (Var and Bouches-du-Rhône DDTM)	X				X			X	X
Plan for the Mediterranean Sea 06 (Alpes-Maritimes Department)	X				X	X			
Water planning and management master scheme (SDAGE)			X (Rhône river basin)	X				X	
Water planning and management local schemes (SAGE)	X			X				X	X
Bay contracts	X				X	X			X
Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET)		X		X				X	
Territorial coherence schemes (SCoT) including a sea development plan	X			X				X	X
Local urban plan (PLU)	X			X				X	X
Beach development plan	X			X			X		X
Category 2: protection and conservation-oriented plans and strategies									
Mediterranean Strategy for the management of small and large yachts anchoring			X (façade)		X	X			X

Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regiona l	National	YES	NO	Strategic	Regulating	Both	
Diving sites strategy			X (interregiona l)		X	X			
Ecological Restoration strategy for the French Mediterranean basin			X (façade)		X	X			X
Strategic document for the implementation of artificial reefs			X (façade)		X	X			
Territorial schemes for ecological restoration (STERE)	X				X	X			X
Strategy of Coastal Conservatory		X			X	X			X
Côte Bleue marine park management plan	X				X			X	X
Calanques national park management plan	X			X				X	X
Port-Cros national park management plan	X			X				X	X
Natura 2000 marine sites documents of objectives	X			X		X			X
Camargue regional natural park charter	X			X				X	X
Pelagos Sanctuary Agreement and plan			X (internationa l)		X	X			X
Category 3: Plans for economic sectors and other marine uses and activities									
National port strategy			X		X	X			
National Strategy for the sustainable management of land and marine			X	X				X	

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Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
aggregates and materials and substances from quarries									
Regional plan for economic development, innovation and internationalisation (SRDEII)		X		X				X	
Marine aquaculture development plan (SRDAM)		X		X		X			X
Structural department plan for aquaculture operations	X			X				X	X
Charter on Sustainable Cruising in the French Mediterranean			X (façade)		X	X			
Ports charter		X			X	X			
Logistics and intermodal plan for the Mediterranean-Rhône-Saône Axis			X (interregional)		X	X			
Port of Marseille strategic plan	X			X		X			X

Title	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
Façade strategic document (DSF) for the Mediterranean f	X	X	X	X	X	X	X		X		X			X	X	X	X	X
Sea and Coastal plan for the PACA Region			X	X		X	X								X	X	X	
Strategy for natural Maritime Public Domain management		X	X	X		X			X						X	X	X	
Plan for the Mediterranean Sea 06 (Alpes-Maritimes Department)	X		X	X		X									X	X	X	
Water planning and management master scheme		X	X	X		X			X					X	X	X	X	
Water planning and management local schemes		X	X	X		X			X						X	X	X	
Bay contracts		X	X	X		X			X						X	X		
Regional scheme for the planning, the sustainable development and equality of the territories		X	X	X		X	X											
Territorial coherence schemes (SCoT) including a sea development plan	X	X	X	X	X	X								X	X	X	X	
Local urban plan (PLU)	X	X	X	X	X	X								X	X	X	X	
Beach development plan			X	X											X	X	X	
Category 2: protection and conservation-oriented plans and strategies																		
Mediterranean Strategy for the management of small and large yachts anchoring			X	X											X	X		
Diving sites strategy			X	X										X		X		X
Ecological Restoration strategy for the French Mediterranean basin	X		X	X	X										X	X		



Title	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Strategic document for the implementation of artificial reefs	X		X	X		X								X	X	X		
Territorial schemes for ecological restoration (STERE)	X		X	X		X			X					X	X	X		
Strategy of Coastal Conservatory			X	X											X	X	X	
Côte Bleue marine park management plan	X		X	X										X	X	X	X	
Calanques national park management plan	X		X	X	X	X	X			X				X	X	X	X	X
Port-Cros national park management plan	X		X	X	X	X	X			X				X	X	X	X	X
Natura 2000 marine sites documents of objectives	X	X	X	X	X	X	X			X				X	X	X	X	X
Camargue regional natural park charter	X		X	X										X	X	X	X	
Pelagos Sanctuary plan			X	X	X									X		X	X	
Category 3: Plans for economic sectors and other marine uses and activities																		
National port strategy						X	X											
National Strategy for the sustainable management of land and marine aggregates and materials and substances from quarries - not implemented at the Med scale									X									
Regional plan for economic development, innovation and internationalisation (SRDEII)					X	X												
Marine aquaculture development plan (SRDAM)		X														X		
Structural department plan for aquaculture operations		X													X	X		
Charter on Sustainable Cruising in the French Mediterranean			X		X											X		

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Title	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Ports charter			X	X		X										X		
Logistics and intermodal plan for the Mediterranean-Rhône-Saône Axis					X	X	X											
Port of Marseille strategic plan					X	X	X							X				

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

6.2 Cross-cutting plans and strategies

At the French Mediterranean façade level, the main relevant document is the DSF which is composed of a strategic part adopted in 2019 and an operational part (monitoring program and action plan) adopted in 2022. It deals with all maritime sectors, except pipelines and cables and maritime defence. The strategic part of the document identifies 30 areas on the vocation map (Figure 19) to illustrate the strategic guidance of the marine space. Their perimeters have been defined according to environmental coherence, similar issues encountered and distribution of activities, independently of administrative boundaries. The implementation of the strategic guidance part of the 2019 document is monitored by the DIRM through key indicators and targets. Regarding the operational part, the DSF includes a detailed action plan with some spatial measures such as the potential location of the development of offshore windfarms, local adaptation of strategies (e.g. anchoring management, restoration), the identification of potential areas for the development of ocean thermal energy, marine shuttles or aquaculture projects. Other non-spatial measures are defined in partnership mode, some of them with local authorities, to improve knowledge, raise awareness or start strategic reflections on specific topics

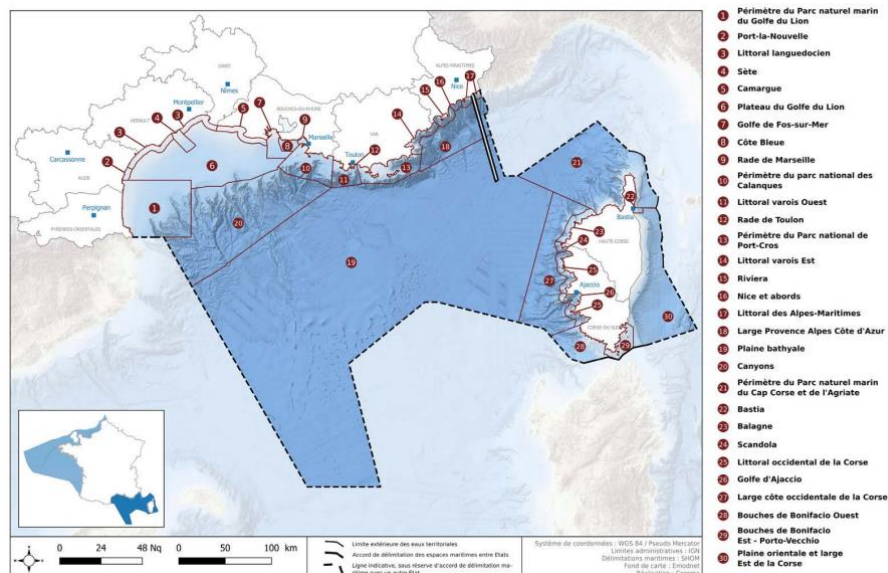


Figure 19. Extract from the DSF strategic part (2019) showing the Mediterranean façade broken down into 30 vocation areas (Source: Mediterranean DSF).

At the region level, there is no dedicated binding marine spatial plan as marine areas are not under the jurisdiction of the Region. However, the SRADDET plans the development of the regional territory, including coastal areas, thus having implications for some maritime activities. Its current version (2019), whose perimeter does not include maritime space, defines some general guidance regarding port and -river transport regional strategy, marine renewable energy, attractiveness of the regional

maritime space and conservation of coastal and marine ecosystems. Some rules are attached to this guidance. For instance, the SRADDET plan promotes the development of economic activities requiring the immediate proximity of the sea by anticipating the effects of climate change and fighting against coastal risks. It also contributes to the strategic objectives of the Coastal Conservatory on the 13 coastal units of Provence-Alpes-Côte d’Azur, by prioritizing the land economic potential. There is no spatial measure and no target included in the SRADDET for the development of the mentioned activities. The Region also defined its own regional Sea and coastal plan (2019) which is not binding and does not include spatial measures. Some key measures can be mentioned such as the implementation of a fund for the creation and modernisation of nautical centres, the development of a label for marinas, and drafting of an eco-tourism growth plan.

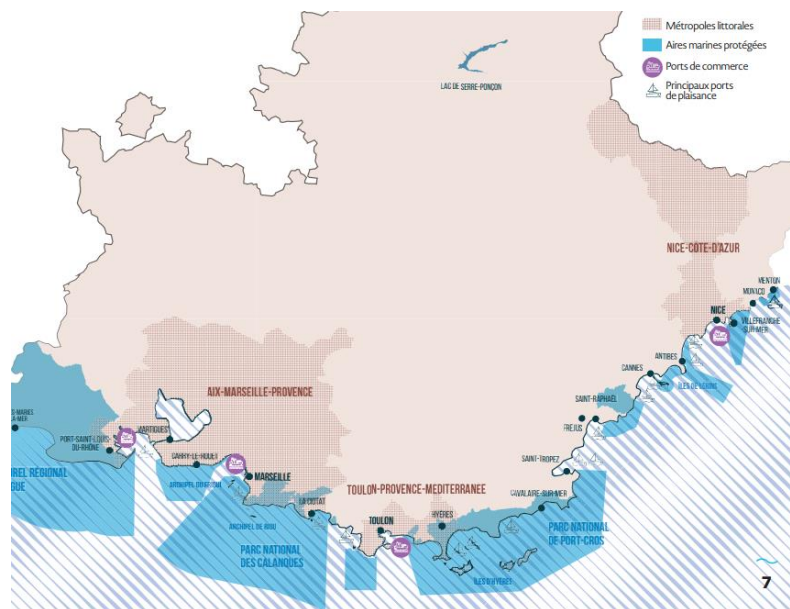


Figure 20. Perimeter of Region PACA voluntary Sea and coastal plan (2019) highlighting coastal metropolis, marine protected areas, commercial ports and main marinas (Source: PACA Sea and coastal plan).

At the department level, two Strategies for the natural Maritime Public Domain (DPMn) management are found for the State services of Bouches-du-Rhône and Var departments. The Alpes-Maritimes DDTM’s strategy for the DPMn has not been approved yet. They are not binding but set the State’s guidelines and actions for the protection and sustainable development of the maritime public domain. Their content is not standardized and thus varies from one department to another. Only the Bouches-du-Rhône’s one took the strategic guidance of the DSF into account as it was reviewed after the DSF publication. These strategies prioritise the challenges of the DPMn management broken down into 5 local territories and address for instance beach concession management, mooring management and coastline erosion. In addition to

guiding the State Services' own actions, those strategies can also promote local authorities' actions with priority thematic defined by geographical area (e.g. "Obtain a strategic development plan for the port of Toulon"); these shall be considered when authorising relating projects or plans.

Elected authorities of Alpes-Maritimes department drafted a voluntary Plan for the Mediterranean Sea (2023) setting department priorities, notably on biodiversity protection. It includes some spatial measures developed in partnership mode with other institutions (e.g. creation of underwater trails in MPAs, monitoring of MPAs and no take zones).

At the intermunicipal level, the SCoT acts as a pivot cross-cutting document adapting the sectoral policies to the concerned territory. Until 2021, it could include a "Sea development plan" which was developed on a voluntary basis by the local authority in coordination with the State to forecast and plan the development of the coastal and maritime area of the municipalities up to 10 to 20-year horizon. 2 out the 11 coastal SCoT have developed a sea development plan. Their limit at sea is generally 3 miles from the coastline. The SCoT defines the vocations and guidance of the territory (e.g. sustainable tourism, reduce transport damages, control of erosion, sustainable strengthening of traditional activities) and ensures the consistency between uses and protection needs (restoration measures, pollution prevention, essential habitats and species management and protection). Some guidance elements are mapped in order to be then translated into local urban plans (e.g. localization of preferential areas to implement anchoring regulation and proposals for fishing ban areas). Today, the SCoT of coastal territories should include a "sea and coastal chapter" but its content is not clearly defined, yet. Regarding the SCoT which did not develop a sea development plan, some included specific guidance on maritime activities without developing a specific chapter and zoning at sea. For instance, the SCoT of Esterel Côte d'Azur includes guidance on port activities and on the implementation of the coastal law.

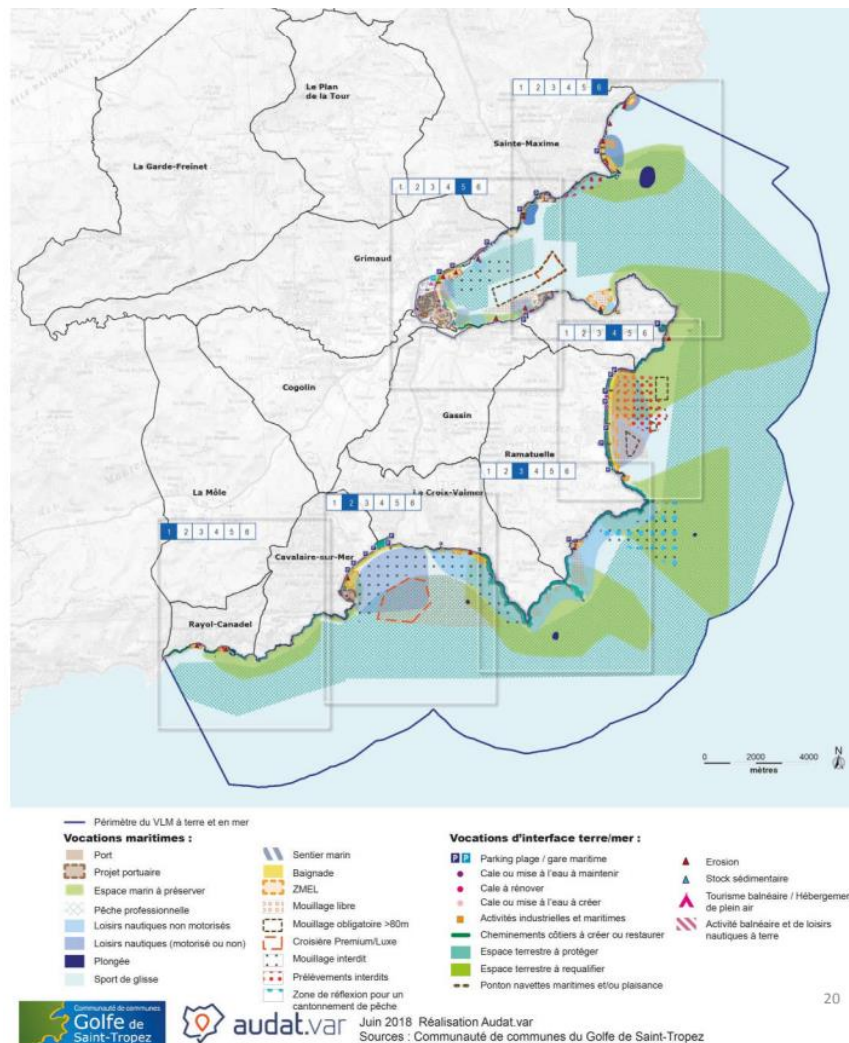


Figure 21. Maritime vocations map included in the Sea development plan of the Inter-municipalities of the Gulf of Saint-Tropez SCoT (2019) (Source: Gulf of Saint-Tropez Sea development plan).

The SCoT should include SAGE guidance related to good quality of marine waters. This can entail the creation of bay contracts (e.g. Gulf of Saint Tropez). Local urban plan (PLU) at the municipality level defines the zoning of the municipality’s territory taking into account the coastal law that calls for the preservation of 100 meters of coastline area, environmental and biodiversity protection and the adaptation to climate change. If the SCoT applies on the territory and includes a sea and coastal chapter, the PLU must also comply with the SCoT guidance for the zoning. The PLU defines guidance for the development of the municipal area which can include the marine space (e.g. port works, development of economic sectors, protection of important areas, installation of facilities to manage rainwaters). The PLU can identify protected areas to implement blue and green corridors for biodiversity conservation, to protect natural spaces from

urbanisation, to delimit areas in which constructions, works, installations and developments must comply with enhanced environmental performance requirements. It is binding on development works. Regarding the protection of the coastline and fight against urban sprawl, derogations are granted for works that need access to the sea (under specific conditions) such as aquaculture farms, some port activities that need direct access (warehouses, tanks, etc.), waste water treatment plant. Finally, there is one Beach development plan that was elaborated for Ramatuelle beach by the local authority to allow the granting of a new beach concession between the municipality and the State, authorising operating buildings on this area defined as a “remarkable natural area”. This beach plan is included as an appendix of the municipality’s PLU.

The 3 existing coastal SAGE documents contribute to the improvement of the marine environment through the definition of guidance elements such as pollution reduction or sediment transit improvement in rivers benefiting coastal environments, lagoons and migratory fish. The SAGE comprises an analysis of current situation and challenges in terms of water management, a sustainable planning and management plan and a set of rules that directly applies to third parties. It notably sets the rules for projects having impact on water and for installations with environmental impacts. It can identify sectors to be preserved for the protection of aquatic environments or uses. It can also encourage the coherence of different tools (e.g. spatial planning of areas to be restored or where light anchoring equipment should be applied, spatial planning for the management of diving sites, port and nautical waste control). One possible operationalisation of the SAGE is the elaboration of a bay contract. The 3 existing bay contracts in the case study area allow the implementation of measures through a partnership with dedicated funds and fixed deadlines to restore maritime and coastal areas, by improving monitoring and governance, reducing pollution sources and ensuring maritime uses organisation. Measures can include reduction of pesticides uses, improvement of water sewage processes, monitoring of port pollutions, development of a territorial scheme for ecological restoration (STERE), development of a blue corridor, monitoring of artificial reefs, etc.

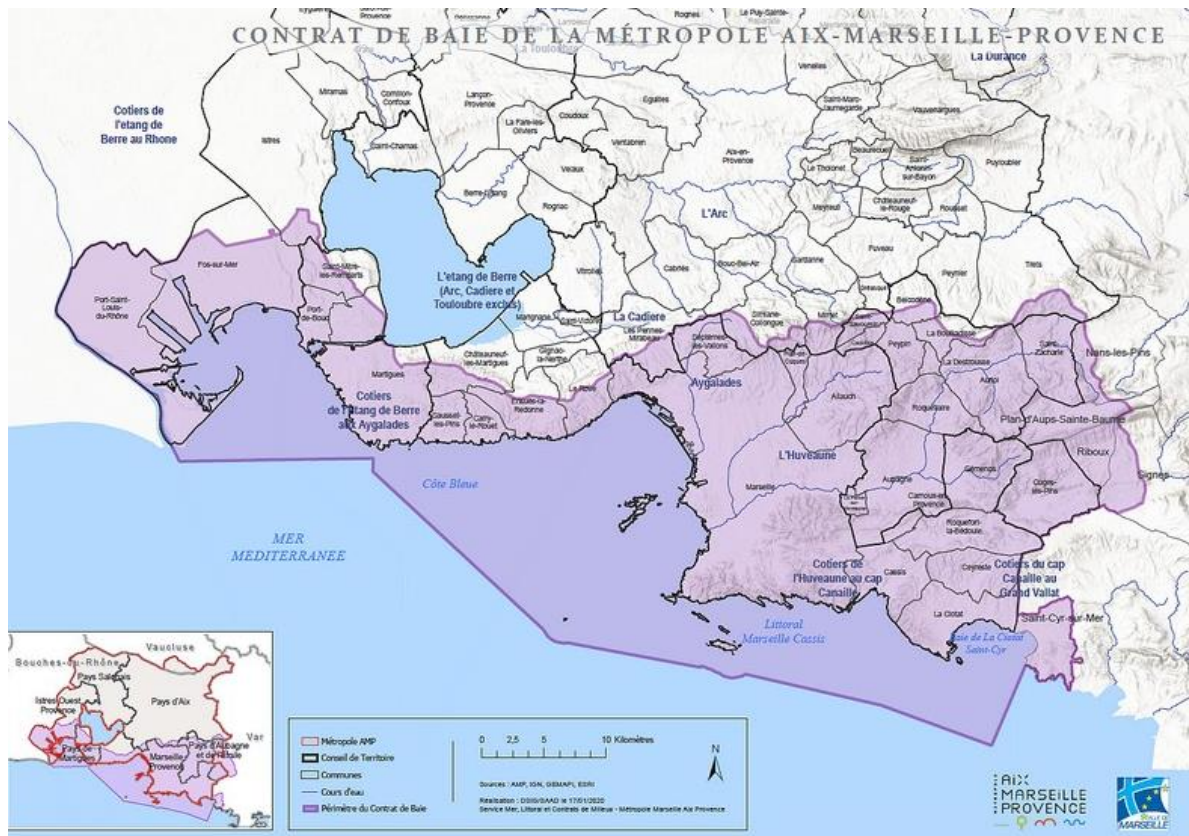


Figure 22. Example of bay contract perimeter (Source: extract from the Aix-Marseille-Provence metropolis bay contract 2023-2024)

6.3 Protection and conservation-oriented plans and strategies

The Strategic document for the implementation of artificial reefs (2012), the Ecological restoration strategy for the French Mediterranean basin (2019), the Diving sites strategy (2019) and the Mediterranean strategy for the management of small and large yachts anchoring (2021) are transversal documents addressing the protection and/or the restoration of the marine and coastal ecosystems. They were elaborated by the DIRM at the façade level or at the inter-regional level to control the pressures of human activities (mainly tourism and recreational boating) on the endangered coastal and marine ecosystems. The last three ones are stemming from the DSF action plan.

PACA Region was part of the technical committee for the drafting of these strategies. They are all supposed to be implemented at a local level, through voluntary actions led by municipalities, bay contracts or MPAs (e.g. regulation of anchoring to protect *P.* meadows, management of *P. oceanica* banquettes on beaches, etc.). Over the last years, artificial reefs have been installed to protect marine biocenosis, increase biomass production but also physically limit the access of certain fishing gear to

specific areas, such as illegal trawling activities in the 3-mile coastal band. The Strategic document for the implementation of artificial reefs in the PACA and Occitanie regions aims at ensuring consistencies and synergies between the authorisations granted by the DDTM for those installations.

The Ecological restoration strategy for the French Mediterranean basin aims at better integrating ecological restoration of marine coastal ecosystems into existing policies on management of uses at sea and on the coast. It locates 6 priority areas in the region, where to develop strategies for coastal waters' restoration by local authorities (so called STERE schemes). This strategy considers the provisions of the Mediterranean Strategy for the management of small and large yachts anchoring and invites local authorities to rely as much as possible on existing plans or management tools to develop their STERE (i.e., sea and coastal chapter of SCoT, bay contracts, N2000, MPAs). Today, 3 STERE are finalized and 3 are under elaboration. The existing STERE identifies the projects that can have detrimental impacts on the 0 to 40m deep coastal areas (e.g. port extension, agricultural projects) and define priority areas for restoration actions - e.g. on natural nurseries and deteriorated habitats - preferentially in sites where activities are already regulated (prohibition of anchoring, trawling, dredging; regulation of fishing; fishing ban). It is an example of a strategy that is locally adapted based on existing management tools. If the concerned area does not already benefit from an existing management tool, the project of STERE will need to suggest one. The actions' plan of the STERE can be integrated in other strategic documents (e.g. bay contracts).

The Diving sites strategy aims at improving knowledge on environmental impacts of diving activities and enhancing environmentally-friendly practices by prioritising areas for an improved monitoring of the activities. One action of the DSF is to adapt this strategy at a local level.

The Mediterranean strategy for the management of small and large yachts anchoring identifies priority areas to regulate recreational anchoring to help the DDTM in permit issuing, funding and monitoring processes for anchoring, in order to reduce the impacts of recreational anchoring on *P. oceanica* meadows. This strategy aims at promoting voluntary actions by local authorities to be included in existing plans or tools (SCoT, SAGE, bay contracts, MPAs charters, etc.), such as the implementation of light anchoring equipment area.

In addition to those transversal strategies to protect coastal marine ecosystems, there is a regional strategy of the Coastal Conservatory focusing on coastal land conservation, which adapts the Conservatory's national land acquisition policy to regional specificities. The regional maritime area is covered by several MPAs falling under different protection regimes, which in some cases overlap. In the range of 0-50m

depth¹⁰, 57% of the regional maritime territory is covered by 13 Natura 2000 sites (which are either managed by municipalities, national parks, regional park, marine park, or French Biodiversity Agency), 26% is covered by two national marine parks managed by public institutions, 3% by one marine park co-managed between local authorities and professional fishing organisations (N2000 coverage overlaps with the other protection types so figures cannot be summed up). 0.5% of the same area is covered with areas where fishing is regulated by fisheries' organisations which are not considered as MPA and do not benefit from management plans. There is also one regional park (Camargue) including a coastal area co-managed by regional and local authorities and a marine area co-managed between the Park and the State. The national, regional or marine parks aim to define a project of development of the covered territory prior to defining protection measures that are chosen according to this project, whereas the Natura 2000 sites are specifically designated to protect habitats - such as marine phanerogam meadows (*P. oceanica*), Cystoseira habitats, coralligenous seabed - or species (such as marine birds, loggerhead turtle, bottlenose dolphin). Each of the four aforementioned parks manage at least one Natura 2000 site which has been designated within their limits.

The two Charters of the national parks at sea (Calanques and Port-Cros) managed by the State present the same structure which is regulated by law. Both parks include marine and terrestrial areas considered as a single interdependent territory, which are spatially divided into a core area, an optimal adhesion area and an adjacent maritime area. The core area is then divided into distinct vocation zones with specific regulation: integral reserve, natural vocation area, area with management of public attendance, fauna strengthening area with spatialised regulation of activities. The optimal adhesion area on land and the adjacent maritime area at sea cannot set new regulations but set guidelines for sustainable development, shared among all stakeholders, the public institution and the member municipalities. The Charters may be implemented through a multi-year action plan.

¹⁰ 2017, MEDAMP report, Observatoire des réserves sous-marines et des aires marines protégées des côtes françaises de la Méditerranée Université Nice Sophia Antipolis - Université Côte d'Azur - CNRS Lab. ECOMERS.

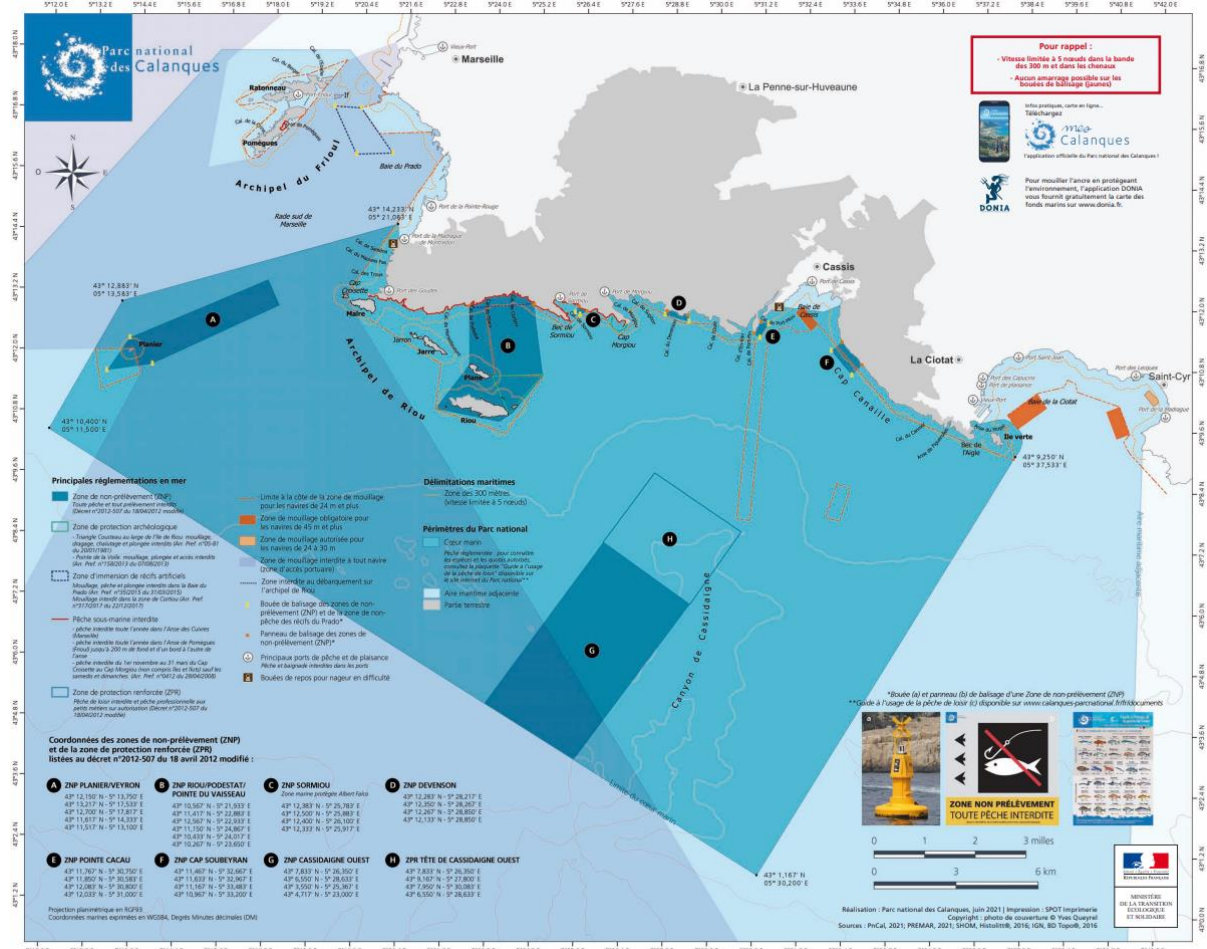


Figure 23. Example of Perimeter and distribution of core area (in dark blue with fishing ban areas in darkest blue), optimal adhesion area (in grey on land) and adjacent maritime area (in light blue) of the Calanques national park (Source: Calanques national park Charter).

The Pelagos Sanctuary Agreement is established between France, Italy and Monaco and covers a large coastal and offshore area crucial for marine mammals. The agreement is used as a pilot site to test measures for diminishing impacts of human activities on marine mammals, notably maritime transport and whale watching activities. It also carries out several knowledge acquisition campaigns and studies. The Port Cros National Park is the facilitator for the French part.

The Regional park of Camargue charter is a contractual document that sets the Park's protection and development planning for a defined period (12 years). It is drafted in consultation with stakeholders as municipalities signing the charter have to comply with it. The local planning documents have to be compatible with the guidance and the measures of the charter. The limit of regional park stops at the coastline, however, the charter express guidance and measures for the seashore and the maritime area and

elaborates a convention which is signed between the Park and the States services responsible at sea.

The Côte Bleue Marine park is an original MPA managed by a Joint Association composed of regional, department and local authorities and professional fishing organisations, as one of the aims of the park is to protect small-scale fishing and to ensure its sustainability. As it is responsible for the Côte Bleue N2000 area management, the area is legally considered as an MPA. The management plan of the Marine park covers the “Côte Bleue” municipalities perimeter (43km of coastline) and 3 miles at sea thanks to a maritime public domain concession which allows the park to implement actions at sea such as artificial reefs’ implementation. Its management plan is not binding; it defines recommendations regarding regulations set by State services or guides the policies of the concerned coastal territories. The park provides input to local strategy and plan definition, provides municipalities with technical assistance for the management of 300m area of the seashore, monitors actions on the coastal fringe (*P. oceanica* banquettes, marine mammal stranding, etc.) and participates in the governance of local plans (bay contract). This governance is a good example of how local authorities can define common objectives on their maritime territory.

Finally, the documents of objectives for the 13 Natura 2000 are operationalised through contracts between maritime stakeholders and users and right holders of the same Natura 2000 sites. By signing the charter for 5 years, the users and right holders commit to comply with the conservation objectives for natural habitats and species defined in the document of objectives. Finally, the projects or plans that may have significant impacts on the Natura 2000 site must go through an environmental assessment process (for instance, the land planning documents).

6.4 Plans for economic sectors and other marine uses and activities

The Region council is responsible for elaborating the Regional plan for economic development, innovation and internationalisation, which draws general objectives regarding the economic development of the region, including social and circular economy. It is binding on local decrees about companies’ financial subsidies. However, it is mainly terrestrial and has little maritime or blue economy dedicated objectives except for the following objectives: (i) improvement of the multimodal and environmental performance of ports and greening of their fleets with electrical connection infrastructures for ships at quayside and (ii) development of maritime industries, fisheries and marine aquaculture through innovation, training and safety. The Region is also responsible for the Regional tourism and leisure development plan which does not include a specific coastal nor maritime part.

Beyond this cross-sector plan, several sector-based strategies or plans assume relevance in the case study area. So far, there is no marine aggregates exploitation in the French Mediterranean basin, so the National strategy for the sustainable

management of land and marine aggregates (2012) did not have to be adapted at the regional level. Aggregate extraction in the Mediterranean French sea basins only concerns sand used for beach nourishment. For reasons of transport costs, the beach nourishment material comes from nearby land-based quarries, coastal or marine sand deposits downstream of the area to be recharged, or from a neighbouring area undergoing accretion. No common guidelines have been defined for port dredging nor for beach nourishment operations.

The marine aquaculture development plan (SRDAM) is set up by the DIRM to make an inventory of aquaculture farms in the region and identify the ideal sites on the coast for its further development, which is currently hindered by high competition with other uses such as real estate pressure and coastal tourism. The plan aims at reconciling those conflicts and help the development of this activity by identifying the sites where the development of aquaculture would have the lowest impact on the environment, the landscape, the heritage and coastal protection. Once adopted by order of the regional prefect, it will be incorporated in the next DSF and must be considered during the maritime public domain authorisation process. The structural department plan for aquaculture operations elaborated by the DDTM defines the prerequisites for ensuring a sustainable and viable aquaculture exploitation within the limits of the department. Specific conditions are defined for the location of farms within MPAs and for the culture of non-native species. Professional organisations of aquaculture and the Marine Farming Commission gathering representatives of the State, department and professional bodies were consulted for the elaboration of this document.

The National Port strategy (2021) “For a port network integral to logistics chains, economic development and ecological and digital transitions” aims at increasing the share of containerised freight to and from France handled in ports by 2050, doubling the number of jobs linked to port activity by 2050 and increasing the share of mass transport modes of transport in pre- and post-carriage by 2030. It is led by the Inter-ministerial committee for the Sea whose secretariat is provided by the General Secretariat for the Sea depending on the Prime Minister. The implementation of this strategy will be carried out notably through the implementation of goals and performance contracts for major seaports, in connection with planning documents (State-PACA Region plan contracts notably).

The Logistics and intermodal plan for the Mediterranean-Rhône-Saône Axis (2019) - led by the Inter-ministerial Delegation for the Development of the Mediterranean-Rhône-Saône logistics and port axis - prioritises the actions to be implemented in order to optimise the use of each mode of transport in their areas of relevance. This plan proposes operational measures to be integrated in future State-Region plan contracts (CPER) such as developing rail motorways and motorways of the sea to reduce international transit road transport, create new lines and new sites.

Still relevant for maritime transportation, the Seaport of Marseille (GPMM) strategic plan for 2020-2024 presents the strategic guidance for the port development to be more competitive and face environmental challenges. It is elaborated by the Port board and it must be presented to the Port surveillance committee composed of 18 members including regional and local authorities. It includes: the Port strategic positioning and development policy; the funding and investment programs forecasted; the modalities of the equipment exploitation; the sustainable development policy identifying the vocation of the distinct spaces of the port, including those with nature protection stakes (this section also includes the relationship between the port and the territorial municipalities) and the access services of the port; and the policy regarding the inter-modality notably for the train and river transport. One of the aims is "A green port serving the blue economy" whose objective is to reconcile environmental excellence, competitiveness and economic attractiveness.

Finally, some voluntary documents are relevant in the case study area. The Charter on sustainable cruising in the French Mediterranean is voluntarily signed by shipowners to limit the impacts of cruising concerning physical alteration of phanerogam meadows and other special habitats in the Mediterranean, risk of collision between cruise ships and cetaceans and noise disturbance, sewage and solid waste from ships, atmospheric emissions from ships. Some voluntary measures include sewage treatments and sulphur oxides emission control. The Ports' charter invites marinas and fishing ports, professional users, NGOs to voluntarily sign above mentioned charter to commit to develop consultation and co-construction in maintaining high standards for innovation and port management good practices. A national level initiative called "Clean ports in France" is led by the Marina French Federation since 2011. The Region PACA leads this initiative.

6.5 Elements of contribution to the EU Green Deal and sea-basin strategies

Almost all analysed plans were written before the release of the EGD so only a few documents mention it (e.g. the Strategy for the sea of the Alpes-Maritimes department). There are few plans or strategies that encompass several components of the EGD at once. Cross-cutting plans such as the DSF and land planning documents may encompass several pillars of the EGD. Protection plans contribute to climate change mitigation (e.g. through blue carbon) and climate change adaptation, biodiversity and ecosystem protection and restoration while economic plans can contribute positively to a few pillars (for instance energy transition) without sufficiently taking the other pillars into account (for instance biodiversity conservation).

Regarding cross-cutting plans, the high-level documents display objectives that contribute to the pillars of the EGD; however, it is complicated to assess the effective implementation of those objectives which in general are not binding enough and thus

depend on the political will, tools and means of local stakeholders. For instance, the DSF strategic part and action plan display guidance consistent with the EGD objectives when they are part of the State's prerogative (notably for the planning of offshore renewable energy). An exhaustive monitoring process of both the strategic and operational parts using key indicators of the DSF is undertaken by the DIRM. This helps reporting on the progress of the implementation. However, for instance regarding climate change adaptation targets of local territories which are managed through local urban plans, implementation levels may be different. This is due to the fact that strategic guidance can be interpreted differently by local authorities, and existing means for their implementation are different from one territory to another.

Regarding the biodiversity and ecosystem protection and restoration pillar, the SRADDET must include the regional ecological consistency scheme (SRCE) identifying biodiversity corridors in the region that should be maintained or restored, and which is mainly focused on land. The SCoT and the PLU are the local land planning documents that could be relevant for the EGD components local implementation, relying on national, façade and regional objectives. For instance, regarding ecosystem protection and restoration and climate change adaptation, the SCoT should determine the balance between urban areas and areas to be urbanized and natural, agricultural or forest areas. It also identifies natural or urban areas and sites to be protected. It can give these areas legal recognition and thus protect them from the pressures of urban development. The prescriptions defined for ensuring blue and green corridors in the SCoT must be applied at the level of urban plans (principle of compatibility between the SCoT and the PLU). However, the level of adoption of those corridors in the local urban plans is different from one plan to another. Finally, few SCoT address sustainable seafood production and blue circular economy pillars in their plan so far, as most of them do not include a sea and coastal chapter.

The DPMn strategies contribute to climate change adaptation along the coastline by fostering sustainable management of the DPMn to combat erosion of the coastline with natural solutions, or sustainable seafood production by protecting the DPMn to ensure the long-term survival and development of marine cultures (e.g. in Toulon bay). At the department level, the specific case of the strategy for the Mediterranean Sea of Alpes-Maritimes should be noted as it is expressly part of the Department Green Deal Policy.

Protection and conservation-oriented plans and strategies contribute to the operationalisation of climate change mitigation and climate change adaptation, biodiversity and ecosystem protection and restoration pillars of the EGD, in particular when they are spatialised. The Coastal Conservatory's strategy effectively contributes to creating a dynamic and interconnected network of natural coastal habitats (objective to fight against habitats' fragmentation and create blue and green corridors). The Ecological restoration strategy for the French Mediterranean basin

fosters an integrated approach for ecological restoration as it invites local authorities to define simultaneously marine uses regulation policies and restoration actions. The restoration actions must participate in the regaining of biodiversity and the control of the pressures causing the deterioration. To achieve this, actions plan should display monitoring indicators that prove the effectiveness of pressures' control and minimisation. Finally, the national park charters and other well managed MPAs documents effectively contribute to biodiversity conservation and other related EGD pillars on their territories through the measures they implement or through the actions stemming from the adhesion of local authorities to their charters.

The analysed economic plans display objectives on the energy transition but few include several EGD pillars. The Logistics and intermodal plan for the Mediterranean-Rhône-Saône axis displays objectives that contribute to the EU's new objective to achieve a 75% modal share by 2050. One out of the 4 goals of the National port strategy is to “step up the ecological transition of the ports by streamlining the procedures for setting up innovative economic activities to facilitate welcoming new industrial and logistics clients into the industrial port zones”. Each major seaport will have to define a “port ecological transition” plan, with a section dealing with circular economy and industrial ecology. These plans will include a roadmap for the deployment of alternative fuels by 2025. However, there is only one key indicator associated to this objective which is the carbon footprint of ports so it does not include the other pillars of the EGD (biodiversity, pollution, circular economy etc.). The Seaport of Marseille strategic plan includes a dedicated chapter on the policy of the sustainable development of the port. Some of the actions include the intensification of flows and the modal shift from rail to river, the implementation of electric connections at berth, the promotion of renewable energy services on the public port domain, the realization of a natural spaces master scheme for the Industrial port area of Fos-Sur-Mer in order to define the preservation and restoration strategy for the area. However, the forecasted increase in the number of cruising boats and maritime transport in general questions the overall contribution of this strategy to the EGD pillars, notably regarding the atmospheric pollution of industrial activities located close to urban areas or the pollutions of sediments or coastal waters.

Voluntary charters defined at the façade or region level such as the Ports charter and the Charter on sustainable cruising display objectives in line with EGD climate change mitigation and zero pollution pillars. However, as these charters will be implemented on a voluntary basis, a monitoring would be required to measure the real achievements.

Some plans mention cooperation actions with some of the State Members of the WestMED Blue Economy Initiative which are indirectly relevant for one of the 6 pillars of its strategy: (i) maritime cluster development, (ii) biodiversity and marine habitat conservation and restoration, (iii) sustainable consumption and production, (iv) development of coastal communities and sustainable fisheries and aquaculture, (v)

skills development and circulation, (vi) maritime safety and the fight against marine pollution. However, no plan mentions this strategy expressively. Some examples are recalled below.

The DSF includes actions to reduce the risk of collision for cetaceans along the Mediterranean coastline through the submission to the creation of a particularly sensitive sea area (PSSA) jointly developed with Italy, Monaco and Spain and accepted by the International Maritime Organisation (IMO) in 2023) and develop real time location methods to improve efficiency and use of real time plotting of cetaceans (REPCET).

At the regional level, the Regional sea and coastal strategy mentions the cooperation with riparian states as an ambition of the Region, notably responsible for managing European funds. Finally, the Interreg Bluemed project involving 13 European countries from the Northern shore of the Mediterranean is mentioned as a key initiative to take into account towards 2020 to draw guidelines for sustainable growth in the Region. The Charter on sustainable cruising in the French Mediterranean does not mention the strategy but it can somehow spread changes regarding pollution reduction across the Mediterranean basin as the shipowners operate across the Mediterranean Sea.

6.6 Elements about stakeholder engagement

All relevant stakeholders are involved in the DSF drafting process at a macro level through the Mediterranean Council for the French Sea Basin which meets up at least once a year. It is composed of 80 members from 5 colleges (the State and its public institutions including a representative from the national parks, local authorities and their groupings, professional activities and companies, company employees' representatives, environmental NGOs and marine uses associations). Specialised commissions are also set up on specific topics such as offshore windfarms planning and highly protected MPAs setting, gathering relevant stakeholders to define the measures and monitor their implementation. The Region is well integrated in the drafting and facilitation process of the DSF and takes part in committees for the implementation of DSF actions.

Other different strategies led by the DIRM have also engaged concerned stakeholders for their elaboration. For instance, the consultations for the Diving sites strategy were held with relevant stakeholders in the regions (representatives of clubs and structures in the profession, managers, scientists and institutional representatives). Fishing organizations, maritime users and professionals were involved in the definition of the Strategic document regarding the implementation of the artificial reefs. The Department State Services are responsible for facilitating the sea and coastal policies' implementation in their department but they may lack resources to support local adaptation of MSP by local authorities. A parliament of the sea was created in 2022 by the PACA Region and aims at gathering the regional maritime stakeholders (maritime

economy including fishing and aquaculture, sports and attractiveness, biodiversity). However, its goal is to foster exchange information on marine uses and protection and not to consult with stakeholders on specific decision.

Regarding water management, the SDAGE and the SAGE embody good practices to engage local stakeholders both for the drafting of the document and its implementation. These could support local engagement in MSP. The local water management committees are created by the department Prefect to elaborate the SAGE and monitor the implementation of the document. For instance, the water local committee should express an opinion on all the projects that require environmental authorization. They are composed of 3 colleges of stakeholders: (i) local municipalities (which must account for at least half of committee members), (ii) users (farmers, industry stakeholders, etc.), (iii) land owners, professional organizations, NGOs (at least one quarter of the members), State services and operators (at most one quarter of the members). It must include maritime stakeholders when it comprises coastal area. The committee is led by an elected representative of the territory. The bay contracts fostered by the SAGE also display good practices in terms of stakeholders' engagement. The bay committee gathers colleges of representatives of local authorities and municipalities (region, department, metropolis, etc.), users and professional organisations, qualified representatives (natural parks, scientists) and State and public operators. For instance, the Aix-Marseille-Provence bay contract involves 70 stakeholders, including economic ones for both the drafting and implementation processes.

Regarding the land planning documents (SRADDET, SCOT, PLU), the engagement of stakeholders is regulated and those instances could be also used to discuss some sea and coastal guidance. For the urban plan (PLU), associated public bodies should be consulted (the Prefect, the Region and Department, public organisations' representatives, consular chambers). Regarding public consultation, at least a public enquiry should be run. Still, additional dialogue measures can be put in place to favour the involvement of the stakeholders and build shared objectives for the territory. Apart from the "regulatory and automatic" implementation of the document, further voluntary actions can be defined by the authority responsible for the document to facilitate the territory's project, governance and implementation of concrete actions.

For national and regional natural parks, stakeholders are actively engaged for the drafting of the document. For instance, for Port-Cros national park, various bilateral meetings were organized during the elaboration of the charter with the State services and local municipalities. Six consultation workshops were set up, corresponding to each of the six ambitions. A major role was given in these workshops to the 64 members of the Economic, Social and Cultural Council (CESC). These workshops were co-chaired by an elected representative from one of the municipalities in the optimal adhesion area and a National Park official. The Marine Park of the Blue Coast is another example

of active engagement of concerned stakeholders for both the drafting and implementation of the charter. The fact that it is managed by fishermen representatives and local authorities should also be highlighted.

The Coastal Conservatory's strategy was submitted for consultation to associations, municipalities and state services. The operational implementation of this strategy is monitored at site level through the partnership between the Conservatory and the entity that manages the site through a detailed distribution of roles and responsibilities.

Regarding the engagement of local authorities in the Port of Marseille strategic document, the City/Port dialogue was set up in 2019 with the implementation of a charter to initiate a permanent dialogue process between the two authorities and ease the sharing of data from the port to the city notably regarding the capacity of ferries hosting. These discussions will help better engage with marine uses' organisations at the local level, taking into account the needs of the inhabitants of the city.

The Port charter led by the Region council was set up with economic stakeholders (nautical industry federation, regional committee for fishing and aquaculture, Mediterranean maritime heritage association, regional Olympic and sport committees, Réseau Mer) to develop consultation and co-construction in maintaining high standards for innovation and port management good practices.

6.7 Persisting gaps in the integrated planning and management of the sea space

In the French Mediterranean façade, main conflicts of uses are located in the coastal areas (within the 3 nautical miles). For instance, the areas around commercial ports are characterised by an intense combination of activities, which are compatible under certain conditions. There are several plans at the local level that regulate or manage the activities in the coastal areas (sea development plans of SCOT, national park charters, STERE, etc.). However, a deeper analysis is needed to identify the gaps and overlaps of the territorial coverage of such tools. This would allow to better know what are the managed areas to rely on for the DSF local implementation.

Regarding the first cycle of the DSF elaboration, it appears there is a missing link between the DSF façade level managed by the DIRM and the regional and local land planning documents (e.g., SRADDET, SCoT, PLU) managed by regional and local authorities. The latter do not mostly address marine issues as the sea has been historically managed by the State. The DSF strategic objectives are quite broad and thus leave room for manoeuvre concerning its application at an intermunicipal or municipal level in absence of operationalisation principles. Indeed, the compatibility principle between higher and lower level documents can be difficult to evaluate. The vocation maps of the DSF plans are similarly broad enough not to impact mapping included in land planning documents at lower level. However, it shall be considered that

DSF represents the first cycle of the MSP process and many guiding elements and actions are to be further detailed to be appropriately translated at regional and local levels in the next cycle. The department State services (DDTM) responsible for facilitating the sea and coastal policies and regulating the maritime public domain at the department level can play a key role in sharing the principles of the DSF within the department territory but they are not requested to produce a strategy or a document at their level, except for the specific Strategy for natural public maritime domain management. At the regional level, the SRADDET is essentially a terrestrial document but it is being revised to include guidance and rules on the adaptation of the seashore to climate change which will strengthen the role of the Region on that topic.

The analysis also highlights that the scale to operate MSP depends on the planned activity, and that MSP at local level still need strengthening or adaptation of existing tools to be effective. For activities planned at the façade or regional levels, the engagement processes at lower levels seem to be crucial to ensure social acceptability. The emerging blue economy sectors are directly integrated in the DSF which constitutes an opportunity for their proper planning (offshore windfarms, ocean thermal energy). These planning provisions are mainly defined at a façade level and require an intense appropriation process among local authorities and stakeholders. For instance, aquaculture is planned at the regional and department level and still lack appropriation by local stakeholders who face opposition by local inhabitants afraid of pollution and competition with amenities to boost the aquaculture sector on their territory.

The lower level of engagement of local stakeholders such as elected representatives in such processes can be explained by various factors: they feel less concerned by those façade level processes than regional stakeholders, lack of time and resources to participate in the DSF drafting workshops, lack of knowledge on maritime activities, lack of staff to assist them on the particular topic of maritime issues, etc. As a consequence, identifying who could be the local relays to ensure smooth information transmission from façade or region to local levels could be relevant. Engaging even more with local municipalities and the public throughout the elaboration of such engagement schemes could make their implementation easier. It appears that the SCoT can play a crucial role to plan coastal activities while preserving coastal ecosystems. So far, only 2 out of 11 SCoT have integrated a Sea Development plan on a voluntary basis. The other local authorities could be encouraged to take advantage of the definition of their SCoT's sea and coastal chapter to draw a project for their maritime territory and organise marine uses in accordance with the DSF. Clearer guidelines for defining this sea and coastal chapter could be helpful for them to leverage this tool. Besides, guidelines could also be elaborated on how to set the balance between the economic development and environmental protection so that it influences local PLU. This can be defined through the level of detail of spatial

representation of the SCoT, the level of prescription, guidelines for relevant biodiversity inventory and evaluation of incidences.

Regarding biodiversity preservation, top-down and bottom-up approaches converge and are complementary. A comparison of how MPAs charters, SAGE, bay contracts, STERE are interlinked with land planning documents and sectoral documents would be relevant to better rely on the complementarity of existing documents for MSP local adaptation. PACA coastal waters are covered with several top down strategies to increase knowledge and protection of its biodiversity: transversal strategies facilitated by the DIRM to better monitor recreational activities' impacts on the coastal biodiversity, DSF dedicated actions that may lead to new or revised strategies, voluntary charters for sustainable cruising, etc. Those strategies are to be implemented locally through existing tools such as MPAs, bay contracts or STERE. Besides, an analysis of the consistency of the MPA network is ongoing at the façade level for the revision of the DSF to define strictly protected areas that will mainly be included in existing MPAs, to respond to the 10% target of strictly protected area defined by the EU biodiversity strategy. Regarding the bottom-up initiatives, locally managed maritime territories such as MPAs act as laboratory to experiment new governance approach to organise maritime uses and improve nature conservation. For instance, one of the Côte Bleue marine park's missions is to "enhance fishery resources and ensure the conditions for sustainable coastal fishing" by experimenting projects for restoration of coastal ecosystems and against coastal bottom trawling or by thinking about new measures for a sustainable professional coastal fishing sector.

Although the DSF includes some guidance and actions addressing ports' ecological transition, the drafting and implementation of the strategy of the Port of Marseille, led by the Port authority depending on the Ministry of Ecological Transition, is an independent process and is not fully integrated in the DSF at the façade level. Besides, this strategy also lacks integration with other local planning document (e.g. SCoT) and thus addressing issues relevant at a territorial level can be quite challenging (e.g. air pollution). At the regional and local level, the national port strategy is too broad to be applied to smaller ports and those ports do not have guidelines or strategies to anticipate upcoming challenges (coastal erosion and relocation of activities, ecological dredging, etc.) except voluntary charters. Besides, those ports are managed by different types of stakeholders and are not necessarily linked to the neighbouring land planning document elaboration processes.

The development of underwater cables supplying data centres has not been integrated in the DSF even if requests for authorisations by the DDTM have increased in the last years specifically in Marseille coastal territory.

Regarding the planning of coastal tourism, the DSF include guidance and actions on this topic to encourage local authorities to implement measures to limit the impact of tourism and recreational activities on their coastal ecosystems (e.g. light anchoring

equipment). The SCoT seems to be at an adequate scale to plan and organise these activities. At the regional level, although the plan for tourism of the Region and the SRADDET do not include a dedicated section on coastal tourism, it could be interesting to investigate the role of the Region on this topic.

Although the Region is well involved in the DSF elaboration and implementation process, the sea is still viewed as regulated by the State. Thus, this topic is still considered by regional and local authorities as the State's field. A lack of linkage is observed between the façade-level DSF and regional and local territory plans focusing on urban planning challenges.

7. Pays-de-Loire Region

Articles L 219-1 et seq. of the Environmental Code stipulates the principles for an integrated management of sea and coastline. The State elaborates a National Maritime and Coastline Strategy in consultation with the National Council for the Sea and Coastal Areas and, in application, a strategy for each sea basin in consultation with the Council for the Sea Basin. The objective is to achieve an optimal use of the sea and the coastline from a sustainable development perspective and to improve mutual consideration of all its issues.



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Figure 24. Pays de la Loire Region, including two departments and the 15 coastal inter-municipalities (Source: Maritime ambition of Pays de la Loire – 2018 version).

At sea, the Maritime Public Domain (DPM) is mainly dedicated to the direct use of the public or to the reception of public services related to the use or exploitation of maritime resources. The DPM is inalienable and indefeasible. The natural DPM¹¹ must be used in accordance with its public utility purpose: any construction or installation project destined to be built on this domain must first obtain a State authorization, which is

¹¹ The natural Maritime Public Domain (DPMn) is made up of the seashore, the ground and subsoil of the sea up to the limit of territorial waters, the soil and subsoil of salt ponds in direct, natural and permanent communication with the sea, as well as the sea lays and relays, up to 12 nautical miles.

temporary, precarious, and revocable and which gives rise to the payment of a fee. The artificial Maritime Public Domain is composed of port installations and security works for navigation. The condition of uses of the DPM are set in The General Code of Property of Public Persons.

On land, the Urban Code is the regulatory corpus related to the land use and development and sets the requirements on the urban plans' development at the different levels. It includes the *Loi littoral* - coastal law on the development, protection and enhancement of the coastline which objective is to preserve natural spaces and ecological balance on the seashore, develop economic activities close to the sea, put in place a scaled protection depending on proximity to the shore.

At the façade level¹², four Interregional Directorates for the Sea (DIRM) depending on the State Secretariat for the Sea are responsible for adapting the Sea and coastal national strategy to their façade specificities elaborating a façade strategy, including a marine spatial plan. The façade strategic documents (DSF) include a spatial dimension, specified as part of the measures transposing the EU Directive of 24 July 2014 on MSP. They also comprise the elements required by the MSFD. All plans, programs, schemes and projects at sea and on the land-sea interface must be compatible with the DSF. On land, if they have an influence on the sea, they must consider the guidance and provisions of the DSF. Additionally, there should be a reciprocal compatibility between the Water planning and management master scheme (SDAGE) and the environmental objectives of the façade strategy. The compatibility or consideration is done at the time of the revision of the documents concerned or in any case within three years.

The Maritime Prefect is responsible for delivering concessions and holds police power beyond the 12 nautical miles limit. At the region level, the Regional council of elected representatives - mentioned as the Region in this document - is responsible for the regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) which is binding on local urban plans. The territorial reform undertaken at national level, through the MAPTAM (2014) and NOTRe (2015) laws, strengthens the Regions' powers in terms of economic development and regional planning, and gives them the role of leader in terms of climate, air, energy, preservation of biodiversity and regional planning. It also transfers the management of European funds from the State to the Regions.

The State regional de-concentrated service in charge of environment, planning and housing (DREAL) is responsible among other competences for animating water policy, Natura 2000 sites network, green and blue corridors.

¹² France is divided into 4 maritime façades (East Channel North Sea, North Atlantic West Channel, South Atlantic and Mediterranean).

At the department¹³ level, the Department council of elected representatives is responsible for the improvement of services accessibility to the public, department roads and of some ports when they have received the competences from the State. The State services operating at department level (DDTM) are responsible for the natural maritime public domain management and for the occupation and environmental authorisations of works at sea until the 12 nautical miles limit.

At the intermunicipal level, elected representatives of groups of municipalities are responsible for the definition of the Territorial Coherence Scheme (SCoT), which can apply until the 12 nautical miles limit, but which in general only applies to the coast limit or the 3 nautical miles limit (or even 1 nm). Municipalities are then responsible for elaborating the local urban plan (PLU) on their territory which has to be compliant with the SCoT or with the urban code if there is no SCoT defined for the territory. The municipality is responsible for the security on beaches and police for nautical activities and bathing sites until the 300m line from the coastline. Municipalities are invited to plan light equipment and mooring areas and offered generally the possibility to act as Natura 2000 sites' managers.

The ports can be managed by different stakeholders at different levels: from State services for the main commercial ports (Marseille and Saint-Nazaire) to metropolis (Metropolis of Nice ports) to department or joint association (Toulon ports). The management of the artificial maritime public domain is delegated to the authority responsible for the port. Marinas are managed by municipalities or department authorities in some cases.

Figure 18 provides a schematic representation of competences at sea and on coast in France.

7.1 Analysed plans and strategies

Several maritime-related strategies or plans are elaborated by the State services. The façade strategic document (DSF) for the French North Atlantic and West Channel façade is an integrated document that operationalises the national strategy for the sea and seashore. The DSF is binding on lower level urban plans and includes an environmental section which notably includes the implementation of the MSFD at the façade level. The two coastal Departments of Pays de la Loire Region, Loire-Atlantique and Vendée, are also covered by strategies for the maritime public domain management elaborated by the State services.

Concerning the regional authority, the Regional Council of Pays de la Loire is about to adopt a new Regional Maritime Ambition strategy (the first adopted in 2018). This was

¹³ The Department is an administrative district and the area under the jurisdiction of the State departments' services and the local authority composed of elected representatives responsible for leading the missions under its competences. There are 2 departments in the Pays de la Loire region: Vendée and Loire Atlantique.

drafted by the Regional assembly for the Sea and Coasts, a body co-chaired by the Region and the government represented by the Interregional Directorate for the Sea. This voluntary-based strategy is an integrated document that fuels numerous others strategies and plans of the Region dealing directly or indirectly with coastal areas and maritime sectors. This is the case of the Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) that includes general guidance and prescriptive rules regarding the development of activities requiring the immediate proximity of the sea, also considering climate change impacts and ecological corridors.

As regards the department authorities, the departmental councils of Loire-Atlantique and Vendée have both adopted voluntary-based strategic document: the “maritime ambition of Vendée” (ending in 2023), and the “Loire Atlantique maritime territory plan”. At the local level, the documents analysed are the Territorial coherence schemes (SCoT). The 8 SCoTs in place consider a few marine and coastal topics, especially marine flooding and tourism. However, their measures only deal with land-based facilities for maritime activities and do not cover the sea area. Moreover, Nantes Saint-Nazaire metropolis elaborated in 2020 a cross-cutting strategy dedicated to maritime and coastal issues, the “Maritime and coastal ambition”. It defines a vision regarding the maritime space of the territory and objectives to strengthen their integration in the development of the territory. Due to sea level rise and climate change, adaptation to coastal erosion and marine flooding risk is a great challenge for coastal territories of Pays de la Loire. These issues are the subject of the “Regional convention for the sustainable management of the coastline”, a specific agreement between the State, the Region and the Departments of Vendée and Loire Atlantique. Based on this convention, 11 specific coastal risk prevention plan (PPRLs) have been elaborated by State services at local level in cooperation with municipalities. Several inter-municipalities are currently elaborating specific strategies for shoreline management.

The master plan for water development and management (SDAGE) stemming from the implementation of the WFD and its adaptation at local watershed level (SAGE) aims to halt deterioration in the status of water bodies and achieve good status for aquatic habitats and marine coastal waters. There are 7 coastal SAGE in the regions, whose perimeter was defined according to a consistent hydrographic unit.

Regarding protection and conservation-oriented plans and strategies, the Region adopted a regional biodiversity strategy for 2018-2023 period (a new strategy for 2024-2029 is currently under development), which also cover coastal areas. The State services developed the territorial action plan for protected areas of Pays de la Loire (2022-2030) which is strongly linked to the DSF. The marine and coastal area of the Pays de la Loire territory presents several protected areas, which are concerned by specific management plans. Almost the whole seafront of Pays de la Loire territory is covered by Natura 2000 areas (7 ZPS and 5 ZSC) that are fully marine or both marine

and coastal. Numerous other coastal protected areas of the Pays de la Loire territory are located on the land, including in particular 35 sites protected by the Coastal Conservatory. Although they do not cover the Public Maritime Domain, they are strongly linked to the sea due to several land-sea interactions. Finally, the Marine nature park of “Gironde mer des Pertuis” is mainly located on the water of the neighbouring Region of Nouvelle Aquitaine but includes part of the south of the Vendée department.

Regarding plans for economic sectors and other marine uses, French regions are responsible for the economic development of their territory and thus the Pays de la Loire Region is in charge of the elaboration of the Regional plan for economic development, innovation and internationalisation (SRDEII). This document is drawn up in line with the SRADDET and consider the guidelines of the Regional Maritime Ambition strategy. The Region elaborates other strategies specific to certain parts of the regional economy, such as the food sector and tourism (respectively the “Sea and land, acting for sustainable food” strategy and the “Regional scheme for tourism and leisure activities development”), that identifies marine activities and set specific objectives in line with the Regional Maritime Ambition strategy. Other specific strategies focusing on key sectors of the Pays de la Loire economy are drafted by regional authorities, States services and stakeholders, including those relevant for:

- the nautical sector (Regional action plan for the future of nautical activities)
- fisheries and aquaculture (Implementation document for the European Maritime, Fisheries and Aquaculture Fund (EMFAF), Department Structural plan for aquaculture operations)
- port activities (Nantes – Saint Nazaire Port development strategy)
- marine renewable energies (Roadmap for research and innovation for marine renewable energies), and
- marine aggregates extraction (Marine Aggregates Guidance and Management Document (DOGGM)).

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.



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Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
Façade strategic document (DSF) for North Atlantic and West Channel			X (façade)	X				X	X
Regional Maritime Ambition Strategy (2018, new version under development)		X			X	X			
Maritime ambition of Vendée plan (2018-2023)	X				X	X			
Loire Atlantique maritime territory plan	X				X	X			
Strategy for public maritime domain management (Vendée (2017-2027) and Loire Atlantique (2014-2024))	X			X				X	X
The Nantes Saint-Nazaire “Maritime and coastal ambition”	X				X	X			
Water planning and management master scheme (SDAGE) (2022-2027)			X (Loire river basin)	X				X	X
Water planning and management local schemes (SAGE)	X			X				X	X
Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET)		X		X				X	X
Territorial coherence schemes (SCoT)	X			X				X	X
Local urban plan (PLU)	X			X				X	X

Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Regional convention for the sustainable management of the coastline (2019-2022)		X			X	X			
Local strategies for shoreline management	X				X			X	X
Flood risks prevention plans (PPRI)	X			X				X	X
Flood prevention action plans (PAPI)	X			X				X	X
Coastal risks prevention plan (PPRL)	X			X				X	X
Category 2: protection and conservation-oriented plans and strategies									
Territorial action plan for protected areas of Pays de la Loire (2022-2030)		X			X	X			X
Regional biodiversity strategy (2018-2023)		X			X	X			
Central Atlantic operation strategy of the Coastal Conservatory		X			X	X			X
Marine nature park of “Gironde mer des Pertuis” management plan	X			X		X			X
Natura 2000 documents of objectives	X			X		X			X
Category 3: Plans for economic sectors and other marine uses and activities									
Regional plan for economic development, innovation and Internationalisation (SRDEII) (2022-2028)		X		X		X			
Regional scheme for tourism and leisure activities development (2022-2028)		X		X		X			

Title	Scale			Legally binding		Typology			Spatial measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Action plan for the future of nautical activities (2018)		X			X	X			
Loire-Atlantique Departmental plan for areas, sites and itineraries for nature sports	X			X		X			X
“Sea and land, acting for sustainable food” strategy (2023-2028)		X			X	X			
Implementation document for the European Maritime, Fisheries and Aquaculture Fund (EMFAF) in Pays de la Loire (2021-2027)		X			X			X	
Marine aquaculture development plan		X		X		X			X
Structural Department plan for aquaculture operations	X			X				X	X
Nantes – Saint Nazaire Port development strategy (2021-2026)	X			X		X			X
Regional roadmap for energy transition (2017-2021)		X			X	X			
roadmap for research and innovation for marine renewable energies (2023)		X			X	X			
Marine Aggregates Guidance and Management Document (DOGGM) (2019)			X (sea-basin)	X		X			



Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
Façade strategic document (DSF) for North Atlantic West Channel	X	X	X	X	X	X	X		X		X		X	X	X	X	X	
Regional Maritime Ambition strategy (2018)	X	X	X	X	X	X	X		X					X	X	X	X	
Maritime ambition of Vendée plan (2018-2023)	<i>Details of the plan not publicly available</i>																	
Loire Atlantique maritime territory plan	X	X	X															
Strategy for public maritime domain management (Vendée (2017-2027) and Loire Atlantique (2014-2024))	X	X	X			X									X	X		
The Nantes Saint-Nazaire “Maritime and coastal ambition”	X	X	X	X	X	X	X							X	X	X	X	
Water planning and management master scheme (SDAGE) (2022-2027)		X	X	X		X			X				X	X	X	X	X	
Water planning and management local schemes (SAGE)		X	X	X		X									X	X	X	
Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET)	X	X	X	X		X								X	X	X	X	
Territorial coherence schemes (SCoT)	X	X	X	X		X									X	X	X	
Local urban plan (PLU)	X	X	X	X		X									X	X	X	
Regional convention for the sustainable management of the coastline (2019-2022)														X	X	X		
Local strategies for shoreline management			X												X	X		

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Flood risks prevention plans (PPRI)			X												X			
Flood prevention action plans (PAPI)			X												X			
Coastal risks prevention plan (PPRL)			X												X			
Category 2: protection and conservation-oriented plans and strategies																		
Territorial action plan for protected areas of Pays de la Loire (2022-2030)						X									X	X	X	
regional biodiversity strategy (2018-2023)			X												X	X	X	
Central Atlantic operation strategy of the Coastal Conservatory															X	X	X	
Marine nature park of “Gironde mer des Pertuis” management plan	X	X	X	X	X	X	X		X				X	X	X	X	X	X
Natura 2000 documents of objectives	X	X	X	X	X	X	X		X	X			?	X	X	X	X	X
Category 3: Plans for economic sectors and other marine uses and activities																		
Regional plan for economic development, innovation and Internationalisation (SRDEII) (2022-2028)	X	X	X	X	X	X	X								X			
Regional scheme for tourism and leisure activities development (2022-2028)			X	X		X										X		
Action plan for the future of nautical activities (2018)				X		X												
Loire-Atlantique Departmental plan for areas, sites and itineraries for nature sports				X												X		
“Sea and land, acting for sustainable food” strategy (2023-2028)	X	X																



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Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Implementation document for the European Maritime, Fisheries and Aquaculture Fund (EMFAF) in Pays de la Loire (2021-2027)	X	X														X		
Marine aquaculture development plan		X																
Structural Department plan for aquaculture operations		X																
Nantes – Saint Nazaire Port development strategy (2021-2026)					X	X	X											
Regional roadmap for energy transition (2017-2021)							X											
roadmap for research and innovation for marine renewable energies (2023)					X													
Marine Aggregates Guidance and Management Document (DOGGM) (2019)							X	X										

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

7.2 Cross-cutting plans and strategies

The main relevant document addressing the entire French North Atlantic and West Channel is the DSF which comprises a strategic part, adopted in 2019, and an operational part (monitoring program and action plan), adopted in 2022. It deals with all maritime sectors, except the ones related to pipelines and cables and maritime defence. The strategic part considered two major categories of objectives:

- environmental objectives; restoring the good environmental status of the marine environment is one of the pillars of the strategic part of the document, that develops specific objectives for each of the 11 descriptors of the good environmental status given by the MSFD directive. A cartographic annex identifies the issues for 16 areas, including strong ecological stakes. The action plan also identifies actions relevant for the 11 descriptors of the good environmental status, as well as cross-cutting actions, and integrates the monitoring program of the MSFD.
- socio-economic objectives, which aim to address 3 objectives of the Sea and coastal national strategy: Developing a sustainable blue economy, Ecological transition for the sea and coastline, Promoting France's influence at international level.

The strategic objectives are monitored by the DIRM through key indicators and targets. The DSF also includes a “vocation map” (Figure 25) which identifies 14 areas and defines priority activities or environmental requirements for each of these areas. The aim is not to exclude but to encourage the co-existence of uses in line with the strategic objectives, while giving the priority to certain activities or issues within the zone in the event of a dispute. The action plan integrates a set of 114 actions and for each action details key operators for their implementation. These can be the State services, regional and local authorities and public institutions such as research bodies, the water agency, etc. The DSF must be revised every 6 years. The strategic part of document is currently under revision for a scheduled adoption in 2025.

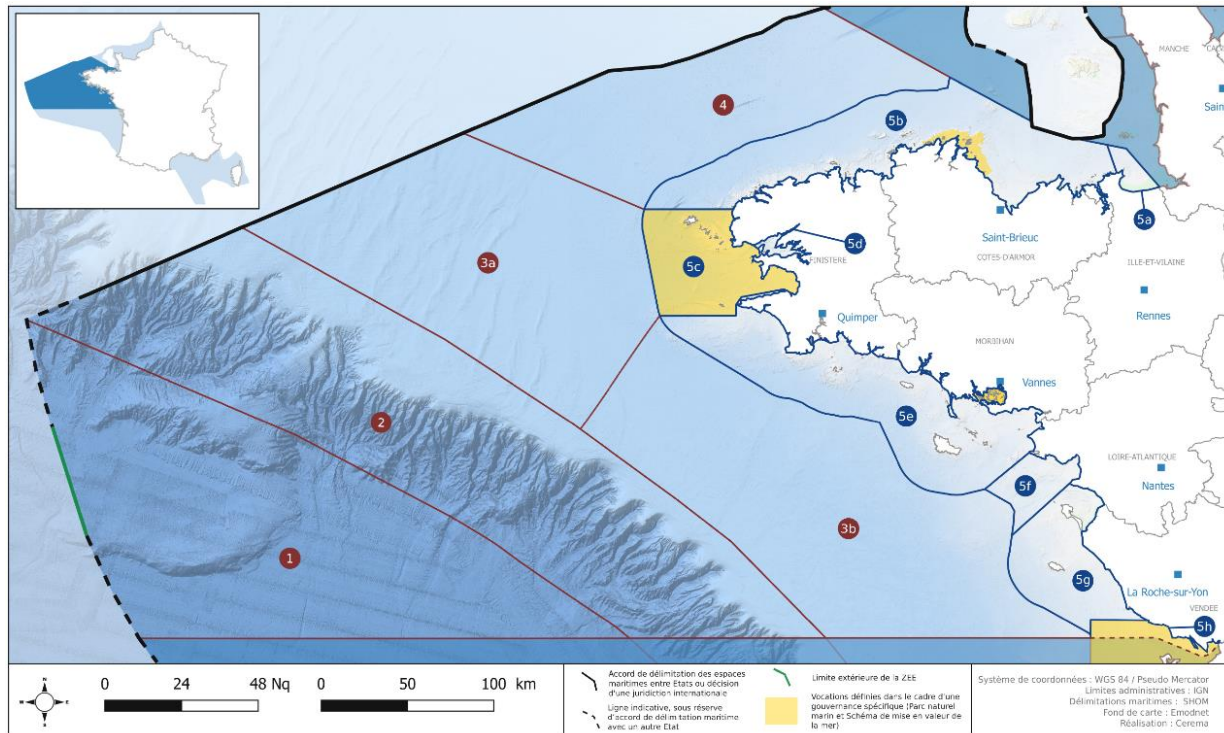


Figure 25. The vocation map of the DSF and its 14 areas (Source: French North Atlantic and West Channel DSF).

At the regional level, there are not dedicated binding marine spatial plans made by the Regional council. However, the Pays de la Loire Region adopted a voluntary-based cross-cutting strategy in 2018, i.e. the Regional Maritime Ambition strategy. It includes objectives and measures built on 3 pillars: promoting the maritime identity of the Region, meeting the challenges of blue growth and protecting and enhancing the sea and coast. Currently, the strategy is under revision to better integrate regional strategies adopted by the Regional Council that have emerged since 2018 and to reinforce the objectives of energy and environmental transitions; the new version should be adopted by the end of 2023. This voluntary strategy aims also to coordinate the various competencies of the Region: in this way it provides inputs to the numerous others strategies and plans of the Region dealing directly or indirectly with coastal areas and maritime sectors.

The Regional scheme for the planning, the sustainable development and equality of the territories (SRADDET) which is the other main regional document relevant for coastal and marine spatial planning remains mostly terrestrial. It includes general guidance and prescriptive rules. A specific chapter of the general guidance is dedicated to reconciling natural areas and economic development of the coastal territories. It gives general objectives and guidelines to implement an integrated coastal zone

management vision. One of the prescriptive rules is dedicated to coastal risk and requires local land use plans (SCOT and PLU) to integrate risk management.

Some cross-cutting plans on water management also address marine issues. The master plan for water development and management (SDAGE) for the Loire-Bretagne territory is elaborated by the Loire-Bretagne water agency and implements the WFD. Specific chapters of the strategic guidance and the action plan are dedicated to coastal waters management and focus on water quality and ecosystems preservation. The SDAGE was modified in 2022 to be better linked to the DSF, after its adoption.

Coastal erosion and marine flooding are great challenges for coastal territories of Pays de la Loire, expected to be exacerbated by climate change. The region was deeply affected by the storm Xynthia in February 2010, which caused major damages on coastal populations and territories specifically in southern Vendée. This disaster marked a turning point in national and regional awareness of the coastal and marine risks. The risks are the focus of a specific strategy co-signed by the State, the Region and the Departments of Vendée and Loire Atlantique, named the “Regional convention for the sustainable management of the coastline”. This identifies two main objectives (knowledge improvement and support to local strategies’ implementation) and details funding rules for projects related to the management of the shoreline implemented by local authorities. A new version of this agreement is currently being drafted.

At the departmental level, the department State services (DDTM) are in charge of elaborating strategies for the maritime public domain management. The only document publicly accessible is the one from Vendée, which was analysed. This document divides the maritime public domain in sectors and defines for each sector challenges and management orientations. The latter are not binding but set guidelines for issuing authorizations at department scale. Departmental councils have no jurisdiction on marine areas, however both the Departments of Loire-Atlantique and Vendée have elaborated voluntary-based strategic documents affecting the marine space. The “Maritime ambition of Vendée” plan establishes a set of actions for the 2018-2023 period building on three pillars: innovation, territories’ development and management, maritime identity. The plan ended in 2023 and it seems that the Department will not release a second action plan. In 2019, the Departments adopted the “Loire-Atlantique maritime territory” action plan. The plan sets 4 objectives on environmental and climate transition, sustainable development, maritime identity and access for all citizens to the coast; It also determines actions to be conducted during the 2019-2029 period. However, this plan is currently on hold and would be resumed soon.

Finally, several cross-cutting plans and strategies are in place at the local level. All 8 Territorial coherence schemes (SCOT) consider marine and coastal topics. Regarding marine issues, marine flooding risks and facilitation of tourism development and coastal ecosystem protection are addressed in every SCOT. Other marine activities are

often mentioned, such as fishing, aquaculture and port activities. They are sometimes the subject of specific prescriptions aiming to ensure support to these activities, in particular in terms of needed facilities on land, economic development and land use aspects. The SCOTs do not directly address marine areas. At a sub-local level, the PLU can also make prescriptions regarding land use and must implement objectives and prescriptions of the SCOT. A complementary, more detailed analysis would be needed to identify how the PLU deal with coastal and marine issues.

Still at the local level, the Nantes Saint-Nazaire metropolis elaborated in 2020 a cross-cutting strategy dedicated to maritime and coastal issues, the “Maritime and coastal ambition”. This strategy mainly focuses on landscape enhancement and the need to ensure access to the sea to all citizens. It also gives objectives for a better integration of the Nantes-St Nazaire port in the city and the development of a “coastal food project” for the territory taking in account local seafood production. Thus, it has some implications for the marine space and its activities.

Regarding water policy management, 7 coastal local plans for water development and management (SAGE) covering the whole coastline of the Pays de la Loire territory implement the SDAGE at local watershed level. These SAGE integrate specific issues regarding coastal water quality and some of the impact of maritime activities (such as nautical or port activities). Regarding natural risk management, 11 specific coastal risk prevention plan (PPRLs) have been elaborated by State services at local level (Departmental directorates for land and sea) in cooperation with municipalities. These documents define strategic and perspective rules to prevent damages caused by marine flooding. 3 inter-municipalities are currently elaborating specific strategies for shoreline management. Several inter-municipalities have also adapted their flood prevention action plans (PAPIs) to include these risks.

7.3 Protection and conservation-oriented plans and strategies

The main overarching documents on marine protection and conservation are the DSF (which includes an environmental section translating the MSFD at the French façade level), the SRADDET and the Regional Maritime Ambition strategy (one pillar of which is the protection and enhancement of the sea and the coasts), already mentioned in the previous section. The regional council adopted a regional biodiversity strategy for the 2018-2023 period (a new strategy for 2024-2029 is currently under development) that gives guidance to better know and preserve the regional biodiversity. However, a part for the DSF, these strategies essentially focus on the terrestrial part of the coastal areas and ecosystems.

More specifically on environmental protection, the Regional Directorate in charge of environment, planning and housing (DREAL) elaborated the territorial action plan for protected areas of Pays de la Loire (2022-2030), that translates at the regional level the guidance of the national strategy for protected areas adopted in 2021 (including

the extension of land and sea protected areas to 30% of the French territory, including 10% with strict protection, by 2030). The contents of this action plan on marine areas are common with those of the environmental part of the DSF action plan. For the North Atlantic and Western Channel Basin, 30% of the marine waters are already covered by protected areas. The revision process of the DSF due in 2025 will identify strictly protected areas at the scale of the sea-basin in order to reach the 10% objective.

The regional maritime territory is covered by areas with different levels of protection and concerned by specific local management plans. Almost the whole seafront of Pays de la Loire is covered by Natura 2000 sites (Figure 26) that are fully marine or both marine and terrestrial. Five Natura 2000 sites are exclusively located at sea and have a wide coverage of the marine coastal waters. Two others sites are both marine and terrestrial but covers a significant marine area.

Several other coastal protected areas in Pays de la Loire Region are located on the land; they do not cover the Maritime Public Domain. However, functions and processes of these ecosystems are strongly related to the sea through land-sea interaction (e.g. in wetlands, pounds, estuaries). These sites are covered by different protection status and the same area can be concerned by different protection status: Natura 2000 sites, wetland of international importance (RAMSAR), sites protected by the Coastal Conservatory (Conservatoire du Littoral) and one national natural reserve (the “Casse de la Belle Henriette” national natural reserve). In particular, the 35 sites protected by the Coastal Conservatory are concerned by the Central Atlantic operation strategy which is elaborated by the Coastal Conservatory. This strategy adapts the national land acquisition policy of the conservatory to safeguard the regional coastal areas by defining strategic guidance and maps areas to protect in the future. The action of the Conservatory is made possible thanks to a strong partnership with the Departments of Vendée and Loire Atlantique and with the Pays de la Loire Region.

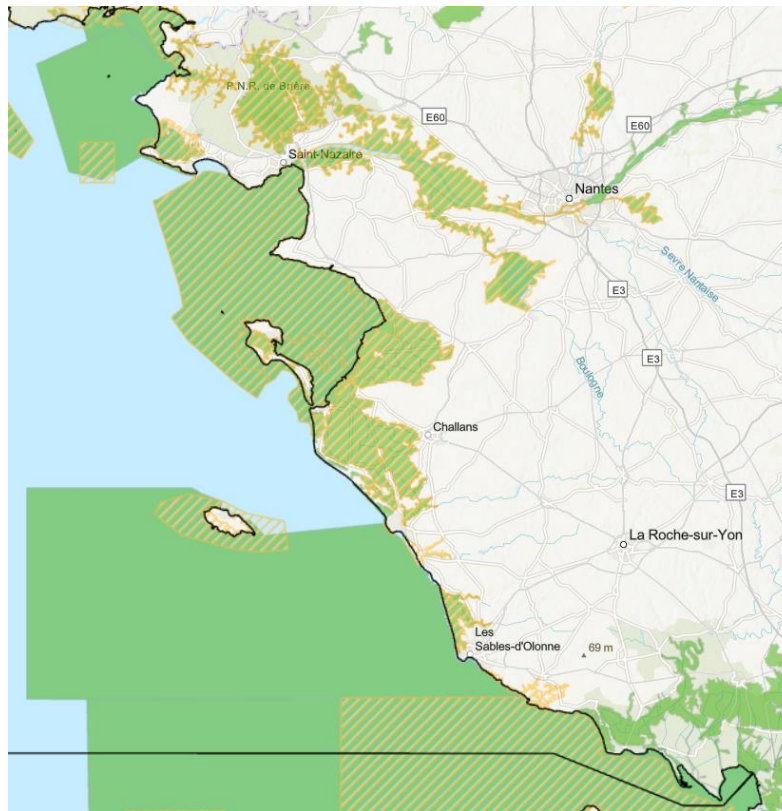


Figure 26. Natura 2000 sites in Pays de la Loire (yellow: special conservation areas, green: special protection areas) (source: Geolittoral geoportal).

Finally, the case study's territory overlaps with marine protected areas mainly falling in neighbouring regions. The marine nature park of "Gironde mer des Pertuis" is mainly located in the waters of the neighbouring Region (Nouvelle Aquitaine) but covers a part of the south of the Vendée department. The park is managed by the French biodiversity agency, a public institution under the authority of the ministries responsible for Ecology and Agriculture & Food. The national natural reserve of Aiguillon Bay covers an area of 50 km², located in the south of Pays de la Loire Region and partly in the Nouvelle Aquitaine Region. It is co-managed by the French biodiversity agency and the League for bird protection, the major French NGO for bird protection. As these marine protected areas are mainly located at sea, their management plans focus on marine biodiversity and conservation issues related to maritime activities.

7.4 Plans for economic sectors and other marine uses and activities

The Regional council is responsible for the SRDEII which set the framework of companies' financial support from the Region and gives general guidance regarding its economic development. The SRDEII concerns all regional economic sectors, however it focuses on specific maritime sectors and thus drawing particular guidance

for them. The concerned maritime sectors are marine renewable energies, fishing, aquaculture, recreational boating and the great maritime port of Nantes Saint-Nazaire. The SRDEII is drawn up in line with the objectives of the SRADDET and facilitates its implementation by integrating the SRADDET's guidance in spatial planning. The SRDEII document also considers guiding elements stemming from the Regional Maritime Ambition strategy of 2018, the second pillar of which addresses the issues associated with Pays de la Loire blue economy.

In relation to the SRDEII and the Regional Maritime Ambition strategy, the Pays de la Loire Region adopted some economic strategies and plans that directly target specific maritime sectors. These strategies and roadmaps enable the Region to give a frame to the funding and facilitation instruments. Others stakeholders, such as State services at regional scale or Departments, can also adopt particular strategies for key sectors.

Regarding tourism, the Region is responsible for the establishment of the Regional scheme for tourism and leisure activities development for the 2022-2028 period. It specifies objectives targeting water sports and recreational boating and aiming at reconciling tourism attractiveness, biodiversity protection and housing access for local populations on the coast. In this framework, the Region adopted in 2018 a specific action plan named "the future of nautical activities". In addition, the Departments are responsible for elaborating the plans related to areas, sites and itineraries for nature sports. The Department of Loire Atlantique adopted its plan and identifies 19 sites of importance for nautical activities (especially sailing) located on the coast. The managers of these sites must guarantee access to users, while respecting the natural environment, and they can benefit from specific public funding.

Regarding fishing and aquaculture, the regional council has in place a strategy called "Sea and land, acting for sustainable food" (2023-2028), that identifies cross-cutting objectives and actions for land and marine food production and supply. As every French coastal Region, the Pays de la Loire Region is also the intermediate body for the management of the European Maritime, Fisheries and Aquaculture Fund (EMFAF) and has elaborated a regional funding strategy for the 2022-2027 program. Still on aquaculture, the Marine aquaculture development plan (SRDAM) must be elaborated by the DIRM. This document aims to identify existing sites and sites suitable for the development of sustainable marine aquaculture, as well as the possibilities for setting up fish farms in closed environments. This document has not been completed yet for the Pays de la Loire. In the frame of the future revision of the DSF, State services will develop a SRDAM that will be incorporated into the next DSF.

Elaborated by the State services at department level (departmental directorate for land and sea - DDTM), the Structural Department plan for aquaculture operations is a regulatory document that governs shellfish farming activities on the department's maritime public domain, and organises the enhancement and preservation of the space allocated to these cultures, through a set of technical rules that are imposed on

operators in terms of occupation and operation. The Vendée department revised this document in 2022 and Loire-Atlantique department in 2018.

Regarding maritime transport and port activities, the Nantes Saint-Nazaire Port is the fourth French port and the first on the Atlantic and has its own development strategy. It is based on three pillars: accomplishing energy, ecological and digital transitions, reinforcing its leading position and supporting the economic and social development of the Loire estuary. The strategy details land use guidance for specific areas of the port domain on land, including industrial and natural areas.

Regarding marine renewable energies, the Pays de la Loire Region are well positioned since benefiting from the construction of France's first offshore wind farm, the dynamism of the Nantes Saint-Nazaire area, the large number of companies along the value chain, and innovative start-ups. The Region is planning to elaborate a specific strategy for marine renewable energies building on the Regional roadmap for energy transition (2017-2021). The Region, as well as the Nantes metropolis, the inter-municipality of The Nazairian Region and the Estuary (CARENE) and the EU's funds FEDER funded the WEAMEC network (West Atlantic Marine Energy Community). This network brings together stakeholders and companies involved in the field of marine renewable energy and focusing on research, innovation and training. WEAMEC drafted in 2023 a roadmap for research and innovation for marine renewable energies.

Regarding marine aggregates, four sites are exploited offshore of Pays de la Loire. The activity is the subject of a specific document, the Marine Aggregates Guidance and Management Document (DOGGM), elaborated in 2019 which is annexed to the DSF. This document stems from the National strategy for the sustainable management of land and marine aggregates and materials and substances from quarries.

7.5 Elements of contribution to the EU Green Deal and sea-basin strategies

Several of the analysed plans were drafted before the release of the EGD so they do not expressly mention it. However, some of them share the vision of the EGD and contribute, directly or indirectly, to some of its components and related objectives.

The Regional Maritime Ambition strategy set, for example, specific objectives to develop marine renewable energies – thus contributing also to climate change mitigation - and to provide specific funding for blue circular economy. The strategy fuels other regional strategies and actions plans, such as the action plan for circular economy, the regional roadmap for ecological transition or the strategy for a sustainable food system. A pillar of the Regional Maritime Ambition strategy is focused on protecting and enhancing the natural environment. However, it mainly relies on knowledge improvement and protection objectives targeting terrestrial coastal areas. This can be explained by the division of competences between the State and the

Region. The new version of the Regional Maritime Ambition strategy, due by the end of 2023 may reinforce the objectives regarding energy and ecological transitions. Several regional strategies are also coming to an end during the 2021-2023 period. They are likely to be revised in the near future, with the opportunity to better integrate the EGD objectives.

Although contributing to reduce the greenhouse gas emission is an objective of several analysed strategies and plans, the target of “no net emissions of greenhouse gases in 2050” set by the EGD is not specifically mentioned. Carbon neutrality is integrated in the proposal of the new National strategy for sea and coasts and the energy and climate programming law (adoption of both documents due by the end of 2023). This goal will also be incorporated in the new versions of the DSF, with quantified targets regarding marine renewable energies power deployed within each French façade and the location of further offshore windfarm development. The revision of the DSF should also include quantified targets in terms of strict protection with localization of future strictly protected areas. More than 30% of the North Atlantic and West Channel Basin already benefit from a protection status (inclusion different protection typologies); areas for which protection status must be reinforced in order to reach the 10% objective of strict protection were identified in the current DSF.

Only the Regional Maritime Ambition strategy expressly mentions the EU Atlantic sea-basin maritime strategy. The Ambition strategy identifies the Atlantic strategy as a framework that can provide funding opportunities for the implementation of common regional objectives. The Pays de la Loire Region took part in projects that directly contributed to the implementation of the Atlantic strategy, such as the CLIPPER Interreg project (Creating a leadership for maritime industries - New opportunities in Europe; 2017-2021). Among the initiatives listed in the Atlantic maritime strategy, 32 initiatives involving Pays de la Loire stakeholders are mentioned.

In any case, the five main objectives¹⁴ of the Atlantic maritime strategy and the four pillars¹⁵ of the 2019-2024 action plan are overall directly or indirectly address by the analysed strategies in Pays de la Loire. The ecosystem approach is at the basis of the DSF (in terms of vocation map areas, objectives and actions) as well as of water policy strategies (SDAGE and SAGE). Other strategies (SRADDET, Regional maritime ambition, etc.) recognize the diversity of marine ecosystems and their benefits for the territory. Reducing carbon footprint through marine renewable energy development and vessels’ decarbonation is a priority for several strategies or plans (e.g. future Regional Maritime Ambition strategy, DSF, SRDEII, etc.). Threat and emergencies, especially concerning flood and coastal erosion risks, are addressed by specific local plans (i.e.

¹⁴ Implementing the ecosystem approach, Reducing Europe’s carbon footprint, Sustainable exploitation of the Atlantic seafloor’s natural resources, Responding to threats and emergencies, socially inclusive growth.

¹⁵ Ports as gateways and hubs for the blue economy, blue skills of the future and ocean literacy, Marine renewable energy, Healthy Ocean, and resilient coasts.

strategies for shoreline management, coastal risk prevention plan (PPRIs), flood prevention action plans (PAPIs)) and by a specific agreement between the State, the Region and the two Departments. Social inclusive blue growth is also a key issue of the Regional Maritime Ambition strategy and the DSF, with specific objectives for training and skills development and collaboration between research and companies. Ocean literacy and citizens' awareness-raising is also addressed by specific objectives of the DSF and is one of the three pillars of the Regional Maritime Ambition strategy.

Some maritime sectors and related assets are specifically mentioned by the Atlantic strategy. This is for example the case of the great port of Nantes Saint-Nazaire is identified as a key port for the European Atlantic coast: its development and environmental transition are identified as crucial in several documents (DSF, the Regional Maritime Ambition strategy, specific agreement between the State and the Region). Finally, the EU Atlantic maritime sea-basin strategy identifies a need to develop coastal tourism and nautical activities. These activities are key sectors for Pays de la Loire coastal economy and their development is the mentioned in several strategies at regional, departmental and local levels (regional action plan for the future of nautical activities, regional scheme for tourism and leisure activities development, Department plan for areas, sites and itineraries for nature sports in Loire Atlantique, etc).

The performed analysis gives some insights about the inclusion of the main objectives of the EGD and the Atlantic sea-basin strategy in the studied plans and strategies. However, further analysis would be required to confirm that the regional and local documents' objectives are fully in line with these EU strategies. Moreover, it would be relevant to further investigate if these objectives are translated into actions associated with monitoring indicators and accompanied by funding mechanisms. Apart from the DSF, the strategies do not include indicators or quantified targets, which makes difficult to assess whether objectives are achieved or not.

7.6 Elements about stakeholder engagement

Regarding the DSF drafting process, all relevant stakeholders are involved at a macro level through the North Atlantic and West Channel façade council, one of the main governance bodies dealing with marine and coastal issues. The council meets at least once a year and is composed of 80 members from 5 colleges (the State and its public institutions including a representative from the national parks, local authorities and their groupings, professional activities and companies, company employees' representatives, environmental NGOs and marine uses associations). To elaborate the strategic objectives, workshops were organized with stakeholders within the façade council to identify the socioeconomic objectives of the basin and its related challenges. A smaller group, called the "standing committee" of the façade council, was appointed to conduct more frequent working sessions. The standing committee gathers elected

representatives from the five colleges. The results of its work are then presented and discussed within the Façade council. The next revision of the DSF (to be carried out over the 2023-2025 period) will follow the same processes. In the same way as the first drafting of the DSF, the second cycle will include a consultation of the general public but this cycle will call upon a more inclusive consultation (web platform, workshops, debate in universities and school, interactive and simultaneous conferences within the façades, etc.). This will be undertaken under the responsibility of the National commission for the public debate.

The Regional assembly for the Sea and Coast, another main governance body, co-chaired by the President of the Region and the regional and maritime prefects, was set in 2017 and meets at least twice a year. It includes all relevant stakeholders concerned with the blue economy, including representatives of local authorities, public institutions, economic sectors, workers' unions, experts, environmental NGOs and leisure activities. The assembly was originally created to elaborate the Regional Maritime Ambition strategy, with the objective to develop a shared vision with the French government representatives, the two departments of Vendée and Loire-Atlantique, and all regional maritime stakeholders. After the adoption of the ambition in 2018, the assembly continued to meet in order to report progress on its implementation. It also constitutes a forum for discussion among stakeholders about strategies or actions conducted by regional and departmental authorities. The work plan for the DSF revision was for example presented by the State services during a meeting of the Regional assembly. The assembly is currently involved in the revision of the Regional Maritime Ambition strategy. Workshops were organized in 2022 and 2023 to re-defined the priorities of the ambition and adapt its objectives.

The strategy of the Loire Atlantique Department was elaborated through a strong, innovative participatory approach. Through the “maritime and coastal challenge”, the Department involved stakeholders, experts and citizens to write a common voluntary moral commitment charter. The methodology consisted in associating a prospective study on the future of the territory by 2040 involving experts and stakeholders with a survey carried out among more than 1,000 citizens of Loire Atlantique. Workshops were organised to identify nine stakes and commitments that can be made by all types of stakeholders. Stakeholders can sign the charter and voluntary commit to address these issues. More than 100 key stakeholders signed the charter, including the Department itself, inter-municipalities, research institutes and universities, NGOs, fisheries and aquaculture representatives, Nantes Saint-Nazaire port, etc.

Regarding the urban planning documents (SRADDET, SCOT, PLU), the engagement of stakeholders is regulated and these foreseen concertation bodies could be used to discuss sea and coastal orientations. In the case of the urban plans (PLU), associated public bodies should be consulted (Prefect, Region and Department, public organisations' representatives, consular chambers).

The Nantes Saint-Nazaire harbour is managed by a state-owned public establishment (the Grand port maritime de Nantes Saint-Nazaire). Stakeholders (the State, regional and local authorities, qualified personalities, companies and users, NGOs) are involved to define the strategy and control the budgetary aspect through governance bodies: the supervisory board and the development council.

In addition, specific mechanisms are in place at regional and local levels to ensure stakeholders' engagement on certain themes. Numerous assemblies and committees nonspecific to maritime topics gather land and maritime stakeholders: regional committee for tourism, coastal commission of the Basin committee for the SDAGE, departmental commissions for aquaculture, etc.

7.7 Persisting gaps in the integrated planning and management of the sea space

The consistency of the guiding elements of the cross-cutting regional and departmental strategies and plans, elaborated by the State (DSF, departmental strategies for the maritime public domain management) and regional and departmental authorities (Regional Maritime Ambition strategy and departmental strategies) show that a common strategic vision is shared by the different authorities at regional and department level. These documents serve as a basis for coordinating the various competences and policies relating to the sea and coast. The broad consultation processes conducted via the façade council and the Regional assembly for the Sea and Coast enabled this vision to be shared among regional stakeholders.

In terms of operationalisation of this common strategic vision, the Region shows proactiveness. The Maritime Ambition fuels the other regional strategies, and the Region developed specific roadmaps for major maritime and coastal issues, such as coastline management and nautical activities. All these documents provide guidance for funding opportunities and consultation processes, the 2 levers traditionally used by the Regional Council to structure its action. In terms of funding instruments, the Regional convention for the sustainable management of the coastline enables the support of coastline management projects, the EMFAF provides aid for fisheries and aquaculture. Regarding the coordination of regional stakeholder networks, the emergence of the WEAMEC network on marine renewable energy, or the structuring of stakeholders in the nautical sector can be cited as important mechanisms. In line with this above-mentioned approach, the SRADDET, includes dedicated objectives to coastal areas but with only a few prescriptive rules that can be enforced against local urban plans.

A mismatch can be observed between the dynamics of maritime activities occurring at local level and certain regional guidelines. For instance, local facilities dedicated to aquaculture and fisheries are competing with those for tourism, despite the joint

guidelines and financial levers deployed by the Region and the State to perpetuate and even develop these activities. Regional and departmental guidelines encourage the development of local strategies for the integrated management of erosion and coastal risks. They have some difficulties to go beyond the anticipation of extreme events (such as the storm Xynthia which left strong impressions on people's minds in 2010), towards an integrated approach to adaptation of the coastal system. These examples show the need to strengthen the operationalisation of regional guidelines building on existing tools providing a framework for action on the ground. The capacity of local planning documents (SCOT and DPM strategy) to effectively operationalise the strategic guidelines, the proper coordination between these documents, and the role of the other public action tools (regulations, financial aid, contracts, etc.) in the enhancement in the implementation of these planning documents can be questioned. It also raises the question of coordination among public authorities acting at different levels and of their cooperation with stakeholders.

The involvement of local authorities in the conservation of marine ecosystems and the levers at their disposal to contribute directly to their good health could be strengthened. The Region and local authorities in the Pays-de-Loire are little involved in public policies for the preservation or restoration of marine ecosystems. The Region's maritime Ambition and its strategies dealing with biodiversity issues (in particular the SRADDET and the Regional biodiversity strategy) mention marine ecosystems as one of the region's assets, but the measures only focus on terrestrial coastal biodiversity. This is also the case of the local documents analysed (the SCOTs that were reviewed for this study make no mention of marine biodiversity). Although not legally required, local authorities and the Region would benefit from being more involved in the protection of marine ecosystems since the sustainability of the maritime activities that contribute to the regional economy is linked to the quality of marine ecosystems. This interdependence has prompted local authorities in certain French regions (particularly in the Mediterranean) to define measures that directly deal with marine biodiversity.

The operationalisation of MSP also raises the question of coordination among public authorities acting at different levels and of their cooperation with stakeholders. The multiplicity of assemblies interrogates the complementarity and coordination of these governance bodies as well as the ability (related to structuring, skills and resources) of coastal and maritime stakeholders to be effectively represented in all these consultation bodies, that are not always focused on maritime or coastal issues. However, it should be noted that the Regional assembly for the Sea and Coast organised by the Region is recognised by stakeholders as a framework for cross-sectoral exchange on sea and coast issues. It is an important lever for facilitating cooperation between stakeholders and sharing the work carried out by the various thematic governance bodies that may be involved in maritime issues.

Room for manoeuvre remains to improve the operationalisation of the DSF and of regional strategic objectives. Indeed, the strategic guidelines of the DSF remain broad and defined on a macro scale, leaving room for interpretation by the Region, and by local public authorities. The SRADDET set objectives but no specific rules with which local authorities should comply. This approach requires local authorities to take ownership of these issues and to be supported by a range of stakeholders to develop the local public action regarding coastal and maritime issues (urban planning agencies, joint water management associations, etc.). The DSF is also seen as complex by the public authorities, which may act as a hindrance for its implementation and appropriation. The State services are aware of this difficulty and would like to develop tools to provide a more communicative approach to the document (through for example interactive mapping and videos) and to promote initiatives led by local authorities that contribute to the DSF. The revision of the DSF due by 2025 calls for a change in approach, in particular regarding the designation of areas linked to marine renewable energies and the strict protection of biodiversity. While the Region is keeping a close eye on the subject, notably through its participation at the standing committee of the façade council, it will be crucial for local public authorities to take ownership of these issues and take part in the debates.

The effectiveness of planning strategies remains to be proven. Monitoring and evaluation of the strategies and the associated actions is crucial to ensure that the actions of the authorities effectively contribute to the achievement of the objectives and serve the common vision. Regarding the documents publicly available, a few strategies present indicators and targets. A state of actions taken is sometime available, however it doesn't allow to evaluate their effectiveness. The DSF includes a monitoring part which is well detailed. However, the implementation of this monitoring part is seen as complex and lacking of operability. The efficacy of public action, relies on the assessment of the implementation of objectives and their operationalization through relevant data collection and analysis.

8. Crete Region

In Greece, the main responsibility for Spatial Planning (terrestrial and maritime) at national and regional level lies within the competences of the Ministry of Environment and Energy. The spatial planning system is designated by Law 4447/2016, Law 4546/2018 (which transposed the MSP Directive 2014/89/EU) as both amended by Law 4759/2020, which established the most recent legal framework for spatial planning in Greece and defined two levels of spatial planning, including national and regional scale spatial plans (frameworks).

The national level of spatial planning consists of: (a) the “National Spatial Strategy” (NSS), and (b) a series of sectoral frameworks “Special Spatial Planning Frameworks” (SSPFs), which comprise primarily strategic guiding options and specialized regulations. The “National Spatial Strategy for the Marine Space” (NSS MS), a policy document forming part of the NSS mentioned above, determines the strategic directions towards the sustainable development of the Greek marine space, and indicates the priorities for the elaboration of MSP Planning Frameworks (MSPFs; i.e. the Greek MS plans yet to be finalised and approved). Having taken into consideration the results of the public consultation process and the opinion of the National Council for Spatial Planning, it is foreseen that within the first semester of 2024, the Minister of Environment and Energy will submit the final version of the NSS MS to the Council of Ministers for its approval and accordingly its announcement in the Greek Parliament.

Although there is no legally binding national MS Plan in Greece yet, MSP related issues are addressed in “Special Spatial Planning Frameworks” covering specific economic sectors. Sectoral plans have been elaborated so far for aquaculture (2011, currently under revision), tourism (under finalisation) and industry (2009, under revision), which include spatial planning guidelines for the land-based, coastal and marine segments of each sector. Furthermore, the Special Framework for Renewable Energy Sources (2008, new study/plan under finalisation) sets the strategic guidelines for offshore wind parks.

Furthermore, planning of OWF development is in progress, through the revision of the Special Spatial Planning Framework for Renewable Energy Sources (RES) and according to what defined by Law 4951/2022 (on offshore RES development) and Law 4964/2022 (on OWF development). The sector is also driven by the National Offshore Wind Farm Development Programme (Article 67 Law 4964/2022), that outlines the potential Areas of Organized Development of Offshore Wind Farms (POAYAP), on the medium and long term. To identify these marine areas, various rules and criteria are considered, such as environmental, social and techno-economic criteria, operator requirements, the compatibility and coexistence with other marine activities, the accessibility to electricity interconnection infrastructure and the ability to transfer offshore energy to the market. The demarcation of the Areas of Organized

Development of Offshore Wind Farms (POAYAP) is done at a distance of more than one nautical mile (1,852 m) from the coastline to the limits of the Greek territorial waters of 6 and 12 nautical miles for the Aegean and the Ionian respectively, in accordance with the Framework Directive 2000/60/EC for the water resources management. So far, the Region of Crete has expressed an opinion on the Strategic Environmental Assessment Study of the National Offshore Wind Farm Development Programme (NOWFDP) through the decision n. 59/8-12-2023 of the Environment and Spatial Planning Committee of the Region.

The regional level consists of: (a) the Regional Spatial Planning Frameworks (RSPFs), and (b) the Maritime Spatial Planning Frameworks (MSPFs), which correspond to the Greek Maritime Spatial Plans. These can be regional, interregional, or sub-regional.



Figure 27. Maritime Spatial Units, as defined in the framework of the THAL-CHOR II project and included in the draft NSS MS (Source: Draft National (Hellenic) Spatial Strategy for the Marine Space).

A Ministerial Decision for the enactment of delineation of the four maritime spatial units (MSUs; Figure 27) (Article 6 (4) Law 4546/2018), is expected to be issued within 2024. These refer:

- Maritime Spatial Unit 1 (MSU1) of Northern Aegean Sea (see the Central Macedonia Region case study in chapter 9), a geographically significant zone, particularly because of its transboundary location. This region holds considerable potential for the expansion of various productive industries, i.e. fishing, aquaculture (incl. shellfish aquaculture) and the extraction of oil and gas. Additionally, it's a

promising site for offshore wind parks. Moreover, its potential for boosting tourism activities is notable.

- Maritime Spatial Unit 2 (MSU2), is encompassing the Southern part of the Aegean Sea in Greece, a major tourist destination, renowned for its beautiful islands, such as Santorini, Mykonos and Rhodes but also the complex of Small Cyclades islands. On the same time the region has an extremely rich cultural and historical heritage, with many archaeological sites located underwater.
- Maritime Spatial Unit 3 (MSU3) is related to the region in focus for this case study, i.e. Crete, an important part of the country with geopolitical significance, a major tourist destination with international reach. The maritime region of Crete faces significant challenges, which are connected, among other things, to the interest in exploration and extraction of hydrocarbons in the southwestern and western parts of Crete's maritime space.
- Maritime Spatial Unit 4 (MSU4). It includes the Ionian Islands in the western front of the country. Five of them (i.e., Zakynthos, Ithaca, Corfu, Kefalonia and Lefkada) are either important or highly important tourist attractions at the global level.

In any case, the above MSUs were proposed by the draft National Strategy for the Marine Space (a deliverable of INTERREG THAL-CHOR II project), while in the legislation currently in force (law 4546/2028), it is clear that MS plans may be of sub-regional, regional or interregional scale. The current state of play is here summarised:

- The final elaboration and adoption of the MS plans (MSPFs according to their definitions as frameworks) is pending.
- A Ministerial Decision about technical specifications for the elaboration, evaluation, and amendment/revision of the MSPFs, as well as any other issue related to their implementation is expected to be issued within 2024.
- The study of the first MSPF, as a pilot framework, for the maritime spatial unit (MSU) of North Aegean, has been completed within the context of the INTERREG "THAL-CHOR II" project. Currently, this study is in the process of further elaboration.
- The Ministry of Environment & Energy, being the competent authority for the establishment and the implementation of MSP (MSP authority), is in constant cooperation with the relevant (co-competent) ministries and bodies and the scientific community in order to complete all the procedures provided for its optimal implementation, in order to ensure the sustainable development of its marine space and the protection of the environment in the context of the country's particular characteristics, the energy related and the geopolitical challenges.

The NSS MS has no binding character, as it serves as an indicative strategy for a long-term MSP. On the other hand, as a policy framework, the NSS MS must take into account

the directions of existing development and sectoral spatial plans mentioned above (i.e. the National and Regional Development Plans of the Country, the RIS -Strategy 2021-2027, the Multiannual Development plan of Aquaculture in Greece, the National and regional strategies for Adaptation to climate change, the National Energy and Climate Plans and most specifically the plans and strategies of the Ministry of Maritime Affairs and Insular Policy).

Evidently, the Ministry of Environment and Energy is cooperating with the Ministry of Maritime Affairs & Insular Policy, for implementing MSP. The Law 4770 of the Ministry of Maritime Affairs & Insular Policy, issued in 2021, focuses on the Integrated Maritime Policy (IMP) for the Insular Territory and many tasks of the relevant Strategy should be fulfilled by the end of 2027. Following the 2023 Operational Plan, “Regional Dialogues” have been organised in 2023 for the prioritization of relevant proposals and projects to be operationalised in the coming years (Ministry of Maritime Affairs and Insular Policy:2022).

In the following sections, the plans and strategies that are now in effect and relevant for the coastal and marine space areas of Crete Region are being presented and discussed. In this regard, the following points and facts should be taken into account:

- The Region is a spatial autonomous system with a relevant hinterland and population. It developed rapidly, above the national average, for a long period of time and improved its position in the Greek economy until 2009. Economic activity and employment peaked in 2008, with the strengthening of tourism, trade sectors and real estate sectors, while the primary sector declined significantly (mainly in terms of employment) still remaining important in the island (Region of Crete (2020), Strategic Regional Plan 2020-2023).
- Crete, with its rare natural environment and some of the most recognizable points of cultural interest, is one of the most popular tourist destinations worldwide with an impressive recovery after the pandemic.
- Data about the employment rate and the full demographic portrait of the Crete Region can be publicly available¹⁶.
- Crete has many academic and research institutions, with a high degree of participation in international and European networks. It has also developed research and innovation structures to a much higher level, compared with other regions of the country.
- Currently, the sea gates of Crete are being upgraded, with the expansion of the ports’ facilities, a new passenger station and the cruise department in the port of Souda. Such development also includes the upgrading of the container station at

¹⁶ <https://www.iz.sk/en/projects/eu-regions/EL43>

the port of Heraklion and the improvement of the old part at the port of Sitia and the port facilities of Paleochora.

- Crete is supplied with energy from the mainland through the electrical interconnection with the region of Peloponnese. The second phase of development of this interconnection is underway, which will bring to the end of the use of polluting diesel power plants in Crete.

8.1 Analysed plans and strategies

In Greece, which is a unitary and centralised state, national strategies and plans aim to ensure that regional policies are well-coordinated and integrated into the broader national agenda. This is particularly important in areas such as spatial planning, environmental protection, economic development, and infrastructure planning, where the actions of one region can have impacts on others. Following this, the Greek MSP should consider this top-down approach. Furthermore, at the regional level, spatial planning, both terrestrial and maritime, should align with and reflect the objectives and priorities outlined not only in cross-cutting national and regional spatial plans and strategies but also in sectoral and conservation-oriented ones.

Currently, there is no MS plan neither at the national nor at the regional or sub-regional scale. Planning and related measures for the marine space in the country, come also from sector-based legislation concerning environmental protection and key economic sectors such as tourism, aquaculture, industry, RES or the use of mineral resources (as described below).

The main existing cross-cutting plans or strategies, relevant to the area, are briefly described in the next paragraph. The first one is the Regional Spatial Planning Framework of Crete Region (RSPFCR) which is an integrated plan (both strategic and regulating) that provides regulations both for the terrestrial and the marine parts of the Region. This plan has been revised in 2017 and approved by the regional government of Crete in 2017 by decision no. 42284/13.10.2017 (Government Gazette 260/AAP/2017). The second one is the recent law 4770/2021 on integrated maritime policy for the Greek insular space, initiated by the co-competent (with the MSP authority) in MSP, Ministry of Maritime Affairs and Insular Policy. This law foresees the “Integrated National Maritime Strategy” that has a clear spatial, economic, social and environmental dimension and ensures the interconnection and complementarity with other critical National Strategies related to the marine/insular space and also with Maritime Spatial Planning.

In the case study area, three types of protection and conservation-oriented plans can be identified:

- The first one refers to the declared Maritime/Underwater Cultural Heritage (MUCH) protection sites included in the Archaeological Cadastre geoportal¹⁷. This records and documents Greece's immovable monuments, archaeological sites, historical sites, and their protection zones.
- The second one refers to the several Natura 2000 sites present in the island of Crete which are characterized either as "Special Protection Areas" (SPAs) under the Birds Directive or as "Special protection of Conservation" (SAC) under the Habitat Directive. Only the Dia islet (north-eastern part of Crete Sea) is designated as protected area under both Directives. It is noteworthy that there no Marine Protected Areas in Crete, that is areas with special protection measures, being defined by Presidential Decree.
- The third one refers to the protection and conservation of the landscape in application of the requirements of the European Landscape Convention, ratified by the Greek government in 2010. Nine spatial units – the so-called "landscapes of particular importance" – are identified in Crete, as part of a single network of "areas with carrying capacity of natural and cultural capital". These nine areas are in their great majority coastal (mainly located along the eastern, western and southern coasts of Crete)¹⁸.

Ultimately, the third category refers to sector-based plans. These plans are either plans of national scope that include specific regulations tailored for the region or national/regional non-spatial plans that apply also to the marine/insular space and to the land-sea interface. Considered plans and strategies cover the sectors of aquaculture, tourism, industry, and RES (Special Spatial Plans) as well as fishing and diving (only horizontal provisions in relevant laws or strategies).

For example, the Special Spatial Planning Framework for aquaculture issued in 2011 (currently under revision), includes directions for a national standard of spatial organization for aquaculture activities, detailed for each type of cultivation (marine species, shellfish farming, freshwater species, and cultures of aquatic organisms in natural brackish ecosystems). Alongside with it, the non-spatial plan, i.e. the "Multiannual National Strategic Plan for the Development of Aquaculture 2021-2027" provides measures for the organisation of Areas of Organized Development of Aquaculture (AZA or POAY in Greek) up to 2027¹⁹.

A Special Spatial Planning framework, extremely relevant for the Crete region, is the Special Spatial Planning Framework of Renewable Energy Sources (RES) issued in 2008, due both to the ongoing research for hydrocarbons in two "blue blocks" in the Cretan Sea and to the foreseen development of offshore wind energy in the region.

¹⁷ <http://www.arxaiologikoktimatologio.gov.gr/>

¹⁸ https://thalchor-2.upen.gov.gr/layers/geonode:topia_idiaiterhs_shmasias/metadata_detail

¹⁹ <https://alieia.gr/wp-content/uploads/2022/12/%CE%A0%CE%91%CE%9B%CE%A5%CE%98-2021-2027.pdf>

Greece is aiming to establish wind farms in the Aegean, Ionian, and Levantine seas as an effort to reduce its dependence on fossil fuels and enhance its renewable energy capacity. The Hellenic Hydrocarbons and Energy Resources Management Company (HEREMA), in charge of the relevant non-spatial strategy and programme, has identified ten areas eligible for development by 2030-2032, aiming for an overall capacity of approximately 4.9 gigawatts, primarily for floating projects, some of them located in Crete.

Lastly, the Regional Spatial Planning Framework for Industry (SSPFI) issued in 2009 is also important for the Region. In this framework Crete Region is considered in the same territorial unit with South and North Aegean. Industry does not have a general central role in this territorial unit, but in some areas its presence may become more important. Maintaining some industrial activity in the rest of the area can help reduce the risks of over-reliance on a sector such as tourism. Intensification and expansion of industrial activities is proposed for Crete (Figure 28), considering the environmental impacts especially on the coastal zone.

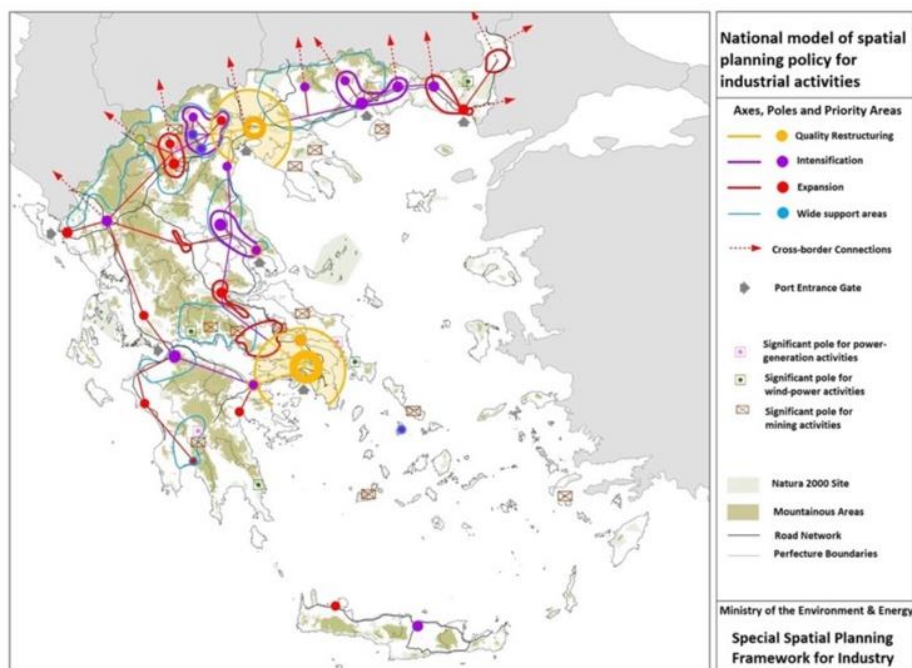


Figure 28. Special Spatial Planning Framework for Industry (SSPFI), Greece (Source: Greek Government Gazette 151/AAΠ/2009).

Specifically, SSPFI anticipates the development of industrial parks or craft located in the subregions of mature industrial area of Heraklion- Gouves and the new expanding one in Chania. Both of them are positioned along the national developmental trajectory of the 'S' curve, described as such in the SSPFI, and with their ample social and natural capital, are well-suited to contribute to new industrial development processes. While on the SSPFI, there is a clear measure for protecting coastal zones in which is prohibited

(especially in touristic islands) to develop industrial sites, this clause is not relevant for Crete and Evia Island. Currently, the 2020 spatial and urban planning legislation (Law 4759/2020) limits the unplanned developments (in areas with land-use plans) and fosters—through spatial incentives—the attractiveness of business parks, industrial parks or the Organized Receptors of Manufacturing and Business Activities (OYMED) for industrial location²⁰.

On the other hand, following the withdrawal of the last Special Spatial Planning Framework for Tourism (SSPFT) in 2013, the allocation of touristic facilities depended on the existing Regional Spatial Plans, which, however, do not include modern tourism development models. Relevant to the absence of a tourism related spatial plan, is the enactment of law 4688/2020 defining the procedures for allocating diving parks. These diving parks are designed to protect marine ecosystems while providing controlled access for recreational diving, contributing to the sustainable use of marine resources and tourism development.

Finally, the Regional Plan for Climate Change Adaptation (PeSPKA) for Crete, addresses key climate changes and their expected impacts across the region, with specific focus on coastal areas. This plan is part of Greece's broader climate change adaptation strategies and includes the development and implementation of Regional Adaptation Action Plans (RAAPs) by Greek Regional Authorities, informed by the National Adaptation Strategy to Climate Change which was endorsed by the Greek Parliament and established under the National Climate Law.

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.

²⁰ https://www.qgb.gr/sites/default/files/basic-page-files/ABΣ-13_03_HPAKΛEIOY.pdf

Short title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
Regional Spatial Planning Framework of Crete Region (RSPFCR)		X		X				X	X
Law 4770/2021 on Integrated Maritime Policy			X	X				X	X
Category 2: protection and conservation-oriented plans and strategies									
Maritime/Underwater Cultural Heritage protection sites	X		X	X			X		X
Natura 2000 sites	X			X			X		X
Spatial units for the protection and conservation of the landscape		X			X	X			X
Category 3: Plans for economic sectors and other marine uses and activities									
Special Spatial Planning Framework for aquaculture	X		X	X				X	X
Multiannual Strategy of Development of Aquaculture 2021-2030: Areas of Organized Development of Aquaculture	X		X	X				X	X
Special Spatial Planning Framework for Renewable Energy Sources	X		X	X				X	X
Special Spatial Planning Framework of Tourism	X		X	X				X	X
Special Spatial Planning Framework for Industry	X		X	X				X	X
Regulations concerning fishing	X			X			X		X
Allocation of diving parks	X			X			X		X

Short title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Regional Plan for Climate Change Adaptation (PeSPKA)		X		X		X			X

Short title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UCH
Category 1: cross-cutting plans and strategies																		
Regional Spatial Framework of Crete Region (RSFCR)	X	X	X		X	X	X	X			X			X	X	X	X	X
Law 4770/2021 on Integrated Maritime Policy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Category 2: protection and conservation-oriented plans and strategies																		
Maritime/Underwater Cultural Heritage Protection Sites																	X	X
Natura 2000 Areas sites			X	X											X	X		
Spatial units for the protection and conservation of the landscape			X	X											X	X	X	X
Category 3: Plans for economic sectors and other marine uses and activities																		
Special Spatial Planning Framework for aquaculture	X	X																
Multiannual Strategy of Development of Aquaculture 2021-2030: Areas of Organized Development of Aquaculture	X	X																
Special Spatial Planning Framework for Renewable Energy Sources	X													X				
Special Spatial Planning Framework of Tourism		X	X	X												X	X	X
Special Spatial Planning for Industry						X								X	X			

Deliverable 3.1. Reginal analysis report



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Short title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UCH
Regulations concerning fishing						X												
Allocation of diving parks	X																	X
Regional Plan for Climate Change Adaptation (PeSPKA)	X	X	X												X	X	X	X

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage.

8.2 Cross-cutting plans and strategies

The analysed plans and strategies in this category include two main documents making part of the Greek planning system. As mentioned above, there is no MS plan adopted in Greece, yet. Hence, strategies and measures implemented in the Greek waters and the coastal zone, are for the moment coming from spatial planning frameworks that concern the terrestrial part of the Regions (including Crete) and frameworks developed for environmental protection and specific economic sectors (as described in the following sections).

The Regional Spatial Planning Framework for the Crete Region (RSPFCR) sets out guidelines and goals for the development of Crete Region across different sectors. The main objectives for the sea and LSI of the Region focus on guidelines for sustainable aquaculture and fishing, environmental protection of the coasts and their landscape as well as promotion of sea connectivity and tourism development, always bearing in mind the environmental impact. Within this Framework several strategic development goals are set, with the most relevant for the sea and land-sea interactions summarized below:

- The Plan targets the harmonious coexistence of the development of maritime transport and port infrastructure with environmental protection and the rational management of the sea and coastal space.
- It sets a series of strict conditions for the protection of biodiversity, natural habitats and wild flora and fauna and the restoration of ecosystems and landscapes/seascapes. In particular, in all revised Regional Spatial Planning Frameworks, the following landscape zones are delineated: (i) landscape zones of international value; (ii) landscape zones of national value; (iii) landscape zones of regional value; and iv) particularly degraded landscape zones.
- It targets the development - which is currently limited - of traditional fishing activities (through its inclusion in the tourist product), as well as of aquaculture with environmentally compatible methods (through the production of quality products), ensuring spatial compatibility with other uses and fostering links in the value chain.
- It supports the operation of the marine aquaculture pilot unit of the Hellenic Centre of Marine Research (HCMR) in Souda, aiming to launch the production of new species as well as the development of new fish farming technologies, not only in closed bays but also in the open sea.
- It endorses the change of pattern for the development of tourism, with the aim of relieving high pressures and upgrading the built space on the overdeveloped northern coast, and limiting the development of forms of mass and single-theme tourism.

The plan (Figure 29) includes several measures impacting land and sea uses. As an example, we can refer to the categorization of Crete’s ports (article 14), or the delimitation of three key Energy hubs in specific sea areas i.e. Atherinolakkos, Korakia of Heraklion, and Xylokamara of Chania (art 15). The first place (Atherinolakkos), is planned to host liquefied natural gas (LNG) facilities in the coastal zone of the area (Figure 30).

Furthermore, Article 12 emphasizes the importance of integrated coastal management, particularly for residential and tourism purposes. This approach involves careful urban and spatial planning to ensure that land uses are appropriate, while also safeguarding the natural and cultural environment. Moreover, as outlined in Article 12, the principle of “compact city” are prioritized in these coastal regions. Finally, Crete, being the largest island in Greece and the fifth largest in the Mediterranean Sea, has several significant ports that serve both commercial and passenger purposes. Their categorization according to the Joint Ministerial decision 8315.2/02/07 (Government Gazette B; 202/16-2-2007) or the RSPFCR is reported in Table 1.

Table 1. Categorisation of major Crete ports (Source: Government Gazette B; 202/16-2-2007 or RSPFCR)

CATEGORIES	Passenger Operation	Freight Operation	Cruise
International interest	Heraklion, Souda of Chania	Heraklion, Souda of Chania, Tymbaki	Heraklion (home port), Souda of Chania
National Significance (Interregional reach)	Rethymno, Kasteli, Kissamos, Sitia	Rethymno, Kasteli, Kissamos, Sitia	Rethymno, Sitia (small)
Major interest (regional reach)	Agios Nikolaos, Ierapetra, Pacheia Ammos	Agios Nikolaos (small)	Agios Nikolaos

The Law 4770/2021 on Integrated Maritime Policy and its related developing strategy endorse “the integrated strategic planning approach of sea economic activities” such as shipping, fishing and maritime tourism, safety, risk minimization and accident prevention at sea. This strategy has just started to be developed with the organization of “Regional talks” with different stakeholders in the islands. It actually foresees specific strategic priorities for:

- Port policy – maritime ports
- Critical energy infrastructure and water resources management
- Ferry services – maritime transport

- Strengthening the competitiveness and entrepreneurship of islands – Island production models
- Maritime surveillance and safety/security strategy at sea
- Blue careers – employment and investment in the blue economy
- Institutional empowerment – Digital governance.

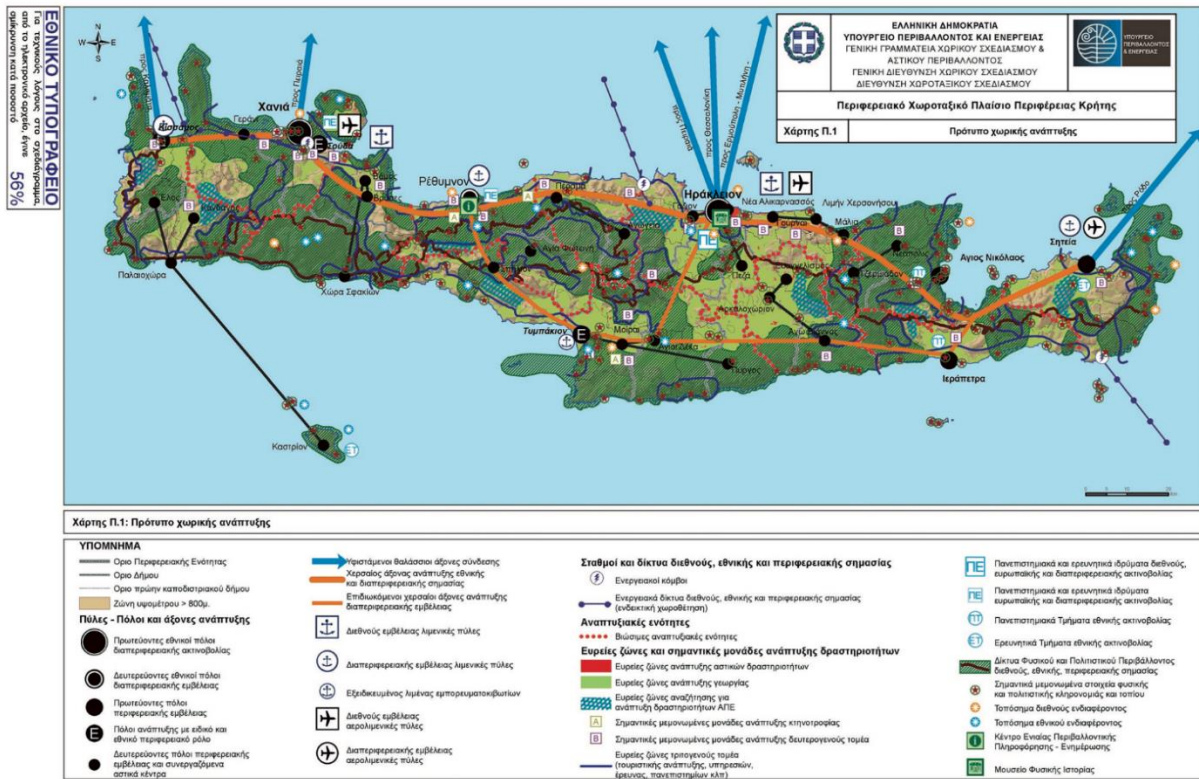


Figure 29. Spatial organization of Crete Region according to the Regional Spatial Framework of Crete Region (Source: RSFP-CR, 2017)

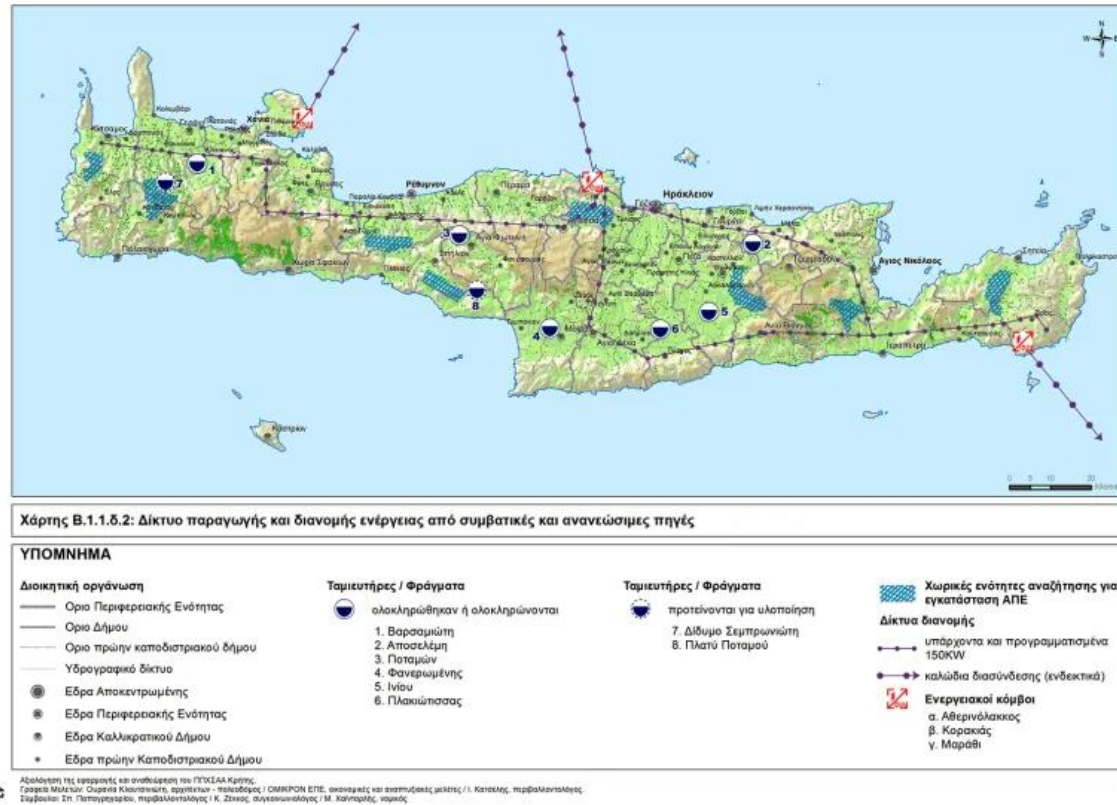


Figure 30. Network of energy production and distribution (incl. renewable energy) (Source: revised RSPFCR, 2017).

8.3 Protection and conservation-oriented plans and strategies

Protection and conservation-oriented plans and strategies that are relevant for the planning and management of the sea space of Crete Region fall in the category of nature conservation plans (NATURA 2000 sites), MUCH protection plans and landscape protection plans.

Crete Region has a valuable natural ecosystem illustrated by the high number of Natura 2000 sites that have been designated in the area. Many of these sites expand in the sea or are exclusively located at sea (including islets), thus embracing sensitive marine ecosystems. Ecosystems and biodiversity conservation in marine or partly marine (land and sea) Natura 2000 sites in Greece, is regulated by Law 937/2011. This law is of national scope and sets specific guidelines for the permission of activities in Natura 2000 sites. More specifically, it defines the kind and the extent of the human activities that can take place in the limits of the Natura 2000 sites and how relevant research can be conducted. In the region of Crete, according to Law 3937/2011, the Natura 2000 network includes 54 areas (Figure 31):

- Twenty-eight are designated as “Special Areas of Conservation” (SAC) or “Proposed Sites of Community Importance” (pSCI),
- Twenty-five are designated as Special Protection Areas (SPA), and
- Only one (1) is designated as both “Special Area of Conservation” and “Special Protection Area” (islet of Dia).

Besides the above, and according to Law 3937/2011 (Official Gazette 60/A/31.03.2011), for landscapes already declared as of particular natural beauty, a Ministerial Decision by the Minister of Environment and Energy is required to regulate the terms of their inclusion in the category of “Protected Landscapes and Protected Natural Formations” of the National System of Protected Areas. As of now, some key islets of Crete that are listed by the plans have not been officially recognised.

According to the Presidential Decree entitled “Approval of the list of small island wetlands and determination of terms and restrictions for the protection and enhancement of the small coastal wetlands included in it” (Official Gazette 229/AAP/2012), Crete is home to 69 small island wetlands. The Decree specifies particular protection measures for these wetlands, which include the prohibition of activities such as draining and drainage works and Interventions that alter the hydrological regime, including drilling and water pumping (unless these actions are aimed at the preservation of the wetland). These measures are designed to safeguard the ecological balance and natural characteristics of these sensitive and important wetland ecosystems.

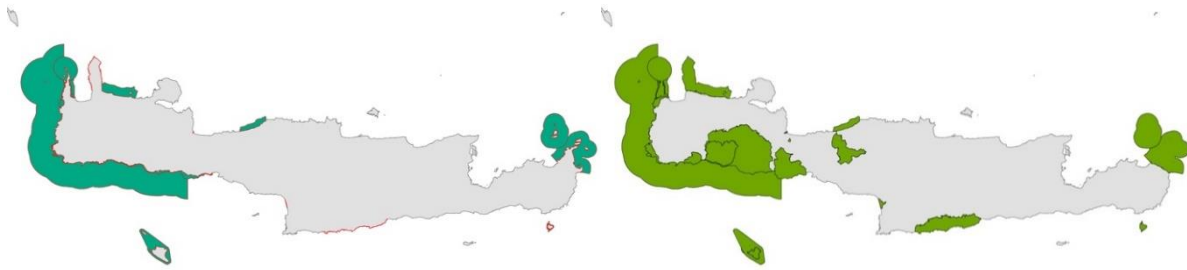


Figure 31. On the left: marine part of the Natura 2000 network; on the right: Natura 2000 sites with a coastal and sea component (Source: own elaboration, Panteion University, based on data from the Geoportal of the Decentralized Administration of Crete)

Crete also hosts several sites of MUCH, declared by two Ministerial Decisions, aiming to ensure the protection of the identified underwater archaeological sites. The measures related to the protection of these sites come from Laws 3028/2002 and 4858/2021. According to the legislation:

- Fishing and anchorage are forbidden in both accessible and non-accessible archaeological sites (there are, however, potential exclusions following a permit by the Ministry of Culture).
- Activities such as observation through underwater diving or by glass bottom boats are permitted only in accessible underwater cultural heritage sites (AUCHS).

The relevant legislation also sets out other regulations about the access to the archaeological heritage sites and gives the possibility to designate a protection zone where all activities are banned around the site, to further protect it.

8.4 Plans for economic sectors and other marine uses and activities

Most relevant plans or strategies for economic sectors and other marine uses and activities in Crete Region refer to the sectors of aquaculture, fishing, RES, tourism and ports. The Special Spatial Planning Framework for Aquaculture (SSPFA) was developed on 2011 on a national level and sets several strategic development goals for aquaculture in the country, linked to more specific goals and provisions for each Greek Region. For the Crete Region, the SSPFA provides recommendations for the development of aquaculture in the Category E. This category refers to areas with appropriate characteristics, i.e.: adjacent to areas of demand for aquaculture products (e.g. urban centres, tourist areas, etc.) and having service infrastructures for the promotion of the aquaculture products. At the same time, in Category E areas, scattered - rather than organized - zoning is considered preferable, to minimise conflicts with competing uses and impacts on the natural environment. The SSPFA further sets out the regulations concerning the licensing and the operation of

aquaculture sites, including environmental protection aspects to be considered. As an example, the operation of a pilot marine aquaculture unit created by HCMR in Souda is also supported, where the production of new species is underway, as well as the development of new fish farming technologies, not only in enclosed bays but also in the open sea. It is noteworthy that a revised SSPFA is currently underway. The revision of the 2011 plan was deemed necessary in order to facilitate and coordinate the development of the Areas of Organized Development of Aquaculture in the Aegean Sea, as mentioned in the "Multiannual National Strategic Plan for the Development of Aquaculture 2021-2027" (ΠΕΣΣΡΡΥ). So far, only one area of organized development of aquaculture, with limited capacity (0.04 %) exists in Crete region (Figure 32).

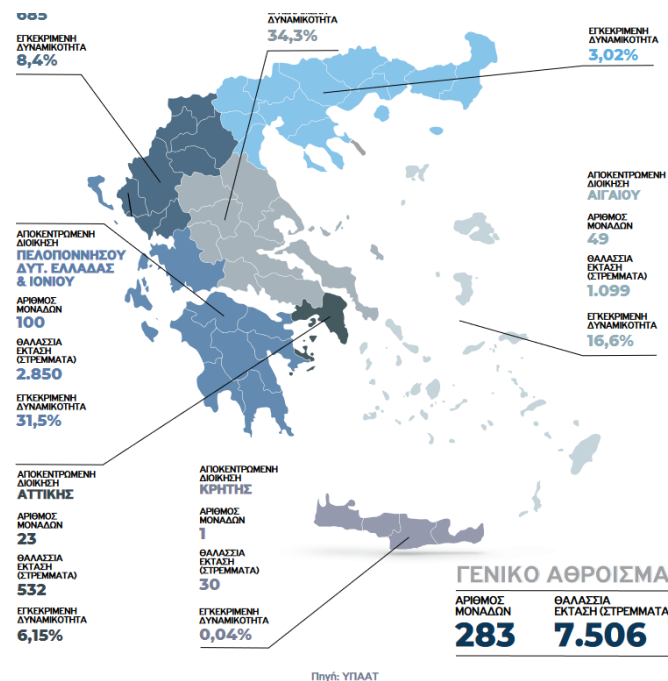


Figure 32. Allocation of AZA (in Greek POAY) in terms of number of units, surface and capacity in 2022 (Source: Greek Ministry of Agriculture and Food).

As for the fishing activity, regulations about trawl fishing are of national scope and were established by Presidential Decree in 1966. This decree provides general spatial and temporal regulations about trawl fishing in Greek waters and more specific ones for certain geographical areas including areas of Crete Region, and measures controlling fishing in sensitive marine zones. The Fisheries Restricted Areas (FRAs) include different types of restrictions such as permanent or seasonal closures and limits to specific fishing gear like towed or mobile gears. The purpose of these restrictions varies, including fish stock protection and preservation of natural habitats. The FRAs in Crete represent approximately 14.8% of the total, identified in the Aegean and the Cretan seas

(Figure 33). The legal framework for these restrictions in Crete is complex, involving national, European, and international laws.

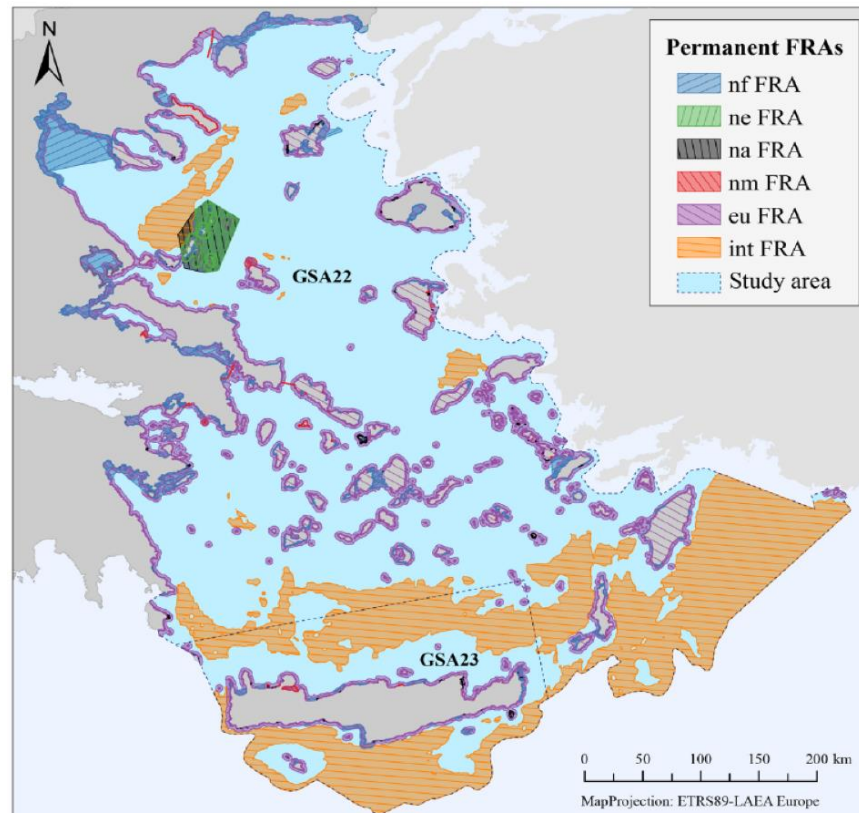


Figure 33. Fishing Restricted Areas per type of restriction, 2014 (Source: Study on Fisheries Restricted Areas (FRAs) in the Aegean Sea, in the framework of Protomedea and Marisca projects).

Both the revised RSPFCR described above and the Special Spatial Planning Framework for Renewable Energy Sources refer to 3 dedicated energy hubs in Crete. A key development project is the energy connection of Crete with the mainland, acknowledged as of huge importance in all spatial plans. This project is currently under development, with the Crete-Attica Interconnection Project (Phase II). This is a significant development project in the Greek energy sector, focusing on connecting Crete (from Korakia place) to Attica (Pachi place, Megara area) through a High Voltage Direct Current (HVDC) line with a capacity of 2×500MW. This project, represents a major investment in Greece's electrical infrastructure and aims to significantly transform the energy landscape of Crete. On the same ground, Cretan maritime areas are the ones that are more suitable in mid-term to establish floating wind energy installations. Areas in the eastern and southern Crete are recognized for

high wind speeds (10-11 m/second), which are extremely beneficial to wind energy projects (Figure 34).

The National Spatial Plan for the tourism sector is also currently under revision. The previously existing Plan is no longer valid. However, the spatial guidelines that this Plan included, were transposed in the Regional Spatial Planning Framework for Crete. Thus, three types of coastal tourism development areas were introduced: (i) coastal zones for tourism development, (ii) controlled residential and tourism development areas and (iii) areas with potentials for the development of new and alternative forms of tourism (Table 2). In the coastal zone of Crete Region, tourism activity is over-developed and related to the mass tourism model, especially in the north part of the island. A key spatial guideline provided by the Regional Plan is that within this type of areas, tourism development should be set under control, and planning and licensing should ensure that the carrying capacity of the ecosystems is not exceeded, emphasizing the importance of the quality of tourism and the quality of the environment.

The plan initially lacked specific provisions for diving parks. However, the introduction of Law 4688/2020 has facilitated the allocation of diving parks. These parks aim to safeguard marine ecosystems while also enabling regulated recreational diving. Presently, ten diving parks are either operational or in the stage of meeting the necessary development criteria, e.g. diving park of Apokoronas, Agios Nikolaos, Gournes, Stalida, Mononaftis, and Ierapetra.

Table 2. Types of coastal tourism development zones identified by the Regional Spatial Planning Framework for Crete.

Zone Type	Zone Location	Details
Urban/Tourist Development and Quality/Environmental Upgrading	From Pachia Ammos to Selles near Agios Nikolaos; Anogeia Milatou to Fodele near Heraklion - Hersonissos; Bali to Selia near Rethymno - Georgioupolis; Almyrida to Kolymbari near Chania	Identified as coastal zones for urban/tourism development and quality/environmental upgrading
Controlled Residential/Tourist Development and Quality/Environmental Upgrading	From Kalyviani to Nafpigeia near Kasteli; Wider area of Mochlos Sitia; Dionysos to Papadokampos near Sitia; Asproolithos Goudouras to Vatos Myrtos near Ierapetra; Matala to Frangokastello, South Coast of Heraklion, Rethymno, Chania; Agia Kyriaki to Anydrou, east of Palaiochora	Designated as coastal zones for controlled residential/tourism development and quality/environmental upgrading with emphasis on sustainable tourism of high facilities

Zone Type	Zone Location	Details
Mild Residential/Tourist Development, Quality/Environmental Upgrading, and Protection/Promotion of Cultural and Natural Resources	Eastern and Western coasts of the island; Wider area of Sougia, Chania	Zones with potential for landscape enhancement and rich natural and cultural resources related to cultural tourism, sustainable tourism

8.5 Elements of contribution to the EU Green Deal and sea-basin strategies

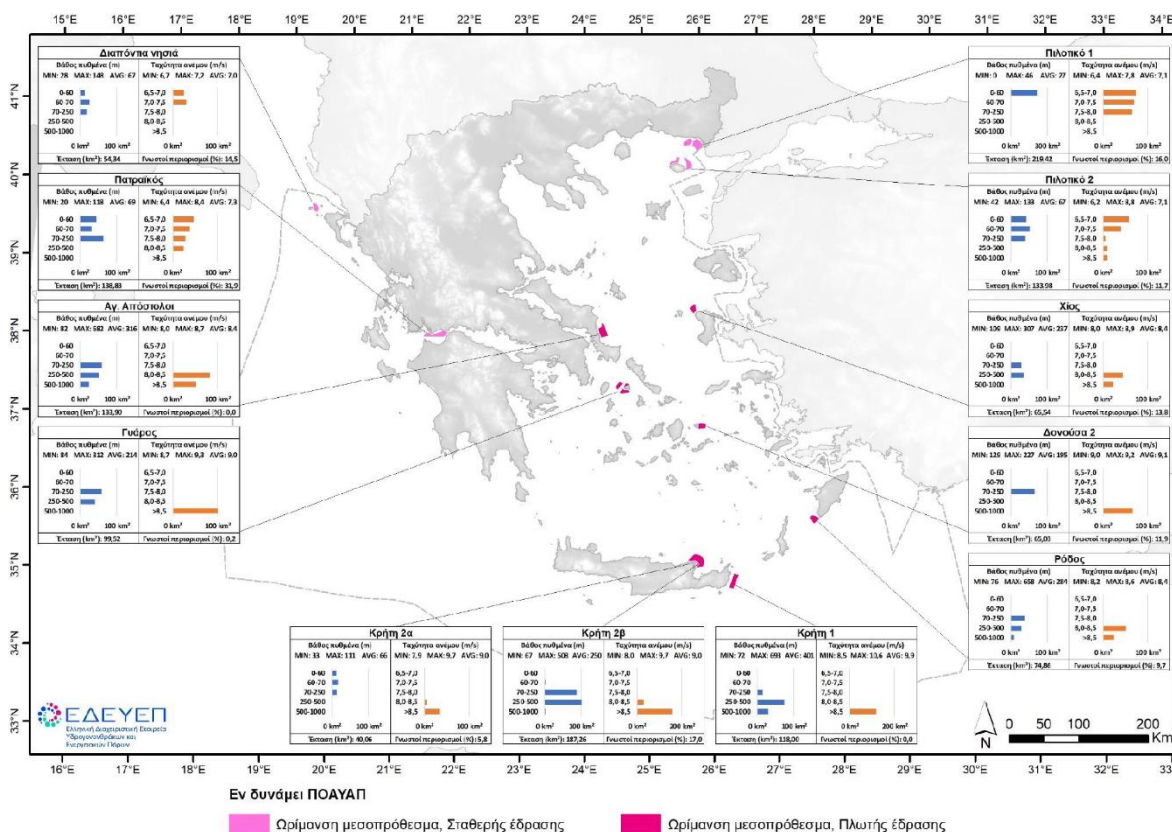
The RSPFCR as revised back in 2017, does not include or incorporate concrete EGD goals. Even so, most of the analysed plans and strategies consider some of the key components of the EGD, in an indirect way. For example, in the cross-sectoral plans there are parts dedicated to biodiversity and ecosystem conservation or zero-carbon policies, which is considered as a primary goal in all strategic guidelines. Moreover, in the Regional Spatial Planning Framework of Crete Region, the guidelines for the development of aquaculture, fishing, tourism and shipping sectors clearly consider biodiversity and ecosystem conservation goals which are reflected in the RSPFCR measures.

Crete’s commitment to the climate change-related aspects of the EGD is foreseen in the “Regional Plan for Climate Change Adaptation” (PeSPKA) approved in 2022, based on the new climate law and national strategy. The national plan ambitiously aims to reduce carbon emissions by over 56% by 2030 (in comparison to the 2005 levels). This reduction is planned primarily through a transition from lignite-based electricity generation to renewable sources like solar and wind energy. The plan includes completely phasing out lignite by 2028 and increasing renewable energy from 18% to at least 35% by 2030. This transition is supported by national laws, including the National Climate Law (Law 4936/2022) and legislation regarding offshore wind farms (Law 4964/2022). In more details, the PeSPKA of Crete addresses key climate changes and their expected impacts across the region. Region of Crete is recognised as highly vulnerable to climate change and key measures are endorsed for handling this. Amongst the most vulnerable areas are the coastal areas of the northern part of the island. To tackle the relevant impacts the drafting of the “Integrated Coastal Zone Management of the Region of Crete” is proposed.

Furthermore, for handling climate change related to sea activities, a prioritization of areas for fishing, aquaculture and energy infrastructure in the Crete Region are foreseen in this plan. For example, related to aquaculture, PeSPKA prioritises the reactivation of marine aquaculture in Sitia. Besides, fishing zones are prioritised; three categories of areas are being identified to this regard:

- 1st category (Herakleion Regional Department): the largest part of the marine areas extending 10 kilometres from the coast in the Heraklion regional department, apart from the marine areas north of Hersonissos and Malia.
- 2nd category (Lasithi Regional Department): the majority of the marine areas suitable for potential fishing extending 10 kilometres from the coast in the Lasithi regional department, except for the areas south of Ierapetra, Lefki, and Makrys Gialos.
- 3rd category (Rethymnon Regional Department): The entirety of the marine areas extending 10 kilometres from the coast, in the Rethymnon regional department

In parallel, an energy infrastructure prioritization is taking place. Furthermore, the planning in terms of OWFs development, is in progress, i.e. the revision of the Special Spatial Planning Framework (SSPF) for Renewable Energy Sources (RES), the offshore RES development regulated by Law 4951/2022, the offshore wind farms (OWFs) development (Law 4964/2022). It shall be also mentioned that in relation to the National Offshore Wind Farm Development Programme (**N_OWF_DP**) (article 67 Law 4964/2022) – outlining in which marine areas the allocation of OWFs is possible (go-to areas) - the first stage of the relevant study has been completed (Figure 34).



Εικόνα 4-10. Αναλυτικές πληροφορίες για τις μεσοπρόθεσμες εν δυνάμει ΠΟΑΥΑΠ

Figure 34. Areas eligible for establishing floating wind energy installations in the medium and long term (Source: National programme for the development of offshore wind parks, 2023).

8.6 Elements about stakeholder engagement

Given their nature (most of them are laws or decrees), all analysed strategies and plans concerning Crete have been subject of public consultation either online or through workshops. In general, cross-cutting plans – given their integrated nature and strategic character – also require the prior opinion of the Regional Council, besides the above-mentioned procedure of public consultation. SSPFAs also require the opinion of the relevant spatial planning body before the online public consultation takes place. For both the RSPFCR and the Special Spatial Planning Frameworks a consultation procedure on their Strategic Environmental Assessment is mandatory and takes place simultaneously alongside the online public consultation mentioned earlier.

Since the analysed strategies and plans were produced some decades ago, a proper documentation on stakeholder’s engagement participation process is not available. Still, some elements about stakeholders’ engagement process could be revealed via desk research. The consultation process for the revised plan of the Regional Spatial

Planning Framework of Crete (RSPFCR) spanned over seven months, reflecting an endeavour to enhance stakeholder engagement. This extended period also allowed the organization of informational sessions across the various regional departments of the island, addressing different topics. The process culminated in a meeting of the Regional Council of Crete, held in the Municipal Council of Heraklion and presented a synopsis of topics and issues addressed during the above participatory process. Still, since stakeholders' and citizens' opinion could be submitted by e-mail as well, the extent to which these opinions influenced the final recommendations and the overall decision-making process remains a subject of scrutiny. Upon evaluation of the available data, the final recommendations were prepared for the Regional Council and finally presented to the relevant Ministry where a thorough discussion with key invited stakeholders took also place. Evidently, the efficacy and inclusivity of this engagement strategy process warrant a critical examination (for example if all stakeholders have been informed and invited to participate).

8.7 Persisting gaps in the integrated planning and management of the sea space

The National Spatial Strategy for the Marine Space is awaiting approval by the Minister of Environment and Energy and the Council of Ministers, while MS plans (Frameworks) have not been developed yet. The MSP study for the North Aegean Region part of the THAL-CHOR project aimed at supporting the first Regional Maritime Spatial Framework is under further elaboration. Besides MSP, the plans and strategies regulating the coastal and marine space currently in effect in Crete, include environmental laws and sector-specific spatial plans. These mainly have a national level scope, however including more specific regulations that apply to the regional and local levels, considering their special characteristics. In general, no major conflicts or incoherence have been identified in the national spatial planning system. However, several sectoral spatial plans (the so-called Special Spatial Planning Frameworks) are completely outdated and still under revision. The planning process is characterised by a high degree of centralization and the local and regional levels are not allowed to fully participate in the decision-making regarding the allocation of maritime activities on the coastal zone or in the territorial waters of the country. Land-sea interaction is not fully considered in the plans in place.

The need to develop MS plans is now imperative to manage several conflicts between traditional and emerging maritime uses, to ensure protection of the marine environment and biodiversity, and to cope with the climate crisis and its impacts on coastal and marine areas of the country. As a short term challenge, Greece needs to develop a climate-smart MSP.

Another serious gap is the lack of organised MSP data on a regional level and of specific regional geoportals and geo-processing tools related to the maritime space.



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The national THAL-CHOR geoportal provides a good opportunity in this sense, but it is not yet accessible. Moreover, regional geoportals specifically addressing to MSP are not in place. Regional data can be extracted from various data and geo-data bases of a sectoral character, thus with high fragmentation. A key step could be the integration and extension of the Geoportal of the Decentralized Administration of Crete, which currently includes a few marine related spatial data, e.g. about the quality of bathing areas, climate related disasters, biodiversity and culture herniate elements. There is the need to include in this geoportal more data about maritime uses and environmental components, as well as on managing measures or restrictions.

9. Central Macedonia Region

A more extended analysis of the sea-based planning systems and distribution of competences on marine and maritime issues is provided for Greece in the Crete case study. Here some elements are recalled for prompt reference. According to the national legislation (Law 4546 of 2018 as amended in 2020 by Law 4759), MSP in Greece is performed at two levels: (i) the national level - National Spatial Strategy for the Marine Space (NSSMS-ΕΧΣΘΧ); (ii) the regional level - Maritime Spatial Plans/Frameworks (MSF-ΘΧΙΙ). The National Spatial Strategy for the Marine Space (NSSMS) constitutes a policy document, setting the framework and the strategic guidelines at the national level, for the marine parts of the country. The NSSMS of Greece has been recently completed and is pending approval. According to the draft NSSMS, four maritime spatial plans must be adopted in Greece, for each of the units (ΘΧΕ 1 - 4) shown in Figure 35. So far, out of the four Maritime Spatial Plans/Frameworks only one has been drafted and it is pending approval. This is the Plan for the North Aegean Sea (ΘΧΕ1), where Central Macedonia Region (CMR) is located.

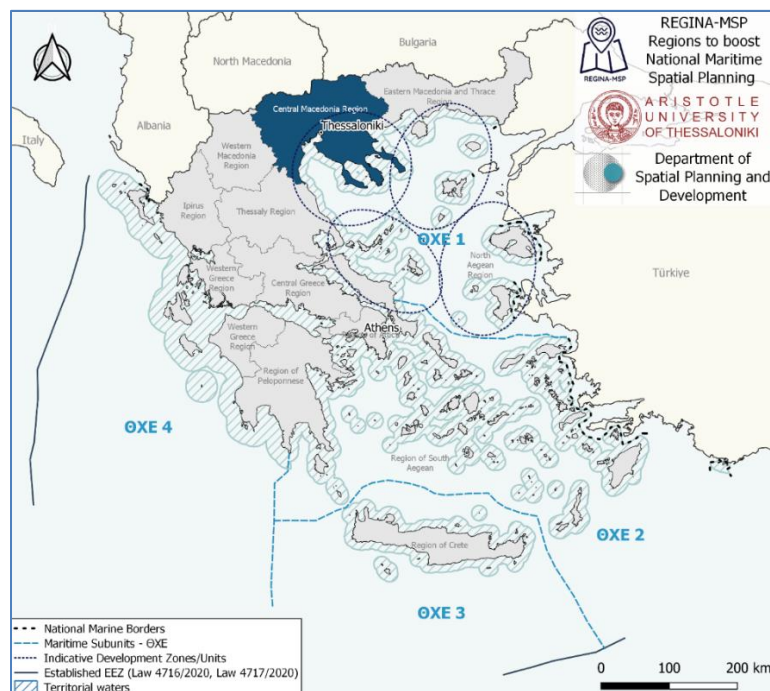


Figure 35. The four Greek marine units for which a separate Maritime Spatial Plan should be adopted (Source: own elaboration, AUTH; based on data from the National Spatial Strategy for the Marine Space).

Central Macedonia Region is the second most populous region in Greece after Athens' Region (Attica), with a population of almost 1.8 million. Thessaloniki, the capital of CMR, is the second largest city of Greece and is known for its very strong economic and industrial profile and for being an international transport node. Tourism and aquaculture are among the most important sectors not only for the metropolitan area

of Thessaloniki, but also for the Region. Thessaloniki contributes about 10% to the country's Gross Value Added. Together with Athens, they account for 60% of productive activity and 50% of the population of the country. Furthermore, 80% of the country's mussel farming activity takes place in the Thermaikos Gulf.

The marine parts of CMR are characterized by a complex geomorphology and seabed topography, due to the semi-closed gulfs and other coastal formations (deltas, estuaries, etc.) that have favoured the development of a very rich marine biodiversity. Marine protected areas as well as underwater cultural sites are found in the coastal zone of CMR. Along the coasts of CMR, urban development is quite intense, due to the uncontrolled urbanisation of the metropolitan area of Thessaloniki and the coastal tourism development especially in Halkidiki's peninsulas.

As regards the spatial organization of the marine parts of Central Macedonia Region, it is mainly achieved through a set of strategies and plans, that are described in the following sections.

9.1 Analysed plans and strategies

Given that neither the National Spatial Strategy for the Marine Space nor the Maritime Spatial Plan/Framework for the North Aegean Sea have been adopted yet, the plans analysed for the case of Central Macedonia Region, vary among:

- Legislation of a national range, referring to restrictions for protected areas of natural and cultural importance, regulation of economic activities (such as fishery), etc.
- The Special Spatial Planning Framework for Aquaculture
- The Regional Spatial Framework of Central Macedonia Region
- Master plans for ports and marinas

Considering the above, it is evident that in the Region of Central Macedonia just one place-based, cross-cutting plan exists (i.e. the Regional Spatial Framework), that refers only to the land parts of the Region and in few cases to land-sea interactions. This means that the spatial organization of the marine space of the study Region, is mainly addressed through sectoral legislation, plans and strategies of national level, except for plans related to protected areas and ports (that refer to the local level and have a site-specific approach). It should be noted however, that even the documents that refer to the national level include specific spatial regulations that apply at the regional level, through the designated zones in the marine area of Central Macedonia Region. These zones regard both economic activities (fishery, aquaculture, etc) and protected area and sites of natural and cultural importance.

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.

Deliverable 3.1. Reginal analysis report



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Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
Regional Spatial Framework of Central Macedonia Region		X		X				X	X
Category 2: protection and conservation-oriented plans and strategies									
Protection of Maritime Cultural Heritage sites	X			X			X		X
Natura 2000 sites	X			X			X		X
Axios Delta National Park	X			X			X		X
Category 3: Plans for economic sectors and other marine uses and activities									
Special Spatial Planning Framework for Aquaculture			X	X				X	X
Regulations of trawl fishing			X	X			X		X
Regulations of fishing in Thessaloniki and Thermaikos Gulfs	X			X			X		X
Areas of Organized Development of Aquaculture	X			X			X		X
Thessaloniki Port Master Plan	X			X			X		X
Kalamaria Marina (Aretsou) Master Plan	X			X			X		X

Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Category 1: cross-cutting plans and strategies																		
Regional Spatial Framework of Central Macedonia Region	X	X	X		X										X	X		

Deliverable 3.1. Reginal analysis report



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Category 2: protection and conservation-oriented plans and strategies																		
Protection of Maritime Cultural Heritage sites																		X
Natura 2000 sites																	X	
Axios Delta National Park																	X	
Category 3: Plans for economic sectors and other marine uses and activities																		
Special Spatial Planning Framework for Aquaculture		X																
Regulations of trawl fishing	X																	
Regulations of fishing in Thessaloniki and Thermaikos Gulfs	X																	
Areas of Organized Development of Aquaculture		X																
Thessaloniki Port Master Plan						X												
Kalamaria Marina (Aretsou) Master Plan						X												

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage

9.2 Cross-cutting plans and strategies

The revised spatial plan for Central Macedonia Region was officially adopted in 2020. This spatial plan (Regional Spatial Framework) refers to the land parts of the region and sets out guidelines and goals not only for the economic development of Central Macedonia Region across different sectors. It also addressed the maintenance of the ecosystem services flow and the enhancement of the natural and cultural heritage sites. The plan has no focus in the marine space. However, it refers to land-sea interactions providing guidelines for sustainable aquaculture and fishing, environmental protection of the coasts and their landscape as well as promotion of improved maritime transportation and marine tourism development.

Central Macedonia Region is found in the north Aegean Sea, where the first Maritime Spatial Plan/Framework of Greece has already been drafted. According to the spatial planning system of Greece, Maritime Spatial Plans/Frameworks are categorized as Regional Spatial Plans. Being such, they provide strategic guidelines, but they can also have a more regulatory nature, depending on the marine area and the case. In the case of the North Aegean Sea (OXE 1), the draft Plan proceeds to the further subdivision of this marine unit, into 4 Development Zones/sub-units, following economic, ecosystem and other criteria (Figure 35). The Central Macedonia Region in total, constitutes one out of these four sub-units.

According to the draft Plan for the North Aegean Sea, prevailing – and further prioritized – activities in the whole area, are: maritime transportation, fisheries, aquaculture, LNG platforms, energy networks and farms and coastal (and marine) tourism. For Central Macedonia Region, the strategic guidelines set by the draft Plan, keep the priorities and goals, as set by the existing sectoral plan and strategies. The Plan also prioritizes environmental protection, under the Ecosystem Approach.

9.3 Protection and conservation-oriented plans and strategies

Central Macedonia Region has valuable coastal ecosystems; this is reflected in a high number of protected areas and Natura 2000 sites.

The Axios Delta National Park is the most relevant protected area in the coastal part of the Region. It was designated in 2009 by the Joint Ministerial Decision 12966 (National Gazette No 220/ΑΑΠ/14-5-2009), to include land, water and marine areas of the rivers' estuaries, as well as salt marshes and a lagoon of great environmental and economic importance. Most part of the National Park is also included in the Natura network (including three Natura 2000 sites). It is also protected by the Ramsar Convention. Table 3 summarises the different designations that apply in this National Park.

The management plan for the National Park of Axios Delta is currently under consultation process within the concerned management authority. Up until now, regulations applied in the Park come from the national legislation (Ministerial Decision - National Gazette No 294/Δ/01-08-2018 as amended and is in effect). In the marine parts of the Park some of the prohibited uses and activities are: installations and activities that can disrupt the cohesion of the ecosystem (e.g. wind farms), creation or expansion of settlements, as well as every activity that could degrade the fragile ecosystem of the rivers' estuaries and sand dunes. Some of the permitted activities (under specific circumstances and only following environmental licensing) include: scientific research, environmental education visits, recreational and professional fishing and forms of alternative tourism as well as sand mining in riverbanks and aquaculture.

Table 3. Different designations in the Axios Delta National Park (designation by National Gazette No 220/ΑΑΠ/14-5-2009) (Source: own elaboration, AUTH; based on data from the Natural Environment & Climate Change Agency - NECCA)

National legislation:	Wildlife Refuge
Natura network:	GR1220002 (SCI): Delta Axiou – Loudia – Aliakmona – Evriteri periochi – Axioupoli (Size: 41,496 ha) GR1220010 (SPA): Delta Axiou – Loudia – Aliakmona – Alyki Kitrous (Size: 28,855 ha) GR1250004 (SCI): Alyki Kitrous – Evriteri periochi (Size: 1,457 ha)
Ramsar Convention:	59: Axios, Loudias, Aliakmon Delta (Size: 11,808 ha)

Another type of protected area found in the coastal part of the study area is Wildlife Refuges (Table 4). All these sites are also part of the Natura network. Following the provisions of the (environmental) Law 3937/2011, protection of Wildlife Refuges is very strict, only permitting: wildlife observatories, mining activities and roads construction after proper documentation and environmental licensing.

The marine area of Central Macedonia Region is also home to *Posidonia Oceanica* meadows that were set under protection in 2019, by the Joint Ministerial Decision (Gazette No 105/Δ/12-03-2019). In these areas trawlers' fishing and aquaculture is prohibited.

Table 4. Marine and partially marine Natura 2000 sites that include Wildlife Refuges in Central Macedonia Region (Source: own elaboration, AUTH; based on data from the Natural Environment & Climate Change Agency - NECCA)

GR1220002	SCI	Delta Axiou – Loudia – Aliakmona – Evriteri periochi – Axioupoli (Sites included in the Axios Delta National Park)	41,496 ha
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GR1220010	SPA	Delta Axiou – Loudia Aliakmona – Alyki Kitrous *	28,855 ha
GR1250004	SCI	Alyki Kitrous – Evriteri periochi *	1,457 ha
GR1270004	SCI/SPA	Limnothalassa Agiou Mama	626 ha
GR1220012	SCI	Limnothalassa Epanomis kai thalassia paraktia zoni	808 ha
GR1270013	SPA	Ygrotopoi Neas Fokaias	421 ha

Table 5. Marine and partially marine Natura 2000 sites in Central Macedonia Region, additional to the ones that include Wildlife Refuges (Source: own elaboration, AUPh; based on data from the Natural Environment & Climate Change Agency - NECCA).

GR1270010	SCI	Akrotirio Pyrgos – Ormos Kypsas – Malamo	1,179 ha
GR1270008	SCI	Paliouri – Akrotiri kai Thalassia Zoni	16,161 ha
GR1270007	SCI	Akrotirio Elia - Akrotirio Kastro - Ekvoli Ragoula	526 ha
GR1270009	SCI	Platanitsi - Sykia: Akr. Rigas - Akr. Adolo	990 ha
GR1260002	SCI/SPA	Ekvoles Potamou Strymona	1,274 ha
GR1220005	SCI/SPA	Limnothalassa Angelochoriou	373 ha
GR1270002	SCI	Oros Itamos – Sithonia	18,054 ha
GR1270016	SPA	Thalassia Zoni Anatolika kai Notia Chersonisou Athona	17,091 ha
GR1270015	SCI	Thalassia Zoni Chersonisou Athona	20,304 ha
GR1220003	SCI	Stena Rentinas – Evryteri Periochi Spilaio Drakotrypa- Spilaio Lakkia kai Rema Neromana	5,896 ha

Apart from the Natura sites included in Table 4, more sites are found in Central Macedonia Region. These are shown in Table 5. The conservation of the Natura sites is also regulated by Law 3937/2011, and management plans (although obligatory) have not been developed yet in the Region, except for the case of the National Park (which is under consultation). The Law sets strategic guidelines that regulate the kind and the extent of the human activities that can take place within the geographical scope of a Natura site, how research can be conducted within the area, and how the protection of their biodiversity can be ensured.

The framework and the strategic guidelines for the protection of underwater and maritime cultural heritage in Greece are set by Laws 3028/2002 and 4858/2021. In CMR

three locations with maritime cultural heritage are found (Figure 36), and they are under protection status since 1999 and 2002:

- Marine area of Thessaloniki Gulf (designation by National Gazette No 384/B/24-05-1989)
- Marine area in the Bay of Kipsas in Sani (Kassandra peninsula) (designation by National Gazette No 1710/B/19-11-2003)
- Marine area in Porto Koufo (Sithonia peninsula) (designation by National Gazette No 1710/B/19-11-2003)

In the proximity of these maritime archaeological finds, anchorage and fishing are forbidden. Some restrictions for diving to visit the archaeological remains also exist.

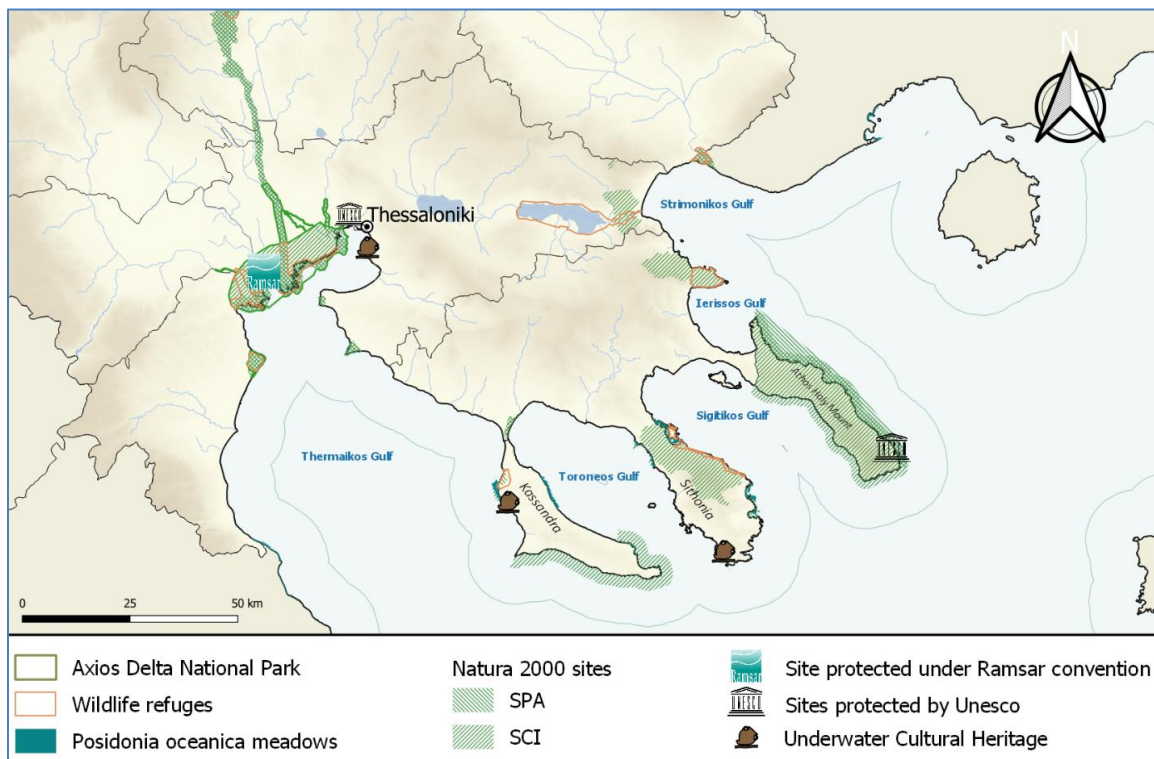


Figure 36. Protected areas of natural and cultural importance in Central Macedonia Region (Source: own elaboration, AUTH; based on data from Geodata.gov.gr, mapsportal.yopen.gr, listedmonuments.culture.gr and EMODNet).

9.4 Plans for economic sectors and other marine uses and activities

Plans under a sector-based approach in Central Macedonia Region regard tourism, aquaculture, fishing and ports. Key planning guidelines are summarised and analysed below.

The National Spatial Plan for the tourism sector is currently under revision. The previously existing Plan is no longer valid. However, the spatial guidelines that this Plan included, passed in the Regional Spatial Plan/Framework for Central Macedonia

Region that was revised in 2020. This latter introduces three types of tourism development areas: (i) developed tourism areas, (ii) developing tourism areas and (iii) areas with potentials for the development of new and alternative forms of tourism. In the coastal zone of Central Macedonia Region, tourism activity is over-developed in most parts. In the Regional Plan, the coastal zone is characterized either as “developed tourism area” or as “developing tourism areas”. Key spatial guideline in the Regional Plan is that within this type of areas, tourism development should be set under control, and planning and licensing should ensure that the carrying capacity of the ecosystems is not exceeded.

Aquaculture is a sector of great economic importance for Greece and in particular in Central Macedonia Region: 80% of the country’s mussel farming activity takes place in the Thermaikos Gulf. The Plan for the spatial organisation of this sector, refers to the national level and was adopted in 2011. It is currently under revision. The National Spatial Plan/Framework for Aquaculture, has a strategic nature but also a more regulatory one, setting objectives and spatial guidelines at the local level. In the case of Central Macedonia region, the Plan identified two Priority Areas for aquaculture (one in Thermaikos and another one in Strimonikos Gulf), as in these marine areas a great number of aquaculture farms already operated. Within these Priority Areas, the Plan recommended that aquaculture activity should be further organised, with the establishment of at least two Aquaculture Exclusive Zones, where the activity will be intensified, following proper environmental standards. As of now, only one Aquaculture Exclusive Zone has been established, in the south of Thermaikos Gulf – Pieria Prefecture (Presidential Decree 21-03-19 - National Gazette No 206/Δ/09.05.2019).

In Central Macedonia Region fishing is a well-established activity. Given the sensitivity of the seabed and ecosystems of some marine areas, zones have been established (Figure 37), setting restrictions and regulations about the fishing methods and the intensity of the activity within these zones. The first zones established in the area, regarded “Trawler prohibition zones”. They were established back in 1966 by Royal Decree 917/1966 (National Gazette No **A**-248/27.9.1966), which not only identified such zones in all parts of the Greek marine space, but also set the spatial-temporal regulations applied within them. Apart from those, also a site-specific zone exists in Central Macedonia. It was established in 2009 (Presidential Decree 68/2009 - National Gazette No 90/A/12.6.2009) and it applies in Thermaikos Gulf, while further focusing on the inner parts of the Gulf, where Thessaloniki metropolitan area is located. Within this zone, regulations regard: the distance from the shore at which fishery should take place, fishing techniques that can be used as well as the time periods when fishing activities can occur.

Finally, sectoral national strategy exists for maritime transportation and for ports infrastructure and facilities (completed in 2012), that is currently under review. In Central Macedonia Region the port of Thessaloniki is the most important one. It is one of the

five Greek ports recognized as “Port of International Importance” by the National Gazette No 202/B/16-02-2007. It is also part of the TEN-T (Trans-European Network of Transport). The latest Master Plan was adopted in 2018 (National Gazette No 77/ΑΑΠ/2018) and is currently under revision. The guidelines included in the Plan specify the priorities for its use and for future development. The management area of the Thessaloniki international port extends up to at least 500 m offshore (following the standards set by the national legislation). Apart from Thessaloniki one, other 15 ports are located in Central Macedonia Region (of a lower range and operation) (Table 6). Moreover, in the study Region, three marinas also exist, one of which is located in the metropolitan area of Thessaloniki and two in the Halkidiki peninsula. In Thessaloniki one fish wharf is also located, out of the 11 in total that operate in Greece.

Table 6 Port infrastructure and facilities in Central Macedonia Region (Source: own elaboration, AUTH; based on data from the Regional Spatial Framework of Central Macedonia Region, National Gazette No 202/B/16-02-2007).

International Sea Gate	Thessaloniki port (The Master Plan for the Thessaloniki port was approved in 2018 by the National Gazette No 77/ΑΑΠ/2018)
Port of Major interest	Nea Moudania
Ports of regional importance	Nea Michaniona (Fish Wharve), Litochoro, Paralia Katerinis, Epanomi, Nea Kallikratia, Nea Skioni, Nea Fokea, Porto Koufo, Lagonisi, Neon Rodon, Stratinioum, Stavrou, Asprovalta
Marinas	<p><u>Thessaloniki metropolitan area:</u> Aretsou (kalamaria) (The Mater Plan Aretsou marina was approved by the Presidential Decree 26-01-23 – National Gazette No 95/Δ/2023)</p> <p><u>Rest of Central Macedonia Region:</u> Sani (Kassandra), Porto Karras</p>
Leisure boats shelters and anchorages	Pigadakia-Sikia (Halkidiki), Kallithea, Ouranoupoli, Nikiti Sithonias

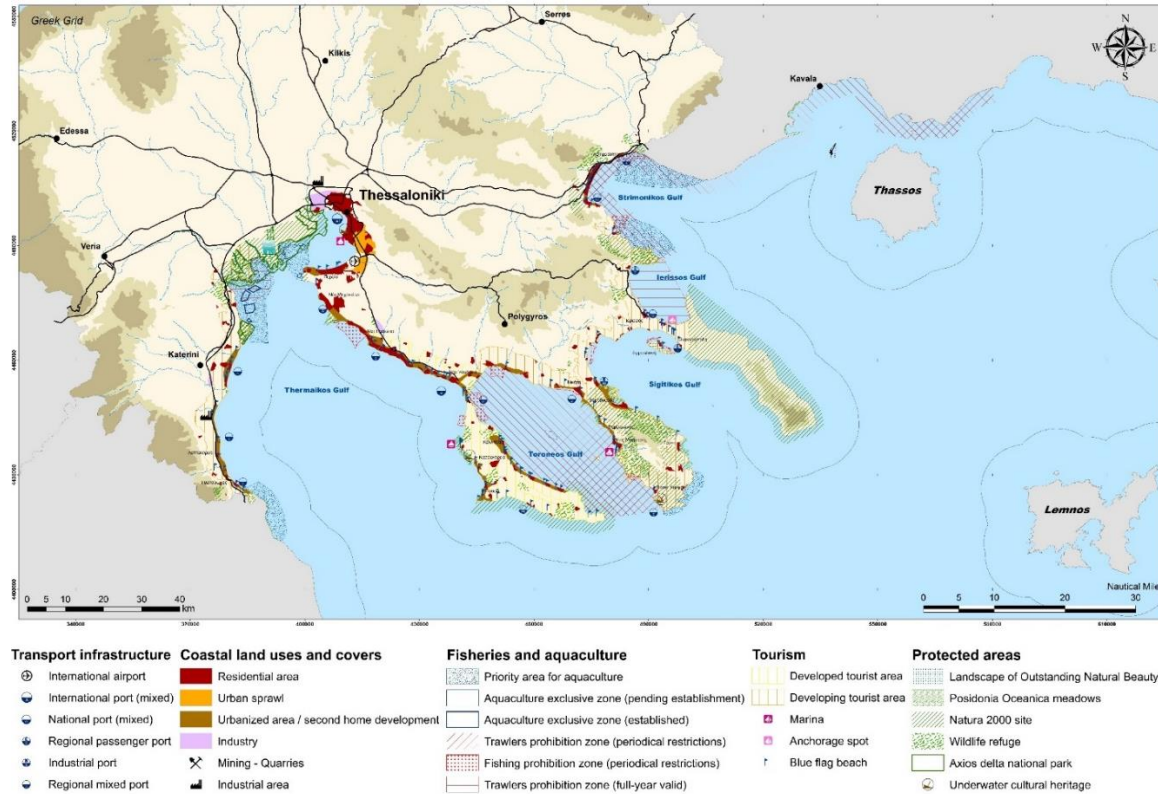


Figure 37. Spatial organisation of the marine space of Central Macedonia Region (Source: own elaboration, AUTH; based on data from EMODnet, Hellenic Ministry of Environment and Energy, Marineregions.org, GEBCO, Regional Spatial Framework of Central Macedonia Region, alieia.hcg.gr, geodata.gov.gr, mapsportal.ypen.gr).

9.5 Elements of contribution to the EU Green Deal and sea-basin strategies

Most of the considered national plans and strategies were adopted before the EGD and as such, they do not directly refer to EGD objectives. However, the integration of the EGD goals and components is reflected in most of the nation-wide strategies on environmental protection, climate and energy that were recently adopted or are currently drafted. Although these refer to national targets and goals, they will be eventually adapted in the future regional plans and strategies, thus contributing in mainstreaming the EGD at this level.

In 2019, Greece adopted the “National Energy and Climate Plan”. This Plan sets the climate goal of reducing carbon emissions by more than 56% (compared to 2005) by 2030. This will be achieved mainly by replacing electricity generation from lignite to renewable energy (solar and wind), with a goal to decommission the former completely by 2028 and expanding the presence of the latter from 18% to at least 35% by 2030. These actions are further supported by national legislation such as the National Climate Law (Law 4936 of 2022) and Law 4964 of 2022 about the installation of offshore windfarms. All these goals, are expected to be specialized and addressed at the regional level, when the National Plan for RES (under revision) will be adopted and when the revision of the Regional Spatial Plan will take place. Moreover, Greece has set circular economy at the core of its development strategy with the new “National Action Plan for Circular Economy” adopted in 2021. It is a roadmap to make the country’s economy sustainable and at the same time competitive that fully complies with the goals of the new EU action plan for circular economy.

The protection of the natural capital of Greece is of utmost importance and the “National Strategy of Biodiversity (2014-2029)” sets the guidelines and specific goals for its conservation. An action plan based on the strategy is revised every five years. As long as the sectors of fishing and aquaculture are concerned, Greece has developed the “Fishing, Aquaculture and Sea Program (2021-2027)” that fully integrates the priorities set in the EU policies of the EGD, including in particular those relating to the Biodiversity Strategy 2030 and the Farm to Fork Strategy.

Most of the analysed regional level plans and strategies include references to some of the key components of the EGD. For example, in the Regional Spatial Plan (approved in 2020) all the guidelines - for the marine environment and for the sectors of aquaculture, fishing, tourism and shipping - refer to biodiversity and ecosystem conservation aspects, while measures take into consideration provisions of the environmental protection laws. This Plan also sets horizontal guidelines for climate change mitigation referring to the integration and enhancement of renewable energy in all sectors. It also includes guidelines for the mitigation of impacts in the coastal zone from sea level rise, based on a scenario of 0,7 to 2,0 m sea level rise in the next decades.

The Regional Spatial Plan for Central Macedonia, also addresses indirectly EUSAIR pillars (Blue Growth, Connecting the Region, Environmental Quality and Sustainable Tourism).

Furthermore, the regulations for the coastal and marine protected areas in Central Macedonia Region derive from Law 3937/2011 that is dedicated to the protection of valuable areas. Biodiversity and ecosystem protection and restoration is considered a major national capital and is mentioned throughout the whole document, as several chapters are dedicated to it. Similarly, the sectoral strategies and plans for the fishing and aquaculture activities set guidelines and regulations for the development of both sectors, ensuring that these activities are practiced in a way not threatening to the biodiversity and not undermining the ecosystem conservation

The “Regional Strategy for Climate Change Adaptation”, recently drafted and currently pending approval, is another example of a regional strategy directly dealing with a EGD component. This strategy is the application at the regional level of the “National Strategy for Climate Change Adaptation”.

9.6 Elements about stakeholder engagement

In Greece plans as well as legislation and strategies, undergo official consultation via an online platform (“opengov”), which is open to all stakeholders (e.g. public administration, sectors, NGOs, associations, etc) as well as to the general public. This has supported participation on public matters in Greece over the past years. Apart from that, and especially for strategies and spatial plans referring to the national and regional level, a supreme consultation body operates since 1999. The National Spatial Planning Council (NSPC) is composed of twenty representatives from unions, chambers, associations, etc. of national level related to spatial planning and sectors, as well as of other two senior spatial planning experts. Among the 22 members in total, one derives from the Association of Greek Regions and another member from the Central Union of Municipalities of Greece. Consequently, regional authorities are indirectly involved in the MSP processes through their single representative in the NSPC. Direct involvement can only take place through the opengov platform. Both the National Spatial Strategy for the marine parts of the country, as well as the Maritime Spatial Plan/Framework for the Greek marine unit 1 (**OXE1**) where Central Macedonia Region is located, first underwent consultation via the opengov platform, and then through the National Spatial Planning Council. Finally, both documents also underwent consultation with the Ministries that are involved in the national marine affairs.

Contrary to the practice for MSP, Regional Authorities (and by extension Central Macedonia) are directly involved in the drafting of spatial plans related to their land parts (i.e. the Regional Spatial Plans/Frameworks), as they are invited to organise an official consultation process within their Regional Council.

Other very important plans for the marine area of Central Macedonia are the one for the Axios Delta National Park and the Master plan for the international port of Thessaloniki. For the National Park, stakeholders' engagement is achieved through the Management Authority that is in charge of the Park management (a management plan is currently under consultation). For the international port of Thessaloniki, information on stakeholder participation is not documented, as the plan was approved years ago.

In conclusion it should be noted that, regional stakeholders of Central Macedonia have shown great interest in the past in participating in consultation regarding spatial, sectoral, environmental and other plans and strategies that address issues of relevance for their region. It is also worth noting that in this Region, especially when referring to plans and strategies related to the metropolitan area of Thessaloniki, authorities and other bodies tend to organise more consultations than the ones required by the legislation in order to fully engage regional stakeholders and local experts.

9.7 Persisting gaps in the integrated planning and management of the sea space

Identified gaps for CMR are related to marine governance issues and to MSP challenges per se. Marine governance gaps are summarised in the following points:

- Currently, Greek Regions have no direct role in drafting MSP plans, even when they address the marine waters in the proximity of the regional coastline. Role of regions needs to be strengthened; spatial planning on land, which directly involves Regions, represents a good practice in this sense. A great opportunity for the Region of Central Macedonia was missed when the drafting of the first MSP plan for the marine unit 1 was in process.
- The marine unit where Central Macedonia Region is located is a shared sea with other four Greek Regions. It is important to establish a solid governance scheme to enhance cooperation and interactions to tackle common and trans-regional issues. This governance scheme could have the form of a Community of Practice.
- It is also important to strengthen governance at the intra-regional level of Central Macedonia, developing a mechanism including all regional stakeholders (public sector, chambers, professionals, NGOs, experts, private sectors, etc) that are involved in marine affairs and can contribute to MSP from different perspective.
- Regional stakeholders of Central Macedonia need to build further their capacity over MSP and therefore become more acknowledged with MSP specific matters, including those related to the North Aegean Sea.
- Limited data availability and accessibility represent a critical issue for negotiation and decision-making in MSP in Central Macedonia. A marine geo-database

should be created and permanently maintained and updated to address this issue.

Concerning the MSP process per se, following gaps and challenges have been identified:

- The already drafted MSP plan for marine unit 1 needs to be approved as soon as possible, to make official a place-based planning approach in the North Aegean Sea, integrating sectoral and environmental plans that already exist in the area.
- After its approval, this plan needs to be further detailed for the marine parts of the Central Macedonia Region (one of the four sub-units of the North Aegean Sea unit), taking into consideration local needs and priorities.
- Concerning the previous point, the main MSP goal in Central Macedonia is to achieve optimal organization and growth of existing marine sectors (especially aquaculture, maritime transport and marine and coastal tourism), without undermining the ecosystem service, in particular in the sensitive semi-closed gulfs.
- Among the many gulfs of the Region, Thermaikos should receive special attention, due to the occurring great pressure caused by several uses and infrastructure (an international port, a large metropolitan area, agriculture on land, aquaculture at sea, etc.).
- Important LSI need to be addressed when dealing with MSP, in particular at the regional and local scale, such as coastal erosion and the interaction of the coastal urbanized areas with the sea (in Thessaloniki and other tourism-oriented urbanized coasts).

10. County of Mayo

Mayo is a county located in the Northern and Western Region on the west coast of Ireland. Mayo has the longest coastline in Ireland, at 1,168 km or approximately 21% of the total coastline of the State, stretching from Killary Harbour in the south to Killala Bay in the north.

The Maritime Area Planning Act (MAP Act) 2021 provides the legal underpinning to an entirely new marine planning system. It enables, for the first time, regulation of Ireland's maritime area outside 12 nautical miles. This relatively new piece of legislation provides a statutory basis for marine spatial planning, development management, licencing and enforcement in our maritime area. It removes barriers in the permitting and consenting process, while ensuring a more facilitative and supportive planning framework, which is essential to achieving our green transition as quickly as possible.

Mayo County Council's functional area now extends into the maritime area, out to 3 nautical miles. This part of the maritime area is identified as the nearshore. The maritime area beyond three nautical miles is termed the outer maritime area.

The MAP Act legislates for the national marine spatial plan and for sub-national marine spatial plans, called Designated Maritime Area Plans (DMAPs). The Minister for Housing, Local Government and Heritage is the competent authority for marine spatial planning. The National Parks and Wildlife Service, also under the auspices of the Department of Housing, Local Government & Heritage has responsibility for heritage and conservation including the designation of Natura 2000 sites. New legislation for designating Marine Protected Areas is currently being prepared.

Ireland's national marine spatial plan is the National Marine Planning Framework (NMPF). It was established in line with EU Directive 2014/89/EU. The NMPF is a national plan for Ireland's seas, setting out, over a 20-year horizon, how we want to use, protect and enjoy our seas. The NMPF sits at the top of the hierarchy of plans and sectoral policies for the maritime area. The plan has been informed by existing sectoral plans and will, in turn, be used to inform future cycles of those plans in an ongoing feedback loop. It provides a coherent framework in which those sectoral policies and objectives can be realised.

A DMAP is a forward-looking sub-national marine plan that will contribute to the overall management of the maritime area. DMAPs will be consistent with the Marine Planning Policy Statement (MPPS), the NMPF and any other relevant Ministerial guidelines or policy directives. DMAPs will support sustainable development of the maritime area and facilitate coherent and transparent decision-making. A DMAP can have a sectoral or multi-sectoral focus and when adopted becomes part of the national marine planning framework. There is an opportunity to deliver DMAPs at the regional or local level to guide activity and development in the nearshore. This paves the way for plan-

led development of offshore renewable energy. Work on developing DMAPs for offshore renewable energy has commenced. However, at present this only relates to the south coast of Ireland and therefore does not include the case study area of County Mayo.

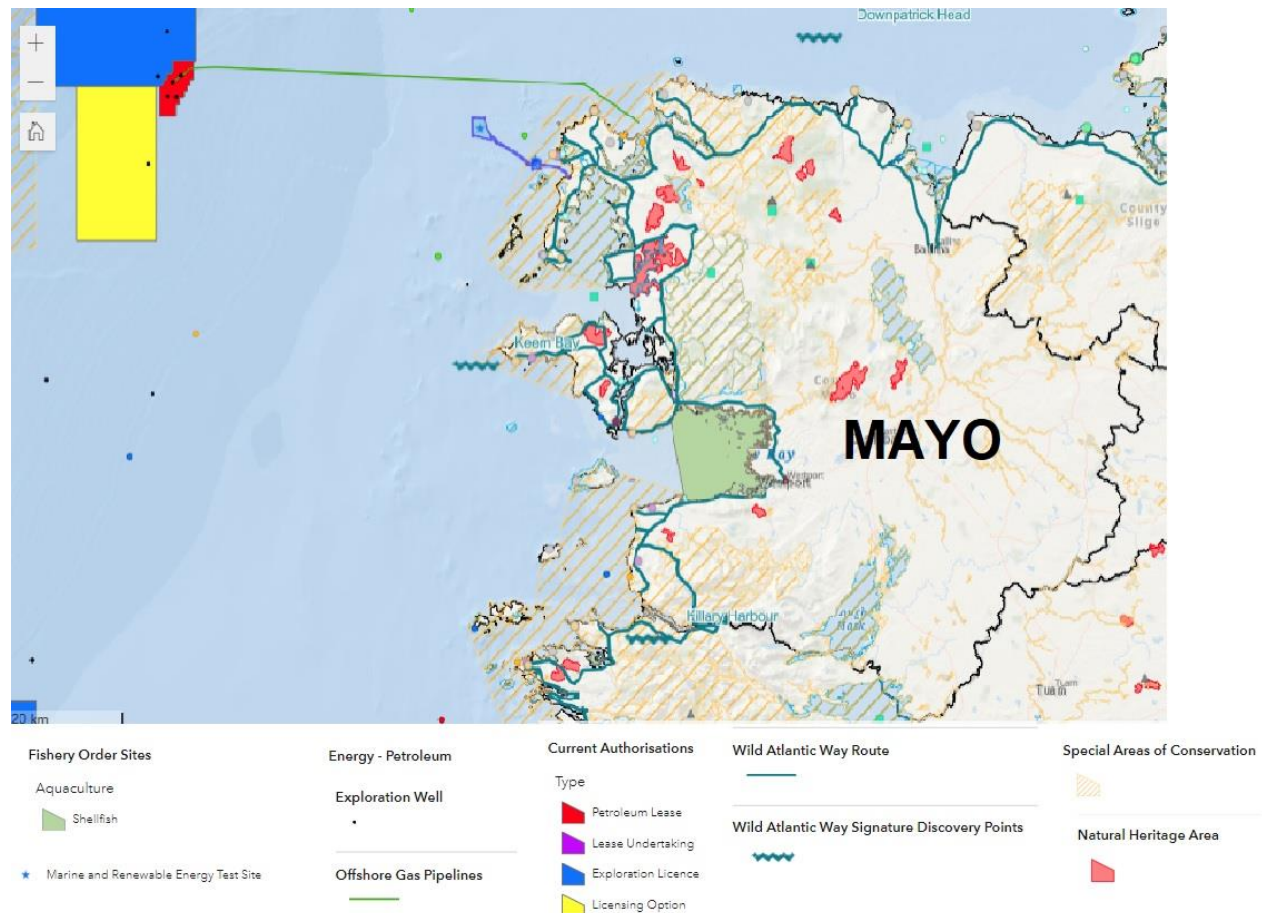


Figure 38. County of Mayo case study area and main marine used and activities (Source: <https://marineplan.ie>).

10.1 Analysed plans and strategies

Four statutory cross-cutting plans and strategies were identified and analysed. Ireland adopted its Maritime Spatial Plan, the National Marine Planning Framework (NMPF) in June 2021. There are currently no marine spatial plans at sub-national level (regional or local). However, there is a comprehensive hierarchy of terrestrial plans that include policy objectives for coastal areas and therefore address land-sea interactions. These include the National Planning Framework (NPF) (the terrestrial equivalent to the

NMPF), the Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region and Mayo County Development Plan (CDP).

The NMPF is the overarching framework for decision-making that is consistent, evidence-based and secures a sustainable future for the Ireland's entire maritime area. The NMPF is the state's inaugural step towards plan-led development of the maritime area. The framework, bringing together all marine-based human activities, presents the Government's vision, objectives and marine planning policies for each activity while recognising that our biodiversity-rich marine environment requires robust protection. It details how these marine activities will interact with each other in an ocean space that is under increasing spatial pressure, ensuring the sustainable use of our marine resources to 2040. The NMPF is the key consideration for decision makers on all marine authorisations.

The RSES, a 12-year strategy, provides a high-level development framework for the Northern and Western Region that supports the implementation of the NPF and aims to deliver transformational change. The RSES re-iterates that there must be consistency between land-based and ocean-based planning which supports both the Marine Environment and Marine Economy. The CDP sets out the roadmap for the overall proper planning and sustainable development of County Mayo for the period 2022 to 2028. It includes statutory planning policy to guide future development.

Conservation plans for 36 Natura 2000 sites were identified (22 SACs, 14 SPAs). These sites include site-specific conservation objectives. European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies including planning authorities are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites. In addition, there is a nationally designated Natural Heritage Area and two Ramsar sites.

Three sectoral plans and strategies that are of relevance to the case study have been identified. All of these strategies are strategic in nature and are not legally binding. However, they inform the policy objectives of statutory land use plans such as the RSES and CDP and in time will inform the development of statutory designated maritime area plans.

The Offshore Renewable Energy Development Plan (OREDPA) identifies the opportunity for the sustainable development of Ireland's abundant offshore renewable energy resources. It sets out key principles, policy actions and enablers for delivery of Ireland's significant potential in this area. The National Strategic Plan for Sustainable Aquaculture Development 2030 (NSPSA) provides a strategy for the sustainable development of aquaculture in Ireland over the next decade and framework for funding under EMFAF, as well as other EU and national initiatives. Aquaculture has

grown from a cottage industry in the 1980's to now producing around 40,000 tonnes of high value finfish and shellfish and employing around 1,800 people mainly in rural locations. The Wild Atlantic Way Regional Tourism Development Strategy 2023 – 2027 sets out a strategic approach to unlock the commercial potential of the Wild Atlantic Way while ensuring that this development is sustainable, that the benefits accrue to local communities, and that our natural environment is protected. The strategy includes objectives for land and sea and illustrates the interactions and dependencies between land and sea for the tourism sector.

Main characteristics and considered sectors of the analysed strategies and plans are summarised respectively in the first and second table below.



Title	Scale			Legally binding		Typology			Measures included
	Local	Regional	National	YES	NO	Strategic	Regulating	Both	
Category 1: cross-cutting plans and strategies									
National Marine Planning Framework (NMPF)			X	X				X	
National Planning Framework (NPF)			X	X		X			
Regional Spatial and Economic Strategy (RSES)		X		X		X			
Mayo County Development Plan (CDP)	X			X			X		
Category 2: protection and conservation-oriented plans and strategies									
SACs	X	X		X			X		
SPAs	X	X		X			X		
Natural Heritage Area	X			X			X		
RAMSARs	X	X		X			X		
Category 3: Plans for economic sectors and other marine uses and activities									
Offshore Renewable Energy Development Plan (OREDPA)			X		X	X			
National Strategic Plan for Sustainable Aquaculture Development 2030 (NSPSA)			X		X	X			
Wild Atlantic Way Regional Tourism Development Strategy 2023 - 2027		X			X	X			

Deliverable 3.1. Reginal analysis report



Title	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC	
Category 1: cross-cutting plans and strategies																			
National Marine Planning Framework (NMPF)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
National Planning Framework (NPF)			X	X		X	X								X	X	X		
Regional Spatial and Economic Strategy (RSES)			X	X												X	X		
Mayo County Development Plan (CDP)			X	X												X	X		
Category 2: protection and conservation-oriented plans and strategies																			
SACs																	X		
SPAs																	X		
Natural Heritage Area																	X		
RAMSARs																	X		
Category 3: Plans for economic sectors and other marine uses and activities																			
Offshore Renewable Energy Development Plan							X												
National Strategic Plan for Sustainable Aquaculture Development		X																	
Wild Atlantic Way Regional Tourism Development Strategy			X	X															

FI = Fishing, AQ = Aquaculture, TO = Coastal and maritime tourism, RA = Recreational and leisure activities, MT = Maritime transport, PA = Port activities, MR = Marine renewable energy, OG = Oil and gas exploration and exploitation, MA = Marine aggregates (sand extraction for beach nourishment and construction), DM = Deep sea mining infrastructures and robotics, PC = Pipelines and cables, MD = Maritime defence, DA = Dumping areas (e.g. for sediments or munitions), RI = Research and innovation, CP = Coastal protection, NP = Nature protection, LP = Landscape protection, UC = Underwater cultural heritage

10.2 Cross-cutting plans and strategies

The NMPF is the overarching policy framework for decision making and is therefore the primary consideration for decision makers on all marine authorisations across the Irish maritime area including Mayo. It includes 32 overarching planning policies (social, economic and environmental) that will apply to all development / maritime usages in the maritime area. Overarching Marine Planning Policies (OMPPs) apply to all proposals capable of having impacts in the maritime area. They apply equally to proposals that would be located in the maritime area, and to proposals that would be located outside of the maritime area but capable of having an impact in the maritime area. An example of the latter would be land-based development in a port that would support an offshore activity such as renewable energy.

In addition to this, there are a range of sectoral marine objectives and planning policies. These relate to aquaculture; defence and security, energy; fisheries; mineral exploration and mining; ports, harbours and shipping; safety at sea, seaweed harvesting, sport and recreation, telecommunications, tourism, wastewater treatment and disposal. All applications for maritime development in the region will have to be considered in accordance with these objectives. A central planning objective of the NMPF sectoral policies is that marine related development proposals must demonstrate that they will, in order of preference: (a) avoid, (b) minimise, or (c) mitigate significant adverse impacts on the subject matter of the policy.

The Framework also includes co-existence policy requiring maritime proposals to demonstrate that they have considered how to optimise the use of space, including through consideration of opportunities for co-existence and co-operation with other activities, enhancing other activities where appropriate. Policies supporting land-based infrastructure are also included where this infrastructure facilitates marine activity; examples include passenger and tourism facilities, slipways, marinas, boat repair and freight/catch processing facilities. In addition, the Framework includes policy to support proposals for appropriate infrastructure that facilitates the diversification or regeneration of marine industries which is particularly relevant to Irish ports as they commence development programmes for a variety of offshore renewable energy (ORE) support structures.

Currently, the NMPF consists of a single plan for the entire Irish Maritime area, but it is envisaged that detailed regional plans will be made as the MSP process in Ireland evolves. Public consultations on the NMPF indicated that sub-national or regional marine plans would be desirable, similar in nature to regional marine planning in other jurisdictions such as France, Germany and the UK. While the focus of the NMPF, as the first spatial plan for Ireland, was necessarily focused on the entire maritime area, the Government is committed to the preparation of regional plans in future MSP plan

cycles. By definition, these plans would have a local aspect and could potentially provide for bay or harbour areas such as Mayo/Clew Bay.

The Government intends to develop the regional plan making process through a partnership approach, working with regionally grouped local authorities, appropriate Government bodies and regional stakeholders. Although this is the stated intention of the NMPF as regards the approach to regional plans; discussions and policy formulation remain ongoing in order to identify the most suitable planning strategies and solutions that best apply regionally.

The need to address land and sea interactions is recognised and policy is included to promote integration, co-ordination and coherence between land and marine planning systems. This approach is mirrored in the (land based) National Planning Framework, which dedicates a chapter on the shared aims and overlapping areas of coordination across the 2 plans. The NMPF also includes comprehensive environmental policies for biodiversity, protection of the marine environment, water quality and climate change, in addition to socio-economic policies addressing marine access, tourism, employment, and the preservation of marine-related cultural and heritage assets. In essence, the NMPF provides a comprehensive policy basis to guide future development of maritime usages in accordance with the objectives of marine spatial planning (Article 5 of the MSP Directive).

The NPF, the terrestrial equivalent to the NMPF, addresses land-sea interaction through a range of policies that inform the assessment of terrestrial development including land-based marine infrastructure. The NPF recognises that as an island nation, our marine environment is a national asset that yields multiple commercial and non-commercial benefits in terms of, for example, seafood, tourism, recreation, renewable energy, cultural heritage and biodiversity. The plan includes a high-level policy committing all terrestrial plans to take account of and integrate relevant maritime spatial planning issues.

The strategic development requirements of ports and harbours is identified in the NPF as something that should be addressed in regional and local plans. The plan recognises the need to support the sustainable growth and development of the maritime economy and continue to invest in the seafood sector and our Fishery Harbour Centres, particularly in remote rural coastal communities and islands such as the case study area.

The NPF acknowledges the challenges the coastal areas are facing in terms of sea level rise and coastal flooding and erosion and supports the implementation of adaptation responses in vulnerable areas. The plan supports the progressive development of Ireland's offshore renewable energy potential, including domestic and international grid connectivity enhancements. The Framework requires the planning system to be responsive to our national environmental challenges and ensure that

development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.

The CDP and RSES are specifically tailored to regional and local policy. The CDP has a section dedicated to the Coastal Zone Corridor in County Mayo. It recognises that Mayo has an extensive and varied coastline, which is one of the most valuable and sensitive resources in the county. The Plan notes that coastal areas also support a diverse array of related industries such as fisheries and aquaculture, tourism, shipping and gas industries, which generate enormous economic productivity. The Plan acknowledges that the Wild Atlantic Way is an important initiative that has showcased how the natural beauty of this landscape has contributed to the economic development of the coastal corridor in recent years. Significant potential exists to harness the marine resources along the County Mayo coastline for recreation and leisure; transport; renewable energy; and appropriate industry. The CDP considers that Mayo is strategically located to grow the ‘blue economy’ not only in County Mayo but also at a regional and national level. Economic growth in the marine sector is recognised as having the potential to create employment and increase prosperity in all parts of the County, most particularly in coastal communities. There is a specific section dedicated to the Marine Economy (Section 4.4.11). It is noted that “new world demands in terms of food supply, energy security, biotechnology and climate change identify the coast as the focus of sustainability. The role of the Marine Section of Mayo County Council is to bring a stronger strategic focus on all aspects the marine with a view to leveraging our extensive marine resources to build a vibrant competitive marine sector in Mayo”. The Plan hopes to leverage the emerging blue economy sectors such as offshore energy, marine biotechnology and the area of research and development while also prioritising support for the more traditional marine activities such as fishing, aquaculture and leisure, in terms of investment and infrastructure, to build vibrant and sustainable coastal communities.

The RSES notes that Mayo is the home of the Newport Research Cluster which is involved in ground-breaking research in marine biotechnology, climate change and water quality. The Strategy includes policy to enable the expansion of the region’s assets in the blue economy including in marine research and innovation, seafood innovation and marine renewable energy.

10.3 Protection and conservation-oriented plans and strategies

The west coast of Ireland is notable for its rich biodiversity and this is evident in the high number of conservation plans / statements for protected sites. Conservation plans for in excess of 30 marine-related Natura 2000 sites located in or adjoining Mayo were

identified. These plans are directly related to the management of protected sites and identify the qualifying interests or conservation features for which the site was designated. The Natura 2000 network provides an ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European Sites which include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In addition to these European designations County Mayo plays host to a nationally designated Natural Heritage Area (NHA). In addition, there are two sites designated under the Ramsar Convention on Wetlands. The NHA and Ramsar sites overlap and share objectives with an SAC or SPA.

Many of the sites identified overlap in terms of location. They relate to a range of habitats including but not limited to sea cliffs, coastal sand dunes, coastal lagoons, salt meadows, coastal estuarine sites, as well as to protected species such as the bottlenose dolphin, wintering migratory water birds, etc. Each SAC or SPA, the most common designations in Mayo, is typically underpinned by a number of elements: (a) a statutory instrument establishing the designation in Irish law and setting out where the designation applies, what it is a designated for and what activities in particular might be regulated; (b) a site synopsis describing the site and what is being conserved; (c) site-specific conservation objectives. These elements make up the 'plan' for these sites. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived. European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies including planning authorities are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

These conservation plans, made up of elements (a)-(c) described above, are essential to ensure that the development of the maritime area and maritime usages does not adversely affect the integrity of Special Areas of Conservation and Special Protection Areas. They contribute to the environmental pillar of MSP and seek to reverse the decline of biodiversity. The conservation plans and the corresponding heritage and planning legislation represent strong measures to maintain biodiversity and prevent habitat destruction.

The National Parks and Wildlife Service (NPWS) maintains individual web pages for every designated site. As well as elements making up the conservation plan, these sites include studies particular to sites and / or species as well as details of monitoring programs where they have been established along with related results. The presence, absence and extent of research and monitoring information varies considerably from site to site, correlating somewhat to the length of time the site has been delegated.

10.4 Plans for economic sectors and other marine uses and activities

Effective MSP should be informed by detailed strategies for economic sectors and marine uses. These strategies set out the vision and objectives for these particular sectors. They inform the vision for MSP and help planning authorities to anticipate the likely interactions, pressure for certain activities and potential conflicts. This knowledge is essential for putting in place effective policy and management measures. Sectoral plans for offshore renewable energy, aquaculture and tourism were identified. All of these sectors have relevance for the case study.

The Offshore Renewable Energy Development Plan (OREDPA) and potential successor, the draft OREDPA II, identify the opportunity for the sustainable development of Ireland's abundant offshore renewable energy resources. The draft OREDPA II sets out key principles, policy actions and enablers for delivery of Ireland's significant potential in this area. The process for Designated Maritime Area Plans (DMAPs) DMAPs will include a more detailed analysis of the conditions of the relevant maritime area on a regional and local basis. Analysis of the water depths off the Mayo coastline and the west coast in general indicate that floating offshore wind is the most likely type of offshore renewable energy that will eventually be deployed in this maritime area.

The OREDPA sets out several spatial elements, frequently referring to the EU MSP Directive and setting out how that has been implemented in Ireland, for example explaining how spatial designations for specified areas and activities including ORE and emerging renewable energy technologies will be achieved through DMAPs. A key spatial principle stated in the plan is that "proposals and decision making for ORE must promote the objectives of good maritime spatial planning and ensure the sustainable development of Ireland's maritime area."

An example of a non-spatial measure for land-sea interactions outlined in OREDPA II would be the Seafood / ORE Working Group, which was established by the Minister for Housing, Local Government & Heritage in July 2022 to facilitate discussion on matters arising from the interaction of the seafood and ORE industries, to promote and share best practice, and to encourage liaison with other sectors in the marine environment. While the eventual outputs and conclusions of the group will influence spatial elements, the forum itself is an example of a non-spatial strategy to assist the integration of ORE with existing uses.

Aquaculture is an established marine activity in County Mayo. There is an extensive fishery order in Clew Bay for shellfish (oysters and mussels). There are numerous smaller aquaculture sites along the coastline particularly in sheltered inlets. The Draft National Strategic Plan for Sustainable Aquaculture Development 2030 (NSPSA) provides a strategy for the sustainable development of aquaculture in Ireland over the next decade and framework for funding under EMFAF, as well as other EU and national

initiatives. Aquaculture has grown from a cottage industry in the 1980's to now producing around 40,000 tonnes of high value finfish and shellfish and employing around 1,800 people mainly in rural locations. The strategy acknowledges that planning for the strategic growth of the industry is a critical task in the period ahead and recognises the important of MSP in addressing that challenge.

Navigational considerations are essential for the siting of aquaculture. The correct placement of farms is essential for ensuring the operational efficiency of fisheries, the protection of farm property, and the safe navigation of other vessels. The NSPSA supports coexistence and notes that the successful coexistence of aquaculture and tourism must be promoted. This is particularly important for Mayo, where coastal communities are reliant on aquaculture and tourism. The strategy recognises that it is essential that spatial and other information on proposed, and active aquaculture activities is made available to the wider marine spatial planning process. Equally it is important that aquaculture planning is able to access and utilise spatial and other information on non-aquaculture activities and interests (including conservation areas) in order to both avoid any conflicts, as well as develop co-location synergies where appropriate.

The Wild Atlantic Way Regional Tourism Development Strategy 2023 – 2027 is a roadmap for the tourism industry and all stakeholders involved in the region to navigate the current challenges and steer a course towards recovery and future success. It sets out a strategic approach to unlock the commercial potential of the Wild Atlantic Way while ensuring that this development is sustainable, that the benefits accrue to local communities, and that our natural environment is protected. The Wild Atlantic Way was launched in 2014 in response to a crippling global recession which left the tourism industry on the west coast of Ireland facing sustained challenges with declining coastal communities and a tourism season of no more than six weeks in many places. The brand was designed to create a product of scale that would re-imagine the west coast. It would unify it through a continuous, defined route and package it in a way that would motivate visitors to holiday there, and provide an economic engine for the west.

As regards land-sea interactions and associated tourist-derived pressures on same, Fáilte Ireland's extensive monitoring of the effects of tourism to date has shown predictors of impact occurrence to include site type, group type, the number of activities, activity intensity, and the interaction between activity intensity and abundance. Site management must consider these factors in seeking to reduce the potential for impacts to occur and to remove impacts. This is an important spatial consideration identified in the document.

The plan also addresses green infrastructure, which can be defined as a strategically planned network of natural and semi-natural areas. In contributing towards outcomes

under the strategies, partners and stakeholders contribute towards the maintenance of existing green infrastructure and its ecosystem services, taking into account the output of the Mapping and Assessment of Ecosystem Services project being undertaken by the National Parks and Wildlife Service (NPWS). Proposals for the development of any green infrastructure should demonstrate the synergies that can be achieved with regard to the provision of open space amenities, sustainable management of water, protection and management of biodiversity, protection of cultural heritage, and protection of protected landscape sensitivities. This has a spatial element regarding specific site networks, but also a non-spatial element in that it prioritises good environmental practices.

10.5 Elements of contribution to the EU Green Deal and sea-basin strategies

The more recent plans and strategies include policy which contributes to the EGD. There are references to climate change and the associated challenges but also an acknowledgement of the opportunities. The Atlantic Strategy identifies challenges and opportunities for countries in the Atlantic Region and the Atlantic Action Plan sets out practical steps to boost the areas sustainable blue economy. The plan has enabled a number of projects and funding streams to unlock the potential of the blue economy while preserving marine ecosystems and contributing to climate change adaptation and mitigation. There is limited reference to the Atlantic Strategy in the plans that have been analysed.

The NMPF includes strong policies and objectives to support decarbonisation of energy, facilitate ORE and protect the marine environment. A number of additional objectives are included to support Ireland's decarbonisation journey through increased use of ORE. Specifically, the Plan includes an objective to support proposals that assist the State in meeting offshore renewable energy targets, including the target of achieving 5GW of capacity in offshore wind by 2030. There are 21 policies relating to ocean health and environmental protection. These include policies on biodiversity, protected marine sites, water quality, non-indigenous species, sea-floor integrity, marine litter, underwater noise, air quality and climate change. In terms of the Atlantic Strategy, the NMPF includes policy that requires transboundary consultation and co-operation on proposals that have potential transboundary impacts.

The RSES notes that the Green Deal can be seen as a new growth strategy. It further notes that, above all, the EGD sets a path for a transition that is just and socially fair. It recognises that involvement and commitment of the public and all stakeholders is crucial to its success. It is designed in such a way as to leave no individual or region behind in the great transformation ahead. There is no specific reference to the Atlantic Strategy in the RSES.

Climate change is an integral theme in the Mayo CDP. The Plan promotes the sustainable development of County Mayo and makes many references to key elements of the EGD including protecting the environment, promoting the development of renewable energy and including a policy ‘to transition to a low carbon and climate resilient county’. Mayo County Council has adopted and is implementing a Climate Adaptation Strategy.

The OREDP’s central vision is outlined in the context of Ireland’s transition to a low-carbon, climate-resilient and environmentally sustainable economy within EU and global frameworks. OREDP states that Ireland’s significant ORE potential will play a vital role in phasing out fossil fuels, and in delivering a reliable supply of safe, secure and clean energy, which is a key objective of the EGD. The Plan also recognises the importance of protection and conservation of marine biodiversity.

The National Aquaculture Strategy refers to EU and national policy objectives, including preserving ecosystems and biodiversity and contributing to the fight against climate change. In this context it acknowledges that the EGD provides an action plan to boost the efficient use of resources by moving to a clean, circular economy and restore biodiversity and cut pollution.

The Wild Atlantic Way Tourism strategy does not contain any references to the EGD. However, a full chapter on sustainability, climate action and sustainability strategy is included in the plan. This chapter outlines that the principles of sustainable tourism have been placed at the heart of the Strategy through the adoption of the VICE Model for Sustainable Tourism. The VICE model focuses on the interaction between Visitors (V), the Industry (I) that serves them, the Community and culture that hosts them (C) and their collective impact on and response to the Environment (E) to guide the future sustainable development of tourism.

The plan does mention climate action in the context of The Paris Agreement on Climate Change and also under Ireland’s Climate Action Plan 2021 (since updated)- stating that sustainable tourism in the Wild Atlantic Way must keep within environmental capacities and ensure tourism activities do not impact negatively on sensitive environments, habitats and species, or on local communities. The plan also emphasises that the quality, character and distinctiveness of natural heritage and cultural assets are protected, and expresses support for any development that enhances and protects the wildness of the landscape. Fáilte Ireland is also committed to the objective of decarbonising the tourism sector, stating that they will address the significant challenges faced by tourism businesses over the next five years to reduce their CO₂ emissions. Fáilte Ireland will work with a number of other State agencies, such as the Sustainable Energy Authority of Ireland (SEAI) and industry groups to support the industry in reaching these carbon reduction targets, and adhere to all EU and National climate action plans during the lifetime of this strategy.

Ireland has yet to determine if sub-national plans will be done regionally or nationally. As the majority of sub-national forward planning will be developed through the DMAP process and the NMPF sets forth the concept that a lead local authority can be appointed for regional planning, local authorities such as Mayo County Council may opt to prepare a DMAP for their nearshore. All DMAPs will be consistent with the NMPF and therefore contribute towards the Green Deal.

10.6 Elements about stakeholder engagement

The statutory marine and terrestrial plans including the NMPF, NPF, RSES and Mayo County Development Plan all incorporated extensive engagement and public consultation as part of their preparation. Consultation reports on submissions were prepared to respond to the issues raised in submissions. An MSP Advisory Group was established involving key marine stakeholders to inform the development of policy for the NMPF. It is hoped that this group will have a role to play in informing the development of future DMAPs.

Non statutory strategies also engaged in stakeholder engagement. The type and extent of engagement varied between the plans and strategies. In general, all sectoral strategies targeted their sectoral stakeholders.

The conservation plans for Natura 2000 sites are not consulted on prior to notification. There is a statutory notification process after the site is proposed for designation. This is a science led process with limited opportunity for meaningful participation.

10.7 Persisting gaps in the integrated planning and management of the sea space

The analysis of plans and strategies has shown that there is a comprehensive range of high level statutory marine policy and non-statutory marine sectoral policy that is relevant for the County of Mayo. There is also a comprehensive hierarchy of terrestrial planning policy much of which recognises the potential of the blue economy to contribute to regional development.

Outside very specific marine-related conservation designations and objectives, SPAs and SACs in particular, the analysis highlights the absence of sub-national (regional and local) maritime policy in the County of Mayo. The national marine spatial plan is a high-level document and therefore limited in terms of a regional focus or spatial policy approach. MSP is a tool that can be used to harness opportunities and deliver sustainable development. Additional marine policy with a specific spatial focus is required to guide development into the right locations. In particular, there is an opportunity to capitalise on high level sectoral policy and identify tailored local policy responses that include a spatial element. For example, The National Aquaculture

Strategy noted that there was potential for future aquaculture sites to be designated through MSP.

Under the MAP Act 2021 the Minister may designate one or more public bodies to be a competent authority for the purposes of preparing and publishing a DMAP. Local Authorities will be responsible for adopting DMAPs that cover the local nearshore. All other DMAPs will require approval by the Houses of the Oireachtas (parliamentary approval). This process will facilitate the delivery of MSP at the local and regional level. For example, Mayo County Council will have an opportunity to develop a marine spatial plan for their nearshore. The Minister for Environment, Climate and Communications is the competent authority for plans in relation to Offshore Renewable Energy. The first South Coast DMAP will designate an area for ORE off the south coast of Ireland with other coastal regions being looked at in due course.

The case study relates specifically to the Mayo coastline and maritime area. However, it is apparent from the analysis that the area would benefit from a regional approach to marine spatial planning that captures the common themes (water depths, environmental designation, port infrastructure to name but a few) along the west coast and identifies opportunities for an integrated spatial policy response. It is also apparent that marine spatial planning should be driven by marine geography and natural ecosystems in order to be meaningful. More detailed local policy may prove necessary to guide the development of coastal infrastructure.

A commitment to gathering and analysing further data, particularly in terms of the marine environment outside designated areas, is needed to determine a suitable evidence-based spatial policy response for marine activities that harnesses the potential of the blue economy for the region and creates a pathway for sustainable marine development. Monitoring programmes should be developed as part of local and regional marine spatial plans, building upon those in place for designated areas where they exist. The sharing of data is essential for the development of effective policy and for the assessment of development proposals.

The analysis found that there is economic data available for maritime activities but this is mostly on a national scale. This data needs to be broken down to regional and local level to inform the development of MSP at this level. This will facilitate the effective integration of sector-based plans into MSP.

With regard to land-sea interactions, the terrestrial plans include some policy but this is an area that will require further attention as regional and local marine policy is developed. The legislation for marine spatial planning extends from the high water mark meaning that terrestrial and marine plans do not overlap. This can create challenges for addressing land-sea interactions and therefore it is imperative that adequate consultation is carried out in the development of plans and that there is consistency in the approach between land and marine plans. The development of sub-

national or regional marine spatial plans needs to ensure that there is consistency in the policy approach for marine activities that have land dependencies. For example, the development of offshore wind will require supporting infrastructure on land including operation and maintenance bases, storage areas for turbines etc. The policy included in terrestrial plans including land zoning policies needs to be cognisant of these requirements. Similarly, seafood processing will require land infrastructure and this needs to be taken into account in the development of local planning policy.

11. Cross-case studies analysis: commonalities and persisting gaps and challenges

The overall analysis across the eight case studies considered 140 plans or strategies. Given the great majority it is not majority of analysed items addresses the local (57) or the regional scale (57). 33 plans and strategies deal with the national scale, however including provisions relevant at the regional level, while 3 items are related to the transboundary dimension²¹. 64% of plans and strategies are legally binding. 45% have a strategic nature, while a relative limited number (21%) is purely regulatory; the remaining 33,6% have both strategic and regulatory orientation.

Figure 39 shows the number of analysed plans and strategies providing planning elements for the major maritime sectors and human activities at sea. Nature protection is the one mostly addressed, reflecting the high importance of habitats and biodiversity conservation as a cross-cutting elements in several plans (not only those included in category 2). This is also due to the high number of areas interested by different protection regimes occurring in some of the case studies (e.g. Sardinia and PACA). Landscape protection and coastal protection are also well represented in several plans and strategies, probably for their cross-cutting nature and importance for key economic sectors as tourism in particular.

Most addressed sectors are those of great importance at the regional and local scale for their socio-economic implications for local communities, i.e.: tourism, recreational activities, fishing and aquaculture. These are sectors for which competences are often given to Regions and therefore for which regional plans and strategies often exist. Sectors with a more pronounced national dimension (such as those related to energy production) are less represented in the analysed plans and strategies. Even other sectors have mainly a national competence, but also important socio-economic effects at the regional level. This is typically the case of port activities, which is considered in 60 of the analysed plans (of regional or national scale). Finally, a few emerging (e.g. extraction of marine aggregate and deep-sea mining) or specific and highly localised uses of the sea (e.g. dumping areas, maritime defence or pipelines and cables) are less represented in the considered plans.

²¹ The sum of items per scale is slightly different from the total number of analysed plans and strategies, as a few of them address multiple scales.

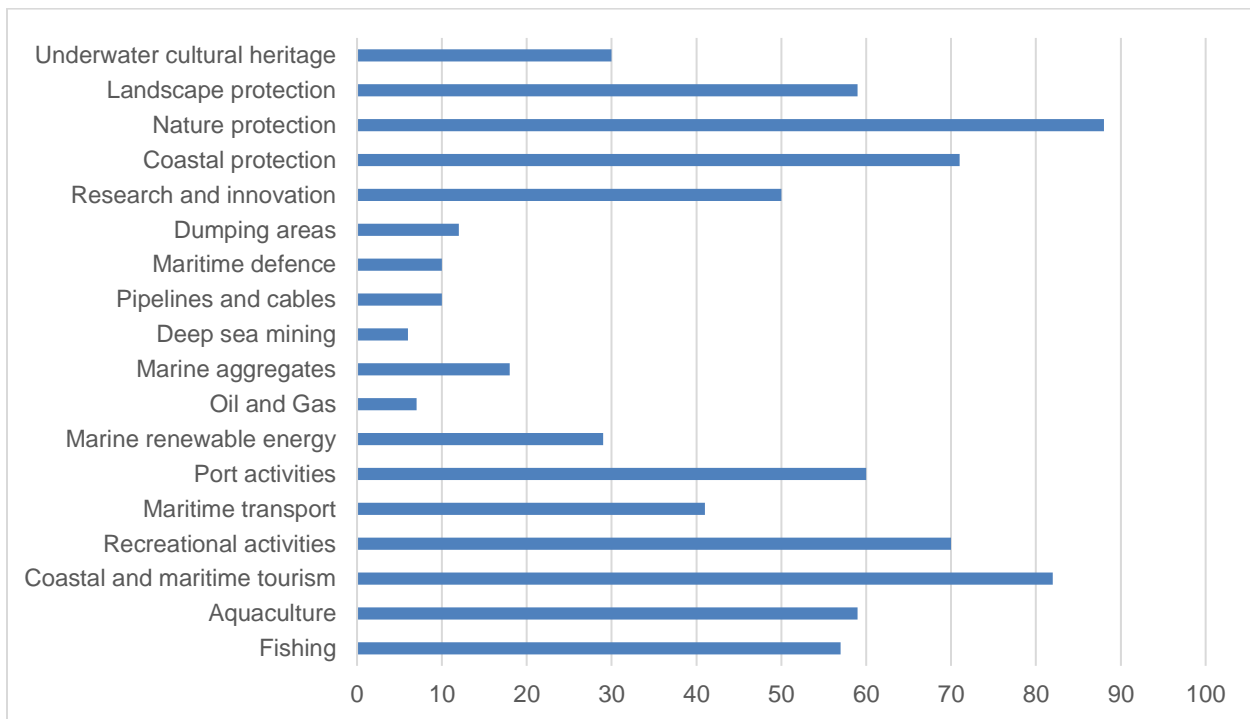


Figure 39. Number of plans and strategies per maritime sectors (Source own elaboration, CNR-ISMAR).

The ultimate objective of REGINA-MSP Task 3.1 and its final deliverable (this report) is to collect and discuss information at the case study level on main cross-cutting and sector-based plans and strategies including spatial and regulatory provisions relevant for the integrated management of the sea space and its resources at the regional and local scale. This analysis provides basic information for other activities of the project, with particular concern to those addressed in Task 3.3 and 3.4. Given the scope of task 3.1, case study chapters are quite heterogenous in terms of contents, rightly to property capture local specificities and match the needs emerging from the local communities in terms of marine planning and management. Cross-case studies elements have been extracted thanks to the shared adopted approach and to the common chapters structure, in particular pointing to persisting gaps and challenges. Some of the identified gaps and challenges will be tackled in the other WP3 tasks, in particular referring to: (i) actions needed to strengthen the role of the regional and local levels and improve the integration of regional and local plans and strategies into MSP (task 3.4); and (ii) improvement in the involvement of regional and local stakeholders, including weaker ones, in MSP (task 3.3).

Integration of regional and local plans and strategies into MSP

MSP is recognised as an overarching framework for the coherent integration of cross-cutting and sector-based plans and strategies defined at different governance levels

(from national to sub-regional). The level of integration of regional and local plans and strategies into MSP depends on the role of Regions into the MSP process, greatly varying from country to country: from role as primary actor in MSP (co-development), to consultation along the entire process, to no involvement at all. Other factors influencing plans' integration are the date of release and approval of plans, and strategies and their spatial scale of application.

Lack of operational integration of regional and local plans and strategies into MSP was observed in some cases. Indeed, MSP plans have a prevalent strategic nature and often remain broad and lack operationalisation, leaving room for interpretation by regional and local authorities. In some cases, a mismatch can be observed between regional (cross-cutting and sector-based) guidelines and the real dynamics of maritime activities occurring at the local level; there is the need to strengthen the operationalisation of regional guidelines through sub-regional planning instruments, thus providing a real framework for action on the ground. Next cycles of MSP will provide the concrete opportunity to better transfer MSP provisions from the national scale to the regional and local levels, thus strengthening the coherent integration with other regional and local plans/strategies. At the same time, regional and local plans and strategies can provide operational instruments for the implementation of MSP provisions at the sub-national scale.

Regional and local plans or strategies are not defined for all cross-cutting elements and/or maritime sectors. In these cases, challenges arise from the lack of objectives and measures established at the case study level. National objectives and measures – also defined by the MSP plans – can only partially fill this gap. The development of strategies and plans considering regional specificities – in harmony with the MSP process – is needed to support a regionally-based sustainable blue economy development in line with the objectives of environmental protection.

Knowledge-base for MSP across scales

As also remarked by the EU MSP Directive, planning and management of the sea space should be based on robust, updated and reliable data and information. Although it is commonly recognised that data unavailability does not represent a major concern for MSP, lack or limited availability of specific typologies of data can hinder the operational implementation of specific MSP aspects relevant at the regional and local level, as for example the spatial management of small-scale fisheries, recreational fishing, leisure boating or preservation and valorisation of UCH sites. Limited availability of data can also concern environmental components, as typically benthic habitats. Socio-economic data at the sub-regional scale on maritime uses are also of great importance for decision making within MSP. Some uses are in general well characterised from a socio-economic perspective (e.g. aquaculture or fishing), while for others data are quite fragmented (e.g. tourism or recreational boating), requiring dedicated studies. For

some of the case studies, the analysis also highlighted the importance of including ecosystem services evaluation within MSP. As not all data are available at the regional scale, mechanisms and incentives to foster collaboration and information exchange between national and regional actors involved in MSP and to foster the contribution – in terms of data sharing – of all involved stakeholders are of paramount importance. Finally, the analysis underlined the importance of developing and maintaining MSP geodatabases addressing the regional scale, directly linking the scope and objectives of REGINA-MSP Task 3.2.

Several case studies remarked the importance of more detailed analysis of the spatial distribution of maritime uses and activities and related interactions (conflicts and synergies) to capture local specificities, gaps and needs, and eventually to advance proposals for more detailed MSP zoning and measures. This is typically the case of marine areas with a high density of uses (e.g. coastal areas, narrow bays, port areas, etc.), responsible for several mutual interactions and/or significant cumulative pressures and impacts on the environment. The analysis of cumulative pressures and impacts should be carried out with an appropriate resolution to support the correct identification of most affected areas; its feasibility surely depends on the availability of local data. A more detailed planning of the sea space in specific areas can better align MSP to the provisions of local and regional strategies and plans, improve social licensing at local level of the MSP plans and contribute matching local level expectations and ambitions.

More in depth analysis shall also include identification, mapping and evaluation of locally-relevant LSI, as for examples coastal erosion or flooding or the several interactions occurring between coastal urbanised areas and the marine environment. The development of sub-national or regional marine spatial plans needs to ensure that there is consistency in the policy approach for marine activities that have land dependencies. Climate change is perceived as a major factor shaping the future distribution of maritime uses and marine ecosystems, as well as of their mutual interactions. Climate change adaptation should be better incorporated into MSP plans, to reduce the vulnerability of marine habitats and maritime sectors also at the regional scale. High resolution models and tools are required to deal with this issue.

Stakeholder engagement

The analysis of stakeholder engagement aimed at highlighting major elements arising from the available sources of information, without pretending to provide details which would have required a dedicated project. Three typologies of situation were highlighted

referring to the availability of documented information, also reflecting the challenges in developing this part of the analysis at the case study level.

For some of the analysed plans and strategies, information on stakeholder engagement processes is documented and therefore available, at least to some extent (first situation). This is definitely the case of MSP plans, of other cross-cutting strategies or plans (e.g. ICZM or climate change adaptation ones), and more in general of planning processes which were recently implemented at the regional level. Stakeholders' participation varies from case to case and from plan to plan. In general, MSP processes have been effective in involving national governmental institutions and stakeholders. In some cases, regional administrations have been fully part of the co-generation process of MSP plans, while in others they have mainly played the role of stakeholders. Participation of national and regional public institutions into MSP normally occurred through councils, commissions, committees or other formalised frameworks. Major gaps are related to the proper involvement of local administrative organisations (departments, municipalities, etc.) and regional and local stakeholders (as economic operators from locally relevant sectors, NGO's members, the general public, etc.).

Sub-regional and local actors have been more efficiently engaged in the elaboration of some cross-cutting and sector-based plans with a remarked regional or even local dimension (e.g. regional landscape plans, management plans of marine protected areas or Natura 2000 sites, plans for the definition of Allocated Zone for Aquaculture, water management plans, bay contracts, etc.). Engagement processes and mechanisms set in place in these cases can provide good examples to support the involvement of local stakeholders and communities into MSP. In some cases, the ice-breaker or catalyst role of informal engagement processes to improve formal participation of regional and local stakeholders into MSP has been remarked.

For some plans and strategies, engagement and consultation of stakeholders is not properly documented (or at least such documentation is not immediately available), although this might have occurred (second situation). This can happen for older plans or for planning processes promoted by local actors which might lack the capacity, instruments or resources needed to collect and store information on the engagement processes. Finally, some of the considered plans and strategies do not even mention the topic of stakeholder engagement (third situation). In these cases, it is not possible to argue whether these have actually occurred or not.

Overall, the analysis of case studies highlighted the existence of a few valuable experiences of stakeholders' engagement into MSP at the regional level. Engagement of local stakeholders is even more limited, if not completely absent, also in consideration of the strategic and broad-scale nature of the 1st MSP cycle. A wider and more effective stakeholders' participation, also involving local communities and weaker

actors, still represents a major challenge. REGINA-MSP addresses these issues in other activities of the project. Task 3.3 aims at improving the participation of regional and local stakeholders in MSP through engagement events organised at the regional and local level, while WP4 will design and provide tools for improved ocean literacy, capacity building, training and exchange of knowledge and practices through the mechanism of Community of Practices (CoP). In some cases, the proliferation of consultation processes at different governance level hinder the effective participation of stakeholders (lack of resources and time, stakeholder fatigue, etc.); cooperation and coordination between the different public authorities involved in the planning and management of the sea is essential to this regard. Finally, the analysis has remarked the importance of properly documenting the process of stakeholders' engagement, which in some cases might have been successfully occurred but without collecting and organising related information and lessons learned.

Elements about contribution to the EGD

The analysis of plans and strategies relevant for the management of the sea space and its resources at the regional and local level investigated the way these can contribute to the EGD. We do not claim to be exhaustive and detailed in this analysis as this would require a dedicated project, rather to intercept and report some of the major links (or absence of links) between planning and management of the sea space at the regional level and the marine components of the EGD (i.e. related to climate change mitigation, climate change adaptation, sustainable food production, circular economy, biodiversity conservation and zero pollution) observed across the case studies.

MSP plans generally make direct reference to the EGD and include several links to its marine components. This occurs at various levels. Several EGD policies (e.g. the EU biodiversity strategy for 2030, the offshore renewable energy strategy, the European climate law and/or previous policies on climate change mitigation, the blue economy strategy, the circular economy action plan, the farm to fork strategy for sustainable food production, etc.) are directly referenced in several MSP plans. EGD overarching goals are recalled in MSP visions, while more detailed elements of the EGD are mainstreamed into the MSP objectives and measures for their implementation. Zoning can also directly or indirectly refer to EGD elements, as in the case of identification of priority or vocation areas for biodiversity protection, development of sustainable aquaculture or development of offshore renewable energy. The occurrence of explicit links between the EGD and MSP is likely determined by the strategic nature of the MSP plans and the recent timing of their preparation. However, the assessment of the effective implementation of the EGD objectives at the regional level through MSP plan is premature, given the very recent development of these plans. MSP plans have mostly a strategic nature and the implementation of its objectives – including those related to the EGD – highly depends on the capacity to operationalise them, also linking to other

cross-cutting and sector-based plans and strategies focusing on the regional and local scale.

Most of the other analysed plans and strategies were developed before the formulation of the EGD package, so only more recent and/or cross-cutting ones expressly mention it, while several others often include indirect references to the EGD objectives relevant for the management of the coastal and marine space and its resources. Indirect references imply the acknowledgement of the issues addressed by the EGD without directly referring to the quantitative and specific targets sets in its related policies. The regional or even local dimensions of several analysed plans and strategies also play a role. While EGD mainstreaming into national level plans and strategies is somehow progressing (although with differences and challenges), it is likely that its penetration into regional and local strategies and plans is still limited and mainly indirect. Regional and local level processes might still find difficult to link to such ambitious goals from an operational perspective.

Biodiversity and ecosystem protection are widely addressed by several of the analysed strategies and plans (including both those directly linking to the EGD - as the MSP plans - or those indirectly referring to the EGD components). Environmental restoration is also mentioned, although less frequently, referring to maintenance and restoration of green and blue corridors and to nature-based solutions by green infrastructures. Climate change is also widely considered; adaptation has in general a cross-cutting/cross-sector dimension, while climate mitigation aspects tend to focus on specific elements as offshore renewable energy development, green transition of shipping and ports or improved energy efficiency of specific sectors (e.g. fishing and aquaculture). Although contributing to reduce the greenhouse gas emission is an objective of several analysed strategies and plans, the target of “no net emissions of greenhouse gases by 2050” set by the EGD is specifically mentioned only in a few cases. Some plans also recognise and stress the importance of the strict nexus between biodiversity protection and climate change adaptation (and mitigation as well for some aspects, i.e. blue carbon habitats). Sustainable food production is also remarked as an important component of several plans and strategies relevant at the regional level, given the importance of aquaculture and fishing (including small -scale fisheries activities) for local communities. In very general terms, less addressed topics are those related to zero pollution and (blue) circular economy, although references to these two aspects are present in some plans or strategies.

The plans and strategies latest developed increasingly deal and integrate the EGD topics and objectives. As planning experiences move forward, EGD-related policies and strategies are being integrated in a more effective and efficient way in the national and regional plans. This is also the case of MSP. Next cycles of maritime spatial planning are expected to operationalise the strategic reference to the EGD objectives included

in the current version of the MSP plans, through concrete measures and actions having direct impacts on regional and local communities. They will also provide the opportunity to integrate most recent development of the EGD, as for example the quantitative targets set for the achievement of carbon neutrality by 2050.

Annex 1 - Common template for the inventory and cross-analysis of marine and coastal strategies and plans relevant for the regional and local level

Template for Category 1: Cross-cutting plans and strategies

Elements to be compiled	Text to be included
Name of the Region/Local area the plan refers to	To be compiled
Sea Basin	To be compiled
Scale of the available plan/strategy	<input type="checkbox"/> Regional/local <input type="checkbox"/> National
Title of the plan/strategy	To be compiled
Starting date of the plan/strategy	To be compiled
Expiration date of the plan/strategy	To be compiled
Time horizon considered by the plan	To be compiled
Responsible authority	To be compiled
Other authorities eventually involved in the plan implementation	To be compiled
Legal dimension of the plan/strategy: e.g. legally binding/guiding, strategic, etc. Shortly describe the relationship between this plan and higher and lower scale plans (if any)	To be compiled
Main scope of the plan	To be compiled

Elements to be compiled	Text to be included
Geographic scope of the plan/strategy	Include a description and / or a map
Economic sectors considered by the plan/strategy	To be listed
Plan/strategy objectives relevant for the sea and for land-sea interactions. Only those relevant for the regional/local level should be included (summarizing them if needed)	To be compiled
Spatial and non-spatial measures relevant for the sea and for land-sea interactions Only those relevant for the regional/local level should be included (summarizing them if needed)	To be compiled
Plan/strategy monitoring program.	If available, briefly describe, highlighting relevance for the marine components and land-sea interactions
Elements of contribution to the EU Biodiversity Strategy Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan	If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics: (i) Biodiversity and ecosystem conservation (including improving marine connectivity), (ii) Biodiversity and ecosystem restoration.

Elements to be compiled	Text to be included
<p>Elements of contribution to the EU Green Deal Do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</p>	<p>If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics: (i) Climate change mitigation, (ii) Climate change adaptation, (iii) Sustainable seafood production, (iv) Biodiversity and ecosystem protection and restoration, (v) Blue circular economy, (vi) Zero pollution.</p>
<p>Elements of contribution to the Sea Basin Strategies (Atlantic Strategy, West Med Blue Economy Initiative) Do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</p>	<p>If available, provide a brief description, highlighting relevant objectives, measures.</p>
<p>Was the plan/strategy preparation supported by consultation with regional/local stakeholders?</p>	<p>If yes, provide a brief description, highlighting how stakeholders were identified and how this consultation has been made.</p>
<p>Was the plan/strategy preparation supported by consultation with the public in general?</p>	<p>If yes, provide a brief description of the means of consultation (on-line, meetings) number of events, materials prepared, etc.)</p>

Template for Category 2: Protection and conservation-oriented plans and strategies

Elements to be compiled	Text to be included
Name of the Region/Local area the plan refers to	To be compiled
Sea Basin	To be compiled
Scale of the available plan/strategy	<input type="checkbox"/> Regional/local <input type="checkbox"/> National
Title of the plan/strategy	To be compiled
Starting date of the plan/strategy	To be compiled
Expiration date of the plan/strategy	To be compiled
Time horizon considered by the plan	To be compiled
Responsible authority	To be compiled
Other authorities eventually involved in the plan implementation	To be compiled
Legal dimension of the plan/strategy: e.g. legally binding/guiding, strategic, etc. Shortly describe the relationship between this plan and higher and lower scale plans (if any)	To be compiled
Main scope of the plan/strategy	To be compiled
Geographic scope of the plan/strategy	Include a description and/or a map

Elements to be compiled	Text to be included
Main environmental, landscape, cultural, coastal values protected by the plan/strategy	To be compiled
Main economic sectors interested by the plan/strategy provisions	To be compiled
Plan/strategy objectives relevant for the sea and for land-sea interactions Only those relevant for the regional/local level should be included (summarizing them if needed)	To be compiled
Spatial and non-spatial measures relevant for the sea and for land-sea interactions Only those relevant for the regional/local level should be included (summarizing them if needed)	To be compiled
Plan/strategy monitoring program.	If available, briefly describe, highlighting relevance for the marine components and land-sea interactions
Does the plan address/favour coexistence with (some) economic sector	If yes, briefly describe
Elements of contribution to the EU Biodiversity Strategy Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan	If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics: (i) Biodiversity and ecosystem conservation (including improving marine connectivity), (ii) Biodiversity and ecosystem restoration.

Elements to be compiled	Text to be included
<p>Elements of contribution to the EU Green Deal Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</p>	<p>If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics: (i) Climate change mitigation, (ii) Climate change adaptation, (iii) Sustainable seafood production, (iv) Biodiversity and ecosystem protection and restoration, (v) Blue circular economy, (vi) Zero pollution.</p>
<p>Elements of contribution to the Sea Basin Strategies (Atlantic Strategy, West Med Blue Economy Initiative) Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</p>	<p>If available, provide a brief description, highlighting relevant objectives, measures.</p>
<p>Was the plan/strategy preparation supported by consultation with regional/local stakeholders?</p>	<p>If yes, provide a brief description, highlighting how stakeholders were identified (representative of a sector, participant in existing governance structure, etc.) and how this consultation has been made: through an existing governance structure, a one-shot event, etc.</p>
<p>Was the plan/strategy preparation supported by consultation with the public in general?</p>	<p>If yes, provide a brief description of the means of consultation (on-line, meetings) number of events, materials prepared, etc.)</p>

Template for Category 3: Plans and strategies addressing economic sectors and other marine uses

Elements to be compiled	Text to be included
Name of the Region/Local area the plan refers to	To be compiled
Sea Basin	To be compiled
Scale of the available plan/strategy	<input type="checkbox"/> Regional/local <input type="checkbox"/> National
Title of the plan/strategy	To be compiled
Starting date of the plan/strategy	To be compiled
Expiration date of the plan/strategy	To be compiled
Time horizon considered by the plan	To be compiled
Responsible authority	To be compiled
Other authorities eventually involved in the plan implementation	To be compiled
Legal dimension of the plan/strategy: e.g. legally binding/guiding, strategic, etc. Shortly describe the relationship between this plan and higher and lower scale plans (if any)	To be compiled
Main scope of the plan/strategy	To be compiled
Geographic scope of the plan/strategy	Include a description and/or a map

<p>Sector targeted by the plan/strategy</p>	<p>To be compiled. Name of the sectors only to be indicated here</p>
<p>Plan/strategy objectives relevant for the sea and for land-sea interactions <i>Only those relevant for the regional/local level should be included (summarizing them if needed)</i></p>	<p>To be compiled</p>
<p>Spatial and non-spatial measures relevant for the sea and for land-sea interactions <i>Only those relevant for the regional/local level should be included (summarizing them if needed)</i></p>	<p>To be compiled</p>
<p>Plan/strategy monitoring program</p>	<p>If available, briefly describe, highlighting relevance for the marine components and land-sea interactions</p>
<p>Does the plan address/favour coexistence with other economic sectors</p>	<p>If yes, briefly describe</p>
<p>Does the plan address/favour synergies with environmental/landscape/cultural heritage/coastal protection?</p>	<p>If yes, briefly describe</p>
<p>Elements of contribution to the EU Biodiversity Strategy Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</p>	<p>If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics:</p> <ul style="list-style-type: none"> - Biodiversity and ecosystem conservation (including improving marine connectivity) - Biodiversity and ecosystem restoration.

<p>Elements of contribution to the EU Green Deal <i>Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</i></p>	<p>If available, provide a brief description, highlighting relevant objectives, measures dealing with the following topics:</p> <ul style="list-style-type: none"> - Climate change mitigation - Climate change adaptation - Sustainable seafood production - Biodiversity and ecosystem protection and restoration - Blue circular economy - Zero pollution.
<p>Elements of contribution to the Sea Basin Strategies (Atlantic Strategy, West Med Blue Economy Initiative) <i>Please do not include a long list of elements but write a synthetic text explaining how these elements are considered in the plan</i></p>	<p>If yes, provide a brief description, highlighting relevant objectives, measures.</p>
<p>Was the plan/strategy preparation supported by consultation with regional/local stakeholders?</p>	<p>If yes, provide a brief description, highlighting how stakeholders were identified (representative of a sector, participant in existing governance structure, etc.) and how this consultation has been made: through an existing governance structure, a one-shot event, etc.</p>
<p>Was the plan/strategy preparation supported by consultation with the public in general?</p>	<p>If yes, provide a brief description of the means of consultation (on-line, meetings) number of events, materials prepared, etc.)</p>

Annex 2 – Version in national language of case study chapters

Región de Murcia

El caso de estudio de la Región de Murcia está situado en la costa sureste de la Península Ibérica y abarca las aguas marinas frente a la comunidad autónoma de la Región de Murcia hasta el borde de la plataforma continental, tal y como se representa en la Figura 1. Estas aguas pertenecen a la demarcación marina levantino-balear (DM-LEBA), una de las cinco demarcaciones marinas en las que se dividen las aguas marinas españolas según la Ley 41/2010 de protección del medio marino (Figura 1). Esta demarcación marina se localiza íntegramente en el mar Mediterráneo.

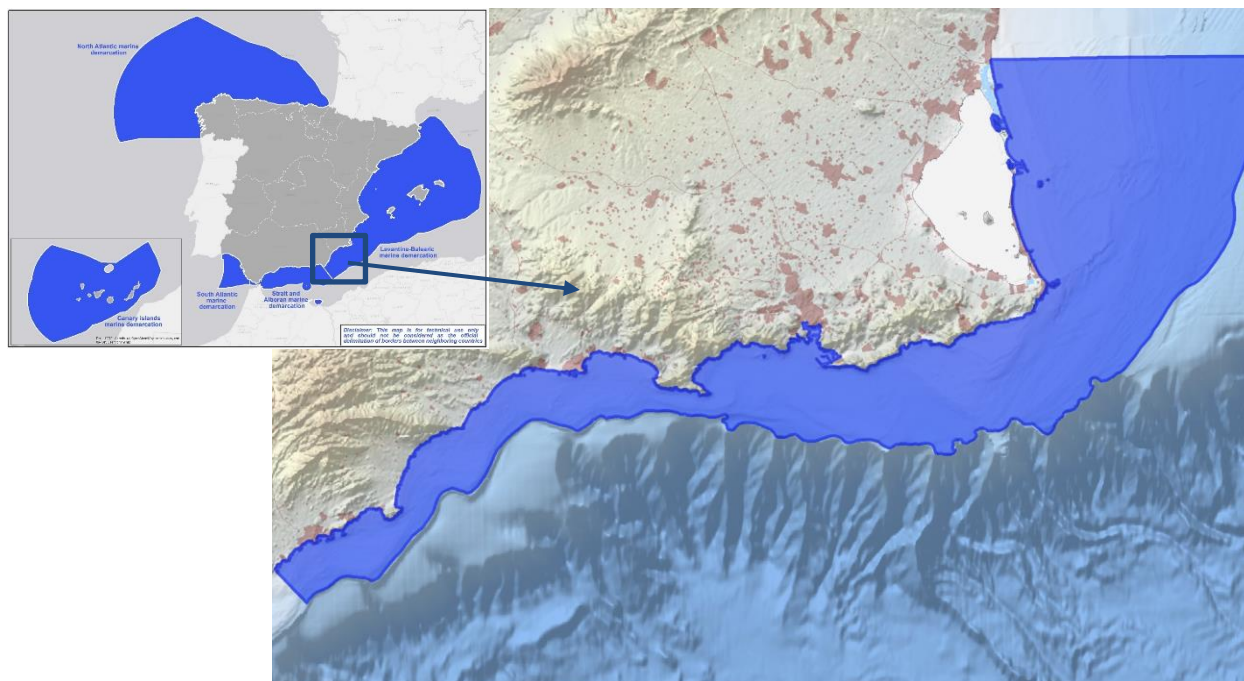


Figura 1. A la derecha: área que abarca el caso de estudio - aguas marítimas de la Región de Murcia pertenecientes a la demarcación marina levantino-balear (DM LEBA); a la izquierda: delimitación de las cinco demarcaciones marinas españolas (Fuente: elaboración propia: IEO, CSIC). Advertencia: Los límites de las demarcaciones marinas no se corresponden con los límites jurisdiccionales de las aguas marinas españolas. No deben considerarse como una delimitación oficial con los países vecinos.

Las competencias en Ordenación del Espacio Marítimo (OEM) en España recaen sobre el gobierno central a través de la Dirección General de la Costa y el Mar (DGCM), del Ministerio para la Transición Ecológica y el Reto Demográfico (MITERD). A pesar de que, como hemos mencionado anteriormente, el proceso de ordenación del espacio

marítimo se realiza a nivel nacional, existen diversos usos y actividades marítimas que son planificadas y gestionadas por las Comunidades Autónomas (CCAA), en función del reparto de competencias establecido en la Constitución Española de 1978.

En términos generales, en España el espacio marino es gestionado por el gobierno central, mientras que las aguas interiores (aquellas que abarcan desde las líneas de base recta hasta la línea de costa) son gestionadas por las CCAA. Por otro lado, la protección del medio ambiente es, en sentido amplio, competencia regional hasta el límite de las aguas interiores. En consecuencia, las CCAA han de elaborar documentos de gestión de la biodiversidad, como pueden ser estrategias, planes y legislación específica, con objeto de implementar correctamente la ley nacional, que establece las bases para la protección de la biodiversidad (Ley 42/2007, de 13 de diciembre de 2007, del Patrimonio Natural y Biodiversidad). La gestión de las Áreas Marinas Protegidas (AMP) es, por otro lado, competencia nacional, salvo que una AMP constituya una continuación geológica/ecológica de un espacio protegido terrestre o esté situada en aguas interiores; en tal caso, dicha AMP es gestionada por la Comunidad Autónoma correspondiente.

En relación a actividades y usos, las competencias en materia de acuicultura, pesca artesanal, actividades recreativas (incluidas las actividades náuticas y el turismo marítimo), así como la planificación urbana y del litoral, corresponden a las CCAA. Por el contrario, el patrimonio cultural subacuático, el cambio climático, la vigilancia marítima, el transporte marítimo, el dragado de arena en el mar o en el dominio público marítimo-terrestre (DPMT) y las energías renovables en el mar, como los parques eólicos marinos, son gestionados por el Gobierno central.

Aunque es el Gobierno central el responsable de establecer las bases y requisitos legales para el desarrollo de actividades en el mar, en el marco de la ordenación del espacio marítimo, las CCAA pueden elaborar planes/estrategias más detallados para ámbitos/sectores de su competencia. Siempre que respeten los requisitos legales establecidos en la normativa nacional, las estrategias y planes regionales tienen la capacidad de ser más detallados y contemplar las especificidades locales que surgen a una escala espacial menor.

Como ejemplo ilustrativo, se puede nombrar la acuicultura, sector cuya planificación y gestión corresponde a las CCAA pero que, debido a su importancia como sector estratégico para potenciar el desarrollo económico de las regiones costeras, la Junta Nacional Asesora de Cultivos Marinos (JACUMAR) - dependiente de la Secretaría General de Pesca (SGP) del Ministerio de Agricultura, Pesca y Alimentación (MAPA) - elaboró cinco expedientes técnicos para el proceso OEM de la Acuicultura, uno por cada demarcación marina. Estos expedientes aportaron un enfoque integrador y son el resultado de un ejercicio de armonización y coherencia entre las propuestas de ordenación de la acuicultura de todas las comunidades autónomas costeras.

Planes y estrategias analizados

Para el caso de estudio de la Región de Murcia, se han identificado y analizado cuatro planes y/o estrategias transversales. El primero de ellos es el Plan de Ordenación del Espacio Marítimo (POEM) de la demarcación marítima levantino-balear, que fue aprobado, junto con los otros cuatro Planes de Ordenación del Espacio Marítimo (uno por cada demarcación marina), por el Real Decreto 150/2023, de 28 de febrero²², con el objetivo general de promover el desarrollo sostenible de los sectores marítimos, garantizando la protección del medio marino y el uso sostenible de los recursos. La segunda estrategia transversal analizada es la "Estrategia de Gestión Integrada de Zonas Costeras (GIZC) del Sistema Socio-ecológico del Mar Menor (SSEMM) y su Entorno", desarrollada a escala regional y centrada en la recuperación del equilibrio ecológico de la laguna costera del Mar Menor y su área de influencia (Figura 2), a la vez que se persigue un desarrollo sostenible de toda la zona.

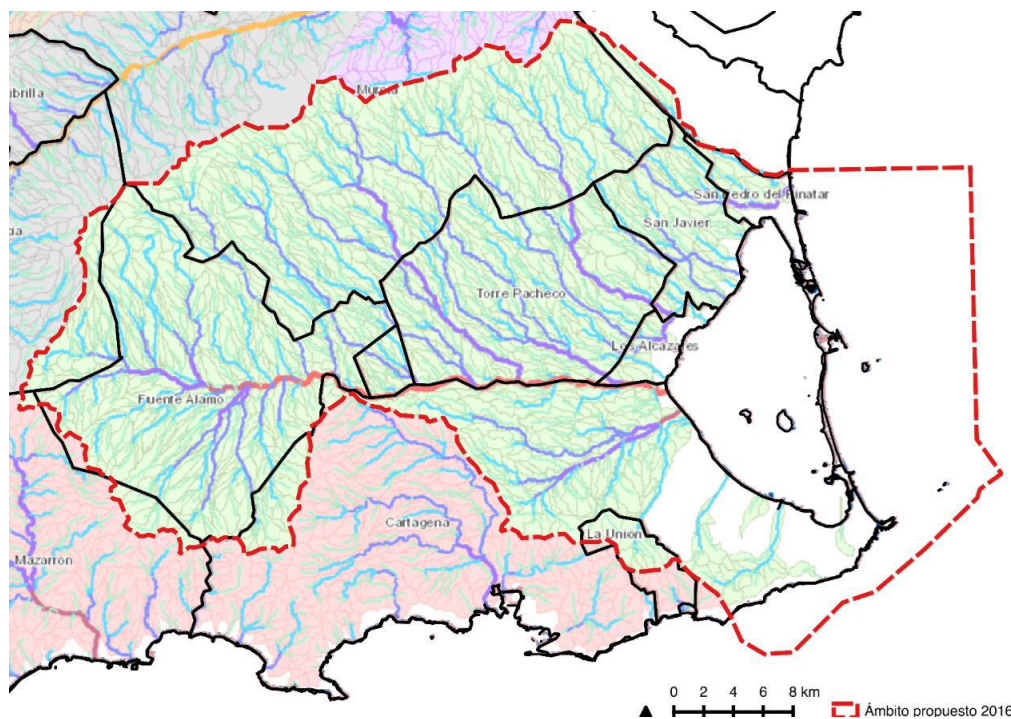


Figura 2. *Ámbito geográfico de la Estrategia de Gestión Integrada de Zonas Costeras (GIZC) del Sistema Socio-ecológico del Mar Menor (SSEMM) y su Entorno (Fuente: DG de Movilidad y Litoral – Comunidad Autónoma de la Región de Murcia (CARM)).*

La Región de Murcia experimentó un crecimiento exponencial turístico urbano en la zona costera que afectó, tanto al equilibrio ecológico en el dominio público marítimo-terrestre (DPMT), como al paisaje litoral y al paisaje marino, especialmente a

²² https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-5704

consecuencia de la construcción de viviendas con fines turísticos dentro de la franja costera. Esta situación condujo a la elaboración de las "Directrices y Plan de Ordenación Territorial del Litoral de la Región de Murcia", a través de las cuales las autoridades regionales trataron de diseñar un nuevo modelo territorial basado en un desarrollo socio-económico más eficiente, orientado a la puesta en valor y conservación de los recursos naturales. Por último, debido a su relevancia a todos los niveles, así como para el desarrollo de otros planes y estrategias costeros y marítimos, se ha analizado la "Estrategia de Adaptación al Cambio Climático de la Costa Española", cuyo principal objetivo es aumentar la resiliencia de la costa española al cambio climático, a través de una adecuada planificación y gestión.

Se han considerado planes y estrategias de protección y conservación referidos tanto a la biodiversidad como al Patrimonio cultural subacuático (PCS). El "Plan de gestión integral de los espacios protegidos del Mar Menor y la franja litoral mediterránea de la Región de Murcia" (Figura 3) tiene como objetivo integrar la gestión de todos los espacios, especies y paisajes protegidos existentes en la región, para facilitar su mantenimiento, conservación y/o restauración, garantizando la aplicación de un enfoque común y coherente. Este plan de gestión hace referencia a diferentes tipologías de áreas protegidas, incluyendo: áreas protegidas por instrumentos internacionales (sitios Ramsar, sitios ZEPIM bajo el Convenio de Barcelona, etc.), espacios de la Red Natura 2000 (Zonas de Especial Conservación (ZEC), de la Directiva Hábitats y Zonas de Especial Protección para las Aves (ZEPA), creadas a través de la Directiva Aves), AMPs, reservas marinas de interés pesquero (RMIP) y otros mecanismos de protección definidos a nivel nacional y regional, como son el parque regional, parque natural, monumento protegido, etc.

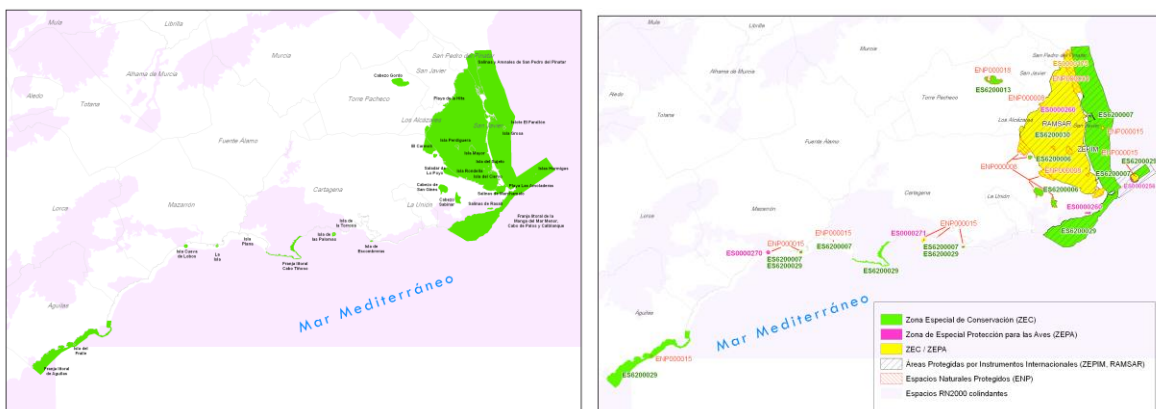


Figura 3. A la izquierda: ámbito geográfico del "Plan de gestión integral de los espacios protegidos del Mar Menor y la franja litoral mediterránea de la Región de Murcia"; a la derecha: espacios protegidos del plan. (Fuente: Consejería de Agua, Agricultura y Medio Ambiente, CARM).

El "Plan Nacional de Protección del Patrimonio Arqueológico Subacuático" -bajo las directrices de la "Convención sobre la Protección del Patrimonio Cultural Subacuático" de la UNESCO- establece los criterios y actuaciones básicas para la protección del PCS en las aguas marítimas jurisdiccionales y de soberanía españolas, incluyendo la Zona Económica Exclusiva (ZEE) y la plataforma continental. La Región de Murcia atesora en sus aguas marinas un importante número de Bienes de Interés Cultural (BIC) que deben ser conservados y protegidos, y que se han convertido en un atractivo esencial para el turismo subacuático.

Se han considerado seis estrategias y planes sectoriales, dos de escala nacional y cuatro de escala regional. La acuicultura es uno de los sectores marítimos con mayores perspectivas de futuro en la Región y está bastante bien organizado. Se han analizado e incluido en este apartado dos documentos relativos a este sector, incluyendo la pesca en el segundo de ellos; estos son el "Plan Estratégico Acuícola de la Región de Murcia 2021-2027" y la "Estrategia de Desarrollo Local Participativo (EDLP) 2014-2020 de la Región de Murcia" (la nueva Estrategia 2021-2027 se encuentra en fase de desarrollo; aún no está publicada). Un tercer documento técnico relativo a la acuicultura marina en la demarcación marina levantino-balear se publicó en junio de 2023 con la finalidad de que alimente la futura actualización del POEM. Debido a su enfoque técnico, este documento no se ha incluido en este análisis.

La Región de Murcia posee un elevado índice de turismo estacional, especialmente en la zona costera. Esta estacionalidad tiene como consecuencia un alto impacto ambiental concentrado en unos pocos meses. El "Plan Estratégico de Turismo de la Región de Murcia 2022-2032" promueve un nuevo modelo turístico en la región, con el objetivo de diversificar el turismo y reducir su estacionalidad.

La navegación y las actividades portuarias tienen una gran relevancia en la Región, tanto en términos comerciales como recreativos. El "Marco Estratégico de Puertos Abiertos de la Región de Murcia 2022-2045" pretende reforzar este sector para facilitar el uso de los puertos recreativos en la zona costera, con un enfoque de desarrollo sostenible. Los dos últimos documentos incluidos en esta categoría tienen carácter nacional; se aplican a la totalidad de las aguas marítimas y costeras españolas. Por un lado, encontramos la "Hoja de ruta para el desarrollo de la energía eólica marina y de las energías del mar en España", actualmente uno de los sectores emergentes más importantes en nuestro país, y la "Estrategia de Seguridad Marítima Nacional", relativa a la defensa marítima, para la cual es absolutamente necesaria la cooperación transfronteriza.

Las principales características y sectores considerados en las estrategias y planes analizados se resumen respectivamente en la primera y segunda tabla, que se pueden encontrar a continuación

Título corto	Escala			Jurídicamente vinculante		Tipología			Medidas incluidas
	Local	Regional	Nacional	SÍ	NO	Estratégico	Regulador	Ambos	
Categoría 1: Planes y estrategias transversales									
POEM para la DM LEBA			X	X				X	X
Estrategia de GIZC del Sistema Socio-ecológico del Mar Menor (SSEMM) y su Entorno		X			X	X			X
Directrices y Plan de Ordenación Territorial del Litoral de la Región de Murcia		X		X				X	X
Estrategia de Adaptación al Cambio Climático de la Costa Española			X	X				X	X
Categoría 2: Planes y estrategias de protección y conservación									
Plan de gestión integral de los espacios protegidos del Mar Menor y la franja litoral mediterránea de la Región de Murcia		X		X			X		X
Plan Nacional de Protección del Patrimonio Arqueológico Subacuático			X	X			X		X
Categoría 3: Planes para sectores económicos y otros usos y actividades marinos									
Plan Estratégico Acuícola de la Región de Murcia 2021-2027		X			X	X			X
Estrategia de Desarrollo Local Participativo (EDLP) 2014-2020 de la Región de Murcia		X			X	X			X
Plan Estratégico de Turismo de la Región de Murcia 2022-2032		X			X	X			X

Título corto	Escala			Jurídicamente vinculante		Tipología			Medidas incluidas
	Local	Regional	Nacional	SÍ	NO	Estratégico	Regulador	Ambos	
Marco Estratégico de Puertos Abiertos de la Región de Murcia 2022-2045		X			X	X			X
Hoja de ruta para el desarrollo de la energía eólica marina y de las energías del mar en España			X	X		X			X
Estrategia de Seguridad Marítima Nacional			X	X		X			

Título corto	PE	AC	TU	OR	TM	AP	ER	PG	AM	MP	TC	DM	ZV	II	PC	PN	PP	PS
Categoría 1: Planes y estrategias transversales																		
POEM para la DM LEBA	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Estrategia de GIZC del Sistema Socio-ecológico del Mar Menor (SSEMM) y su Entorno	X	X	X	X								X	X		X	X	X	
Directrices y Plan de Ordenación Territorial del Litoral de la Región de Murcia	X	X	X	X		X			X				X		X	X	X	X
Estrategia de Adaptación al Cambio Climático de la Costa Española	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Categoría 2: Planes y estrategias de protección y conservación																		
Plan de gestión integral de los espacios protegidos del Mar Menor y la franja litoral mediterránea de la Región de Murcia	X	X	X	X								X	X			X		X
Plan Nacional de Protección del Patrimonio Arqueológico Subacuático			X	X	X							X		X		X		X

Título corto	PE	AC	TU	OR	TM	AP	ER	PG	AM	MP	TC	DM	ZV	II	PC	PN	PP	PS
Categoría 3: Planes para sectores económicos y otros usos y actividades marinos																		
Plan Estratégico Acuícola de la Región de Murcia 2021-2027		X												X	X	X	X	
Estrategia de Desarrollo Local Participativo (EDLP) 2014-2020 de la Región de Murcia	X	X	X											X		X		X
Plan Estratégico de Turismo de la Región de Murcia 2022-2032			X	X										X	X	X	X	X
Marco Estratégico de Puertos Abiertos de la Región de Murcia 2022-2045	X	X	X	X		X								X	X	X	X	
Hoja de ruta para el desarrollo de la energía eólica marina y de las energías del mar en España	X	X	X	X	X	X	X							X	X	X	X	X
Estrategia de Seguridad Marítima Nacional	X	X			X	X					X	X		X		X		X

PE = Pesca, AC = Acuicultura, TU = Turismo marítimo y costero, OR = Actividades de ocio y recreo, TM = Transporte marítimo, AP = Actividades portuarias, ER = Energías renovables marinas, PG = Exploración y explotación de petróleo y gas, AM = Áridos marinos (extracción de arena para la regeneración de playas y la construcción), MP = Infraestructuras mineras de aguas profundas y robótica, TC = Tuberías y cables, DM = Defensa marítima, ZV = Zonas de vertido (ej. sedimentos o municiones), II = Investigación e Innovación, PC = Protección costera, PN = Protección de la naturaleza, PP = Protección del paisaje, PS = Patrimonio cultural subacuático.

Planes y estrategias transversales

Por su naturaleza, los cuatro planes y estrategias transversales analizados afectan a la mayoría de los sectores marítimos y costeros de interés para la Región de Murcia.

Los POEMs son el resultado de la aplicación en España de la Directiva 2014/89/UE de la UE. Los POEM abordan los usos marítimos y costeros, así como las interacciones tierra-mar (ITM). Dentro de los POEM se identifican diferentes categorías de ITM, referidas a aspectos gestionados principalmente por las CCAA. Legalmente, el proceso OEM está vinculado al proceso de Estrategias Marinas en España, que implementa la Directiva Marco de la Estrategia Marina (DMEM). Para facilitar la puesta en marcha del proceso de OEM y la recopilación de las particularidades de cada región y su territorio, se tomó como modelo el marco de gobernanza multinivel ya existente en el proceso para la Estrategia Marina en España. Por ello, se creó un grupo de trabajo de OEM bajo el amparo de la Comisión Interministerial de las Estrategias Marinas (CIEM) y apoyado por los Comités de Seguimiento de las 5 demarcaciones marinas, que incluyen a las administraciones de las CCAA.

Los objetivos del POEM se han articulado en torno a los distintos usos e intereses del medio marino. Para definirlos, la autoridad competente española en materia de OEM elaboró un cuestionario que se envió a las autoridades nacionales y regionales con competencias en asuntos marítimos. El objetivo de esta consulta era identificar: (i) la existencia de objetivos de carácter económico, social o ambiental ya establecidos en las políticas sectoriales marítimas españolas; (ii) la existencia de herramientas de planificación en vigor; (iii) la vinculación con otras políticas europeas; (iv) las principales sinergias y conflictos entre usos, (v) los fondos disponibles para implementar las políticas previstas; y (vi) el sistema de competencias que regula dichas políticas. Adicionalmente al citado cuestionario, se organizaron reuniones entre la autoridad competente, los Ministerios con competencias en el medio marino y las Comunidades Autónomas. A su vez, se crearon grupos de trabajo *ad-hoc* para la discusión de temas específicos. La Región de Murcia participó en grupos ad-hoc relacionados con: Áreas Marinas Protegidas (AMPs), actividades portuarias, energía eólica offshore (EEO), fondeos náutico-recreativos y su impacto sobre los hábitats bentónicos, y navegación y colisiones con cetáceos. Sin embargo, durante el proceso de identificación de objetivos a nivel regional creado para diseñar los objetivos de los POEM, no se recibió información de la Región de Murcia.

Todo este proceso condujo a la formulación de un objetivo general de ordenación del espacio marítimo y tres categorías de objetivos más específicos:

- *Objetivo general de OEM:* promover el crecimiento sostenible de los sectores marítimos de forma que sea compatible con la protección del medio ambiente y el uso sostenible de los recursos marinos.
- *Objetivos de interés general de OEM:* son objetivos prioritarios, ya que emanan de políticas públicas destinadas a proteger el patrimonio común, la seguridad y la salud públicas. Se refieren la protección de la biodiversidad; la seguridad del abastecimiento de agua dulce; el saneamiento, la depuración y la calidad del agua, incluidas las aguas de baño; la defensa nacional; la vigilancia, el control y la seguridad marítimos; la investigación científica, el desarrollo y la innovación; y la protección del patrimonio cultural subacuático.
- *Objetivos sectoriales de OEM:* mejorar la competitividad y sostenibilidad de los distintos sectores, también en relación con las políticas que los regulan. Los sectores marítimos considerados son: acuicultura, pesca extractiva, sector energético (hidrocarburos offshore y energías renovables), sector del transporte de electricidad y telecomunicaciones, transporte marítimo, puertos, turismo y ocio.
- *Objetivos multisectoriales de OEM:* minimizar conflictos, facilitar la coexistencia y promover sinergias entre sectores, así como generar certidumbre, mejorar la coordinación y la cooperación, etc.

Los POEM establecen una zonificación para algunos usos, diferenciando entre:

- Zonas de Uso Prioritario (ZUPs) definidas para Actividades de Interés General que emanan de políticas públicas dirigidas a la protección del patrimonio común, la seguridad y la salud; estas áreas son una prioridad y deben estar garantizadas.
- Zonas de Alto Potencial (ZAPs) definidas para determinadas actividades sectoriales en el contexto de la actividad económica de sectores marítimos cuyo desarrollo futuro es previsible, y en las que también es necesario identificar el espacio más adecuado para su desarrollo. Para estas zonas, se han propuesto medidas a escala nacional que se aplicarán durante el primer ciclo de OEM.

En el POEM de la DM-LEBA se establecieron ZUPs para la seguridad en la navegación, la defensa nacional y la protección de la biodiversidad (Figura 4). Asimismo, se designaron ZAPs para la acuicultura, la protección de la biodiversidad y la extracción de áridos para la regeneración de playas (Figura 5).

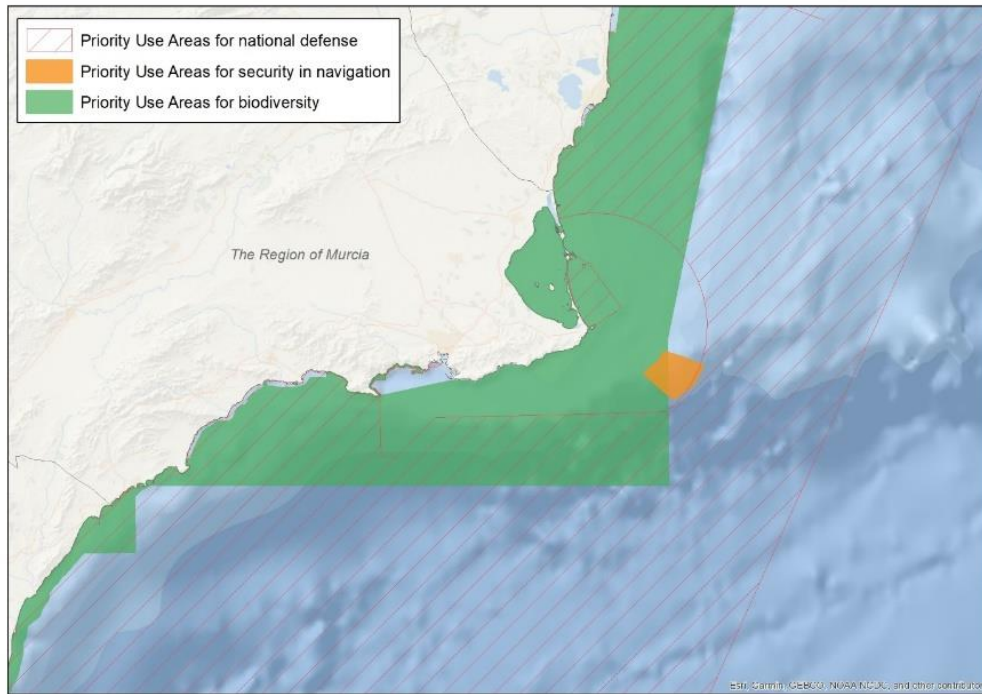


Figura 4. Zonas de Uso Prioritario (ZUPs) definidas en el POEM para la Región de Murcia. (Fuente: Elaboración propia IEO, CSIC, basada en InfoMAR²³, MITECO).

²³ <http://www.infomar.miteco.es/>

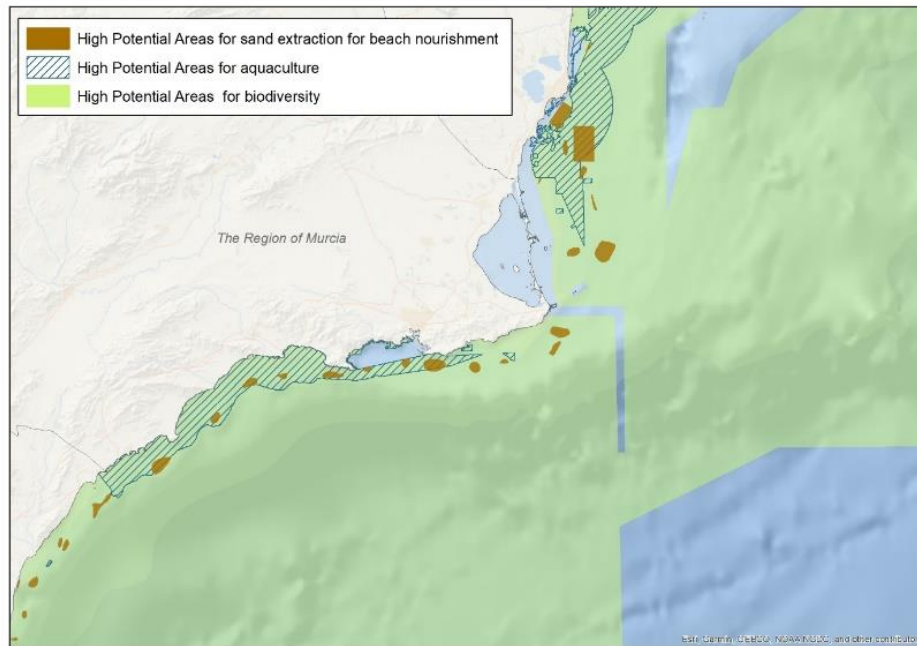


Figura 5. Zonas de Alto Potencial (ZAPs) definidas por el POEM en la Región de Murcia. (Fuente: Elaboración propia IEO, CSIC, basada en InfoMAR²⁴, MITECO).

La "Estrategia de GIZC para el Sistema Socio-ecológico del Mar Menor (SESMM) y su Entorno" contiene varios objetivos relevantes para la zona marina de la Región de Murcia y las ITM. Tres actividades humanas han sido categorizadas como la principal fuente de contaminación para la laguna costera del Mar Menor: el desarrollo urbano-turístico, las actividades mineras y la gran expansión de las actividades agrícolas. Los principales objetivos de esta estrategia se centran en identificar dichas fuentes de contaminación y proporcionar medidas para eliminarlas y detener sus impactos sobre el Mar Menor, principalmente debidos a la alteración de la dinámica de la laguna costera. Los objetivos operativos de esta estrategia se centran en conseguir el Buen Estado Ambiental (BEA) de la laguna y el buen estado de las aguas superficiales y subterráneas del entorno (de acuerdo a la DMA 2000/60/CE), por un lado, así como recuperar los servicios ecosistémicos que presta todo el sistema y aprovecharlos para la coexistencia de las actividades económicas y la conservación de la biodiversidad.

El tercer plan transversal analizado es "Directrices y Plan de Ordenación Territorial del Litoral de la Región de Murcia" que propone un nuevo modelo territorial basado en el desarrollo social, la eficiencia económica y la puesta en valor de los recursos naturales,

²⁴ <http://www.infomar.miteco.es/>

garantizando su adecuada conservación para las generaciones futuras. El principal resultado es la categorización del suelo litoral en ocho tipologías diferentes, en función del uso previsto. El plan identifica, a su vez, una autoridad responsable de la gestión de cada tipología de suelo e incluye medidas para desarrollar acciones estratégicas específicas. Se considera que las actuaciones estratégicas tienen capacidad para desencadenar un proceso de mejora territorial que afecte al litoral y al conjunto de la Región de Murcia. Las Directrices también mencionan que la Administración Regional ordenará el litoral de la Región de Murcia mediante el diseño de "Planes de Ordenación del Litoral". En dichos planes de ordenación se incluyen medidas específicas para la zona del Mar Menor, con el objetivo de implementar un modelo turístico sostenible y de calidad.

La "Estrategia de Adaptación al Cambio Climático de la Costa Española" fue considerada dada su relevancia para todas las actividades que se desarrollen en la zona marítima o costera de la Región de Murcia. Su principal objetivo es aumentar la resiliencia de la costa española frente a la variabilidad climática y a los cambios futuros. Contiene 6 objetivos específicos con respecto al mar y las ITM:

1. Aplicar un diagnóstico periódico de vulnerabilidad y riesgos ante el cambio climático en las costas españolas, a través de la puesta en marcha de una metodología común para identificar, caracterizar y describir las zonas más vulnerables.
2. Promover la movilización y participación de las partes interesadas, con competencias e intereses estratégicos en la costa, en las diferentes fases del ciclo de adaptación.
3. Contribuir a la formación, educación y sensibilización de los diferentes actores y administraciones implicados en la gestión del litoral en la toma de conciencia de las implicaciones a medio y largo plazo de los efectos del cambio climático en la costa.
4. Promover medidas de adaptación en los sistemas socioeconómicos y naturales ubicados en la costa que contribuyan a su resiliencia frente a los fenómenos extremos y el cambio climático.
5. Incorporar un sistema de seguimiento y evaluación de los impactos del cambio climático en la costa española y de seguimiento de las medidas de adaptación implementadas.
6. Favorecer iniciativas que fomenten la investigación sobre el cambio climático, dedicadas especialmente a incrementar el conocimiento sobre los principales

factores climáticos que afectan a la costa y la evaluación de los impactos sobre los sistemas costeros naturales y socioeconómicos.

En cuanto a las medidas operativas, la Estrategia de Adaptación al Cambio Climático de la costa española prioriza la implementación de Soluciones Basadas en la Naturaleza (SBN) (por ejemplo, la restauración y conservación de ecosistemas costeros como dunas, playas, marismas, humedales, etc.), así como la gestión de sedimentos y la protección de la dinámica de la cuenca para sostener la línea de costa. También se consideran muy relevantes la educación y la sensibilización sobre el cambio climático de las instituciones públicas y los sectores privados. Por último, la estrategia aboga por un enfoque integral de GIZC para todo el litoral español, por lo que cualquier plan costero que desarrolle la Región deberá seguir los principios que establece la Estrategia de Adaptación al Cambio Climático de la costa española.

Planes y estrategias de protección y conservación

El "Plan de gestión integral de los espacios protegidos del Mar Menor y la franja litoral mediterránea de la Región de Murcia" pretende establecer un enfoque coherente y unitario para la gestión de los muy diversos espacios protegidos situados en el ámbito geográfico del plan (19 en total). La mayoría de las áreas protegidas incluidas en los planes son costeras o marinas; 6 Objetivos Estratégicos (OE) se ocupan o tienen relación con el mar y las ITM:

- OE.1. Consolidar la Red Natura 2000.
- OE.2. Fortalecer el seguimiento y la investigación como instrumentos de apoyo a la gestión.
- OE.3. Establecer medidas para mejorar el estado de conservación de hábitats y especies.
- OE.4. Garantizar la integración de los requisitos de conservación del patrimonio natural en el desarrollo económico, social y cultural.
- OE.5. Promover la coordinación y cooperación administrativa, así como la participación en la gestión.
- OE.6. Promover la educación ambiental como herramienta de gestión y fomentar el uso público de los espacios protegidos.

Varias directrices del plan están orientadas a mantener o restaurar la funcionalidad ecológica de los ecosistemas y la recuperación de los valores paisajísticos, culturales y ecosistémicos, incluyendo las dinámicas sedimentaria y edáfica. En cuanto a las

medidas específicas, cabe destacar las siguientes en materia de gestión medioambiental y costera:

- Las autoridades competentes en materia de costas velarán por que las actuaciones, proyectos y obras que se promuevan, autoricen o financien en el DPMT incluido en los espacios protegidos, incorporen las medidas necesarias para la conservación de la biodiversidad y de la identidad paisajística.
- Se evitarán aquellas actuaciones, actividades y/o usos que puedan alterar el transporte de sedimentos y agravar los procesos erosivos, así como la alteración de la dinámica costera natural.
- Se considerará imprescindible la reducción de los contaminantes que llegan a la cuenca hidrográfica y, eventualmente, al Mar Menor y al Mar Mediterráneo.
- Se ejecutarán acciones de control y erradicación de especies exóticas invasoras.
- Se adoptarán medidas para evitar la entrada de vertidos en los espacios protegidos.

La Región de Murcia atesora varios enclaves de Patrimonio Cultural Subacuático (PCS) requieren ser conservados y protegidos. Debido a la importancia de este tema para esta CCAA, el Museo Nacional de Arqueología Subacuática ARQVA, se ubicó en esta Región, concretamente en la ciudad de Cartagena. El “Plan Nacional de Protección del Patrimonio Arqueológico Subacuático” tiene un doble objetivo: dar cumplimiento a los compromisos adquiridos con la ratificación de la “Convención de la UNESCO sobre la Protección del Patrimonio Cultural Subacuático”, de 2001 y establecer los criterios y actuaciones básicas para la protección y conservación del PCS. De acuerdo con el plan, la protección de los sitios nacionales del PCS requiere el establecimiento y la adopción de algunas medidas básicas, que se agrupan en cinco tipologías.

1. Medidas de documentación e inventario (por ejemplo, cartas arqueológicas subacuáticas detalladas de las aguas costeras españolas y el desarrollo de un programa de Gestión Integrada de Información Geográfica para el PCS (SIG - PCS)).
2. Medidas de protección física y jurídica.
3. Medidas de formación que impliquen a especialistas en investigación y conservación del PCS.

4. Medidas de coordinación y difusión en las que participen las autoridades regionales y nacionales, los sectores, la marina y otras partes interesadas. Estas actividades también incluyen acuerdos con países no pertenecientes a la UE.
5. Medidas de sensibilización para informar a los ciudadanos sobre los valores históricos y arqueológicos subacuáticos españoles y estimular su colaboración para la protección del PCS.

Planes para sectores económicos y otros usos y actividades marinos

Existe un elevado número de usos y actividades que tienen lugar en el área marítima y en la zona costera que abarca el caso de estudio, lo que implica una planificación y gestión eficaz que ayude a minimizar los conflictos y mejorar la coexistencia entre los usos y entre éstos y la conservación de la biodiversidad. Esto se persigue, tanto a través de los planes transversales abordados en párrafos anteriores como en los siguientes planes y estrategias sectoriales.

El "Plan Estratégico Acuícola de la Región de Murcia 2021-2027" se desarrolló para reforzar la competitividad y sostenibilidad del sector acuícola en la Región; todos los Objetivos Estratégicos de este plan se centran en estas dos cuestiones. Estos OEs se canalizarán en diferentes líneas de actuación (medidas) para fortalecer el sector a nivel regional. En este sentido, la "definición de las mejores ubicaciones para la actividad acuícola" se considera una de las medidas espaciales más importantes del plan, junto con las medidas no espaciales destinadas a "proporcionar un marco regulador y procedimientos consolidados" para el desarrollo de la acuicultura. Otras medidas relevantes previstas por el plan son: el seguimiento y control de todo el proceso de producción, la definición de nuevos posibles emplazamientos para la acuicultura en consonancia con el proceso de ordenación del espacio marítimo, la mejora de la sanidad animal y de la base de conocimientos para la planificación y gestión de la acuicultura.

- La "Estrategia de Desarrollo Local Participativo (EDLP) 2014-2020 de la Región de Murcia", elaborada por el Grupo de Acción Local de Pesca y Acuicultura de la Región de Murcia (GALPEMUR) pretende aumentar el empleo y la cohesión territorial de la Región. Algunos de los principales objetivos de la estrategia son: reforzar la I+D+i, diversificar el empleo a lo largo de toda la cadena de suministro de los sectores de la pesca y la acuicultura, potenciar el papel de las comunidades pesqueras en el desarrollo local, y la promoción de la calidad medioambiental y el bienestar social. Varias de las medidas incluidas en la estrategia son relevantes para el mar y las ITM, como las siguientes:

- Valorización, promoción y consolidación de la pesca y la acuicultura artesanales mediante la mejora de la sostenibilidad y la innovación tecnológica.
- Capacitación de los trabajadores a lo largo de toda la cadena de producción en materia de innovación y mejora de la sostenibilidad.
- Fomento de la participación de los operadores del sector en la elaboración de planes de gestión y protección de las actividades pesqueras/acuícolas y de las áreas marinas protegidas.
- Acciones dirigidas a mitigar la contaminación del medio marino, así como su protección y conservación.
- Promoción de la cultura oceánica en relación con la tradición pesquera.

La zona costera de la Región de Murcia, también conocida como "Costa Cálida", concentra una tasa elevada de turismo estacional, denominado de "sol y playa" durante los meses de verano. El principal objetivo del "Plan Estratégico de Turismo de la Región de Murcia 2022-2032" -que se aplica a toda la Región de Murcia- es redistribuir el turismo a lo largo de todo el año y fomentarlo, potenciando los diferentes valores de la región, como la gastronomía, las actividades náutico-recreativas y el turismo de naturaleza. El plan se centra en la mejora de la calidad de los operadores y actividades turísticas a través de la innovación y la digitalización, las acciones de mejora de la sostenibilidad a largo plazo de los destinos turísticos, la reducción de la estacionalidad turística, la promoción de actividades de conservación en espacios protegidos de alto valor ambiental, el establecimiento de sinergias entre el turismo y otros sectores, como el comercio local, el transporte aéreo o la gastronomía local, la mejora del transporte público y la conectividad y la promoción de actividades turísticas respetuosas con el alto valor ambiental de los espacios protegidos. Uno de los principales objetivos del plan es reformular y diversificar el turismo de "sol y playa" que caracteriza a las costas murcianas y favorecer el turismo de naturaleza y el náutico-deportivo, así como evitar la concentración turística masiva en los meses de verano.

En relación a las actividades portuarias, en 2022 se dio a conocer el "Marco Estratégico de Puertos Abiertos de la Región de Murcia 2022-2045", que pretende impulsar la transición ecológica de los puertos murcianos, más concretamente de los puertos pesqueros y recreativos gestionados por la Comunidad Autónoma. Los principales objetivos específicos de este Marco Estratégico son: (i) potenciar el papel del sistema portuario como generador de riqueza y turismo para la Región, (ii) reorientar las actividades portuarias y el estado de las infraestructuras hacia la transición ecológica y los principios de la Economía Azul, (iii) avanzar en la accesibilidad universal a las

instalaciones portuarias, (iv) satisfacer la demanda social de usos náuticos para disfrutar del litoral murciano, prestando más y mejores servicios aprovechando las ventajas de la digitalización, (v) mejorar la percepción social de los puertos y las actividades náuticas como elementos abiertos y valiosos para la sociedad y (vi) establecer marcos para la convivencia entre los diferentes usos y el mejor aprovechamiento de las infraestructuras portuarias. La digitalización se considera la base para el cumplimiento de estos objetivos.

En línea con el compromiso de la UE sobre la neutralidad de carbono para el año 2050, el desarrollo de las energías renovables es de vital importancia para España. La "Hoja de ruta para el desarrollo de la energía eólica marina y de las energías del mar en España" se publicó en 2021 para garantizar el despliegue efectivo de las Energías Renovables Marinas (ERM) en el país. Los principales objetivos de esta hoja de ruta son convertir a España en un eje o centro de referencia para el desarrollo tecnológico y la innovación ambiental asociada a las energías renovables en el medio marino, desarrollar un marco para el despliegue comercial de los Parques Eólicos Marinos (PEM) y las energías marinas, fortalecer la cadena de valor en su conjunto y potenciar la sostenibilidad social y ambiental, destacando la monitorización pasiva y activa del medio marino que se llevará a cabo en los PEM. En lo que respecta a la Región de Murcia, el POEM no ha establecido ninguna zonificación como apta para energía eólica marina (EEM), debido a las condiciones climatológicas, la biodiversidad y/o los conflictos con otros usos, pero no se descarta el desarrollo de otras energías renovables marinas o incluso PEM bajo futuros desarrollos tecnológicos.

Por último, la "Estrategia de Seguridad Marítima Nacional" pretende aprovechar las oportunidades del mar en el presente y en el futuro, en beneficio del bienestar y la prosperidad de España. Sus principios básicos son: (i) unidad de acción (armonización y coordinación), (ii) anticipación y prevención, (iii) uso eficiente y sostenible de los recursos y (iv) resiliencia o capacidad de resistencia y recuperación. La situación geográfica de la Región de Murcia ofrece oportunidad de convertirse en un enclave estratégico para el transporte y la navegación marítimas, pero es necesaria la cooperación entre todas las autoridades nacionales e internacionales y un adecuado control de las rutas marítimas de acceso a las costas españolas, junto con la colaboración de los sectores privados que operan en el mar y la mejora de la ciberseguridad en el medio marino, para evitar los posibles conflictos que puedan surgir.

Elementos que contribuyen al Pacto Verde Europeo (PVE) y las estrategias de las cuencas marítimas

La gran mayoría de los planes y estrategias transversales analizados incluyen referencias a los objetivos promovidos por el PVE y la Iniciativa WestMED de Economía Azul. Ninguno de ellos menciona explícitamente la iniciativa WestMED; sin embargo, en los últimos planes y estrategias publicados (posteriores a 2019) que se han analizado, se encuentran referencias explícitas al PVE.

El POEM es el plan que más profundiza en los retos del PVE, ya que menciona explícitamente las conclusiones del Consejo de la UE sobre la Economía Azul Sostenible, adoptadas el 26 de mayo de 2021, que establecen que "la aplicación de la OEM debe utilizarse para alcanzar las ambiciones del Pacto Verde Europeo". El plan de OEM que incluye a la Región de Murcia menciona específicamente el PVE, situando a la acuicultura como motor para que los sistemas alimentarios sean justos, saludables y respetuosos con el medio ambiente y participando en los objetivos de la "Estrategia de la granja a la mesa" (estos son: mitigar el cambio climático y adaptarse a sus impactos; garantizar la seguridad alimentaria, la nutrición y la salud pública; asegurar el acceso a alimentos suficientes, seguros, nutritivos y sostenibles y generar beneficios económicos más justos). De hecho, el "Plan Estratégico Acuícola de la Región de Murcia 2021-2027" también ofrece la visión de contribuir a la consecución de los objetivos del PVE a través de producciones bajas en emisiones de carbono, tecnologías eficientes, alimentos de la máxima calidad y fiables y protección de la biodiversidad.

En términos más generales, la producción sostenible, especialmente en lo que respecta a la producción de alimentos abordada tanto por el PVE como por la iniciativa WestMED, se trata ampliamente en varias de las estrategias y planes considerados, dentro del marco más amplio de la Economía Azul Sostenible. Sin embargo, a pesar de que esta última se destaca y fomenta en numerosos planes y estrategias, la "economía azul circular" está totalmente ausente. El objetivo número 2 de la iniciativa WestMED de Economía Azul, que es el "desarrollo de clústeres marítimos", se aborda en las dos estrategias regionales relacionadas con la acuicultura, donde la creación de grupos multidisciplinares a lo largo de toda la cadena de producción resulta esencial para crear un mercado sólido y resistente.

El cambio climático es el tema más mencionado dentro de las estrategias y planes analizados. Mientras que las medidas de mitigación se suelen descartar, las de adaptación se desarrollan ampliamente. La medida de mitigación más importante abordada tanto en el POEM como en la "Hoja de ruta para las energías renovables

marinas” es el despliegue de PEM para contribuir a la descarbonización de la economía de la UE. La “Hoja de ruta para el desarrollo de la energía eólica marina y las energías del mar en España” se refiere específicamente a la visión del PVE de lograr una economía azul sostenible con el aumento necesario de la producción de EEM. También establece que se deben desarrollar medidas que permitan “una gestión más sostenible del espacio marítimo, especialmente en lo que se refiere a facilitar el acceso al creciente potencial de las energías renovables marinas”.

Las medidas de conservación y protección de la biodiversidad, que constituyen un objetivo común en el PVE, la Iniciativa WestMED y la Estrategia de la UE sobre Biodiversidad, son ampliamente mencionadas y abordadas por todas las estrategias y planes analizados.

En resumen, los POEM son los planes que integran un mayor número de elementos del PVE y de la iniciativa WestMED, proponiendo medidas para cumplir los objetivos fijados. El “Plan de gestión integral de los espacios protegidos del Mar Menor y de la franja litoral mediterránea de la Región de Murcia” también incluye numerosas referencias a los temas del PVE. En relación con la adaptación al cambio climático, se destaca la importancia de la evaluación, seguimiento, control y estudio de los impactos asociados al cambio climático. Se menciona la protección y restauración de la biodiversidad y los ecosistemas, especialmente en cuanto a la necesidad de evitar vertidos tóxicos, regulando los contaminantes presentes en la cuenca, restaurando la funcionalidad ecológica de los diferentes espacios protegidos y controlando la presencia de especies exóticas invasoras, entre otros. Los últimos planes y estrategias desarrollados, consideran y abordan cada vez más los temas y objetivos del PVE y la iniciativa WestMED. A medida que avanza el tiempo y la experiencia, las políticas y estrategias de la UE se van integrando de forma más eficaz y eficiente en las normativas nacionales y regionales.

Elementos acerca de la participación/compromiso de las partes interesadas

El análisis de los planes y estrategias reveló tres tipologías de situaciones relacionadas con la información en el proceso de participación de las partes interesadas. En algunos de los planes existe una explicación detallada del proceso de implicación de las partes interesadas, incluyendo información específica sobre los temas tratados, los sectores implicados y las metodologías utilizadas. Este es el caso de la “Estrategia GIZC del Sistema Socio ecológico del Mar Menor (SESMM) y su Entorno”, los “POEM”, el “Plan de gestión integral de los espacios protegidos del Mar Menor y de la franja litoral

mediterránea de la Región de Murcia" y la "Estrategia de Desarrollo Local Participativo 2014-2020 de la Región de Murcia".

Algunos planes y estrategias mencionan claramente la aplicación de un proceso adecuado de participación de las partes interesadas, pero no ofrecen información detallada. Este es el caso de las "Directrices y Plan de Ordenación Territorial del Litoral de la Región de Murcia (OT 1/2002)", la "Estrategia de Adaptación al Cambio Climático del Litoral Español", el "Plan Estratégico Acuícola de la Región de Murcia 2021-2027", el "Marco Estratégico de Puertos Abiertos de la Región de Murcia 2022-2045" y la "Hoja de ruta para el desarrollo de la energía eólica marina y las energías del mar en España".

Por último, algunos de los planes y estrategias considerados no mencionan el tema en absoluto; por lo tanto, no hay pruebas de procesos de participación, aunque podrían haberse llevado a cabo. Este es el caso del "Plan Nacional de Protección del Patrimonio Arqueológico Subacuático", el "Plan Estratégico de Turismo de la Región de Murcia 2022-2032" y la "Estrategia Nacional de Seguridad Marítima". Las tipologías segunda y tercera ponen de manifiesto la falta de información sobre los procesos de participación de los interesados en la mayoría de las estrategias y planes considerados.

Lagunas persistentes en la planificación y gestión integradas del espacio marítimo

La consecución, el logro de una planificación integrada del espacio marino, que incluya diversas actividades y usos costeros y marítimos, es una tarea complicada; más aún, teniendo en cuenta el complejo sistema de gobernanza que existe en España. El proceso de OEM, en su primer ciclo, pretende que se vayan, cubriendo las lagunas de datos y conocimientos existentes y mejorando la coordinación entre administraciones y sectores (a escala nacional y regional). Los POEM se han aprobado recientemente y su aplicación acaba de comenzar. Desde esta perspectiva, el seguimiento es esencial para evaluar si los efectos de la aplicación de los planes a escala regional son los esperados en relación con las visiones y políticas establecidas. Esto es particularmente relevante para las aguas marítimas de la Región de Murcia, debido a la elevada concentración de usos y actividades y la necesidad de mejorar la coexistencia entre ellos; varias lagunas/brechas deben ser consideradas en esta perspectiva. La mayoría de los sectores marítimos que se dan en la zona de estudio no cuentan con estrategias o planes regionales/locales específicos, a excepción de la acuicultura, que es probablemente el sector marítimo más organizado de España, y los puertos deportivos. Estos dos sectores cuentan con estrategias específicas a nivel regional

donde se proponen medidas y objetivos encaminados a mejorar los componentes socioeconómicos y ecológicos de estos sectores. El resto de sectores se contemplan, o bien en una estrategia nacional que apenas consigue incluir algún rasgo regional, o bien en ninguna. Por lo tanto, no existen objetivos ni medidas establecidos para la mayoría de los sectores a nivel regional en la zona del caso de estudio. Esta misma cuestión podría aplicarse al PCS, que carece de un plan regional a pesar de la cantidad de bienes subacuáticos de interés cultural presentes en la región y de la posibilidad de encontrar sinergias con otros sectores, como con el turismo marítimo. El desarrollo de estrategias sectoriales más específicas que tengan en cuenta las especificidades regionales es necesario y permitiría tener una visión clara del desarrollo sostenible de la economía azul en la Región de Murcia. Permitiría una consideración más precisa de los impactos

adecuadamente las sinergias y conflictos entre los diferentes usos y actividades, lo que facilitaría una ordenación del espacio marítimo más detallada a escala regional.

El análisis de las estrategias y planes planteó otra laguna importante. La integración de las estrategias, planes y convenios europeos e internacionales a nivel regional no está optimizada en algunos casos. Es cierto que las estrategias y planes aprobados recientemente han considerado y nombrado estas estrategias europeas, sin embargo, sigue existiendo una ausencia de medidas específicas que allanen el camino para la consecución de los objetivos europeos. Más importante aún es la ausencia de implicación legal de la mayoría de los planes/estrategias, que o bien no son vinculantes y/o no contienen acciones o medidas específicas que deban aplicarse a nivel regional.

Región de Galicia

El caso de estudio de la Región de Galicia se centra en la Comunidad Autónoma del mismo nombre, localizada al noroeste de España. Geográficamente limita al sur con Portugal, al oeste con el Océano Atlántico y al norte con el Mar Cantábrico. Galicia es la región de España con mayor longitud de costa (unos 1.660 km) y se caracteriza por sus rías. El litoral gallego comprende una estrecha plataforma continental, por lo que la isóbata de 200 m de profundidad se encuentra normalmente entre 15 y 30 km de la costa. Todas sus aguas pertenecen a la demarcación noratlántica (DM-NOR), una de las cinco demarcaciones marinas en las que se dividen las aguas marinas españolas según la Ley 41/2010 de protección del mar (Figura 1).

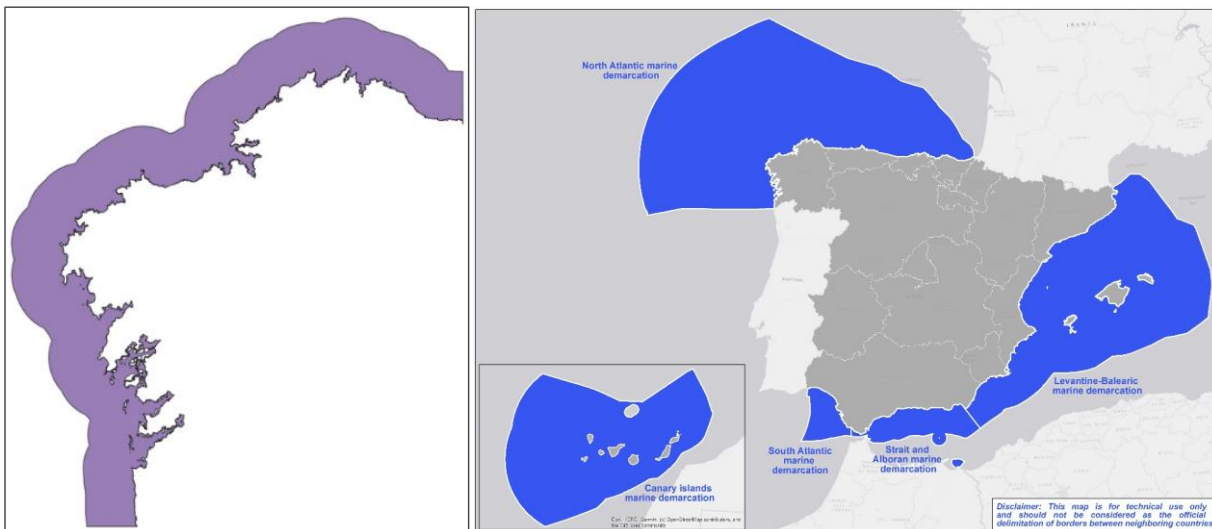


Figura 1. A la izquierda: área de estudio de caso - Aguas territoriales de la región de Galicia pertenecientes a la demarcación del Atlántico Norte (DM-NOR); a la derecha: delimitación de las cinco demarcaciones marinas españolas (Fuente: elaboración propia; IEO, CSIC). Advertencia: Los límites de las demarcaciones marinas no se corresponden con los límites jurisdiccionales de las aguas marinas españolas. No deben considerarse como una delimitación oficial con los países vecinos.

Las competencias en materia de ordenación del espacio marítimo en España corresponden al Gobierno central a través de la Dirección General de la Costa y del Mar (DGCM) del Ministerio para la Transición Ecológica y el Reto Demográfico (MITERD). A pesar de que la ordenación del espacio marítimo se realiza a nivel nacional, diversos usos y actividades marinas son planificados y gestionados por las Comunidades Autónomas (CCAA, también denominadas como Regiones Autónomas

o Regiones en este capítulo), de acuerdo con la distribución de competencias en España establecida en la Constitución Española de 1978.

En términos generales, el espacio marino es gestionado por el gobierno central, mientras que las aguas interiores (las que abarcan desde las líneas de base hasta la línea de costa) son gestionadas por las Regiones. Por otra parte, la protección del medio ambiente es, en sentido amplio, competencia regional hasta el límite de las aguas interiores. En consecuencia, las Regiones están llamadas a elaborar documentos de gestión sobre este aspecto, como estrategias específicas de biodiversidad, planes y reglamentos específicos para la aplicación de la ley nacional que establece las bases para la protección de la biodiversidad (Ley 42/2007, de 13 de diciembre de 2007, del Patrimonio Natural y de la Biodiversidad). La gestión de las Areas Marinas Protegidas (AMP) es competencia nacional, salvo que una AMP constituya una continuación geológica/ecológica de un espacio protegido terrestre o esté situada en aguas interiores; en tal caso, la AMP es gestionada por la Comunidad Autónoma respectiva.

Las competencias sobre acuicultura, pesca artesanal, actividades recreativas (incluidas las actividades náuticas y el turismo marino), así como la ordenación urbana y del litoral, corresponden a las Regiones. El patrimonio cultural subacuático, el cambio climático, la vigilancia marítima, el transporte marítimo, el dragado de arena en el mar o en el dominio público marítimo-terrestre (DPMT) y las energías renovables en el mar, como los parques eólicos marinos (OWF), son gestionados por el Gobierno Central.

Aunque el gobierno central es responsable de establecer las bases y los requisitos legales del desarrollo de actividades en el mar en el marco de la ordenación del espacio marítimo, las Regiones pueden elaborar planes/estrategias más detallados para ámbitos/sectores de su competencia. Respetando los requisitos nacionales, estas estrategias/planes pueden ser más detallados y recoger las especificidades locales que surjan a menor escala. Un ejemplo lo representa la acuicultura, planificada y gestionada por las CCAA. Debido a su importancia como sector estratégico para potenciar el desarrollo económico de las Regiones costeras, la Junta Nacional Asesora de Cultivos Marinos (JACUMAR) - dependiente de la Secretaría General de Pesca (SGP) del Ministerio de Agricultura, Pesca y Alimentación (MAPA) - elaboró cinco expedientes técnicos para la MSP de Acuicultura, uno por cada demarcación marina. Estos expedientes aportaron un enfoque integrador y son el resultado de un ejercicio de armonización y coherencia entre las propuestas de ordenación de la acuicultura de todas las Demarcaciones Costeras.

Planes y estrategias analizados

Los Planes de Ordenación del Espacio Marítimo (POEM) españoles fueron aprobados en febrero de 2023 por Real Decreto con el objetivo general de promover la actividad y el crecimiento sostenible de los sectores marítimos de forma que sea compatible con los objetivos de protección del medio ambiente y uso sostenible de los recursos. En España, la ordenación del espacio marítimo es una cuestión nacional; en cualquier caso, como parte de la elaboración de estos planes (incluido el de la demarcación del Atlántico Norte), tanto los Ministerios con competencias en el mar como las Comunidades Autónomas proporcionaron los datos y la información necesarios.

Mucho antes de la aprobación de los POEM, Galicia ha venido gestionando y regulando su litoral a través de otros instrumentos de planificación, como el Plan de Ordenación del Litoral de Galicia ("Plan de Ordenación del Litoral" - POL; Decreto 20/2011, de 10 de febrero). Se trata de un instrumento de ordenación del territorio cuya finalidad, de acuerdo con la Ley 6/2007, era establecer los criterios, principios y estándares generales para la ordenación urbanística de la zona costera en base a criterios de durabilidad y sostenibilidad, así como definir la normativa necesaria para garantizar la conservación, protección y puesta en valor de las zonas costeras. Especialmente destacable es la recientemente publicada Ley 4/2023 (6 de julio) de Ordenación y Gestión Integrada del Litoral de Galicia, que pretende planificar y gestionar el litoral a través de un enfoque ecosistémico e integrado, para garantizar el desarrollo sostenible de las actividades costeras y marinas, en el marco de las competencias atribuidas a la Comunidad Autónoma de Galicia por la Constitución Española y el Estatuto de Autonomía.

También es relevante para la planificación especial marítima, desde un punto de vista operativo el "Plan Gallego de Cartografía e Información Cartográfica " que es el instrumento transversal básico para la producción de la cartografía e información geográfica necesaria para la gestión de todo el territorio gallego, incluidas sus costas. Su finalidad es garantizar la coherencia e interoperabilidad de los datos espaciales, promover la eficiencia de las inversiones públicas y asegurar la calidad de la producción cartográfica y su utilidad como servicio público.

En el marco de la Investigación e Innovación el Programa de ciencias Marinas de Galicia (web definitiva aún en construcción) aborda todos los sectores económicos gallegos relacionados con la economía azul y aportará conocimientos y datos clave relevantes para la Planificación especial marítima. Este Programa forma parte del Programa Conjunto en Ciencias del Mar, en el que colaboran diferentes regiones costeras de España, para desplegar una estrategia conjunta de investigación e innovación en ciencias marinas y abordar los nuevos retos en el seguimiento y

observación del medio marino, el cambio climático, la acuicultura y otros sectores de la economía azul.

Se han identificado y analizado cuatro planes relacionados con la categoría orientada a la protección y conservación. La Estrategia Gallega de la Infraestructura Verde y de la Conectividad y Restauración Ecológicas regula la implantación y desarrollo de las Infraestructuras Verdes en la región. Éstas se conciben como una red ecológicamente coherente y estratégicamente planificada de espacios naturales, seminaturales y otros elementos ambientales, diseñada y gestionada para la conservación de los ecosistemas y el mantenimiento de los servicios ecosistémicos.

Alineados con los objetivos de conservación, los planes de gestión integral de las dos Reservas Marinas de Galicia - "Os Miñarzos" y "Ría de Cedeira"- ofrecen un modelo de gestión destinado a garantizar la protección y el mantenimiento de la diversidad biológica a largo plazo, proporcionando además un flujo sostenible de productos y servicios naturales para satisfacer las necesidades de las comunidades pesqueras locales. La explotación de recursos naturales como peces, moluscos, erizos de mar, percebes, anémonas, gusanos o algas está regulada por estos dos planes de gestión.

En cuanto a los espacios de la Red Natura 2000, el Plan Director de la Red Natura 2000 de Galicia (PORN) fue aprobado por el decreto 37/2014 de 27 de marzo de 2014. Este plan tiene por objeto declarar los Lugares de Importancia Comunitaria (LIC) presentes en Galicia como Zonas de Especial Conservación (ZEC), así como establecer un instrumento de gestión que fije un conjunto de objetivos y medidas para los espacios naturales que se incluyen en su ámbito de aplicación. Asimismo, garantiza un estado de conservación favorable de los hábitats naturales y especies de interés comunitario (Directiva 92/43/CEE del Consejo, de 21 de mayo de 1992) y de las especies de aves contempladas en el artículo 4 de la Directiva 2009/147/CE.

Por último, la Estrategia del Paisaje de Galicia asume que el paisaje es un importante recurso económico y social. La estrategia establece medidas integradas para proteger y conservar los paisajes más significativos y característicos de la comunidad autónoma, de acuerdo con los principios de sostenibilidad e integración paisajística. Dicha estrategia incluye disposiciones relacionadas con varios sectores: actividades recreativas, turismo, investigación e innovación, energías renovables, telecomunicaciones, entre otros, la mayoría de los cuales se desarrollan a lo largo de la costa.

En cuanto a esta última categoría de análisis, se han seleccionado para el análisis tres planes que tratan de la utilización de los recursos marinos. Afectan a sectores clave como la acuicultura y la pesca. La Estrategia Gallega de Acuicultura constituye la

herramienta fundamental para orientar la gestión y organización de la acuicultura en la región. Proporciona un marco conceptual y metodológico, sirviendo de hoja de ruta para orientar las actuaciones del gobierno, otras administraciones y organizaciones directa o indirectamente relacionadas en el ámbito de la acuicultura. Aunque no es estrictamente vinculante por su carácter estratégico, es importante reconocer su valor como marco de referencia que debe orientar y racionalizar las actuaciones en este sector, con el objetivo de alcanzar los resultados previstos y promover la coordinación, coherencia y eficacia en cada una de las medidas adoptadas.

Abordando otros importantes recursos costeros, los "Planes de explotación y gestión marisquera" establecen el régimen necesario para que la explotación marisquera en Galicia se realice de acuerdo con objetivos sostenibles, considerando aspectos ambientales, sociales y económicos. Las zonas de explotación de bivalvos, invertebrados y algas con interés comercial (almejas, berberechos, navajas, percebe, rayed artemis, abalón, algas, erizo de mar, anémonas, gusanos poliquetos, caracoles de mar, etc.) son concesiones administrativas públicas donde se delimitan espacialmente, clasifican y regulan los bancos. Otros recursos marinos de interés son objeto de "Planes de gestión de especies marinas de interés de Galicia" que regulan las capturas pesqueras (pulpo, anguila, camarón sardina y crustáceos decápodos) y el uso de artes de pesca. En relación con el sector turístico, cabe destacar que Galicia, caracterizada por sus más de 750 playas y sus tradicionales rías o estuarios navegables, ofrece numerosas actividades recreativas y de ocio vinculadas al mar. Tras el inicio de la pandemia COVID-19 la Xunta de Galicia impulsó la reactivación turística de la región a través del "Plan Director 2021 - 2023 Galicia Destino Seguro". Se trata de una hoja de ruta donde la administración y el sector turístico, avanzan conjuntamente en un proceso de transformación para ofrecer una oferta consolidada que permita recuperar los indicadores de ocupación, rentabilidad y gasto previos a la crisis en 2023. En cuanto al sector de la energía offshore, además de la "Energía renovable marina: Hoja de ruta para el desarrollo de la eólica marina y las energías marinas en España", de ámbito Nacional, la Xunta de Galicia creó el Observatorio de la Eólica marina de Galicia. Su principal objetivo es servir de foro de diálogo, encuentro y análisis para la búsqueda de la coexistencia y compatibilidad del potencial desarrollo de la eólica marina en Galicia con todos los usos marítimos existentes, especialmente las actividades pesqueras. El pleno del Observatorio está formado por la Administración Autónoma (Consellería de Economía, Empresa e Innovación, Consellería do Mar y Consellería de Medio Ambiente), sector pesquero (Cofradías de Pescadores y Consello Galego de Pesca) y sector industrial (Asociación de Industrias del Metal y Tecnologías Asociadas de Galicia). Las principales características y

Deliverable 3.1. Reginal analysis report



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sectores considerados de las estrategias y planes analizados se resumen respectivamente en el primer y segundo cuadro siguientes.

Deliverable 3.1. Reginal analysis report

Título	Escala			Legalmente vinculante		Tipología			Medidas incluidas
	Local	Regional	Nacional	SÍ	NO	Estratégico	Regulación	Ambos	
Categoría 1: planes y estrategias transversales									
POEM para la Demarcación del Atlántico Norte			X	X				X	X
Plan de ordenación del litoral gallego (POL)		X		X			X		X
Planificación y gestión integrada del litoral gallego		X		X				X	X
Plan gallego de cartografía e información cartográfica		X			X	X			X
Programa de ciencias Marinas de Galicia		X			X	X			
Categoría 2: planes y estrategias de protección y conservación									
Estrategia gallega de la infraestructura verde y de la conectividad y restauración ecológicas		X			X	X			X
Gestión integral de las dos reservas marinas gallegas.		X		X				X	X
Plan Director de la Red Natura 2000 de Galicia		X		X			X		X
Estrategia del Paisaje de Galicia		X			X			X	X
Categoría 3: Planes para sectores económicos y otros usos y actividades marinos									

Deliverable 3.1. Reginal analysis report

Título	Escala			Legalmente vinculante		Tipología			Medidas incluidas
	Local	Regional	Nacional	SÍ	NO	Estratégico	Regulación	Ambos	
Estrategia Gallega de Acuicultura		X			X	X			X
Planes de explotación y gestión marisqueras		X		X				X	X
Planes de gestión de especies marinas de interés en Galicia		X		X				X	X
Plan Galicia destino seguro 2021-2023		X			X	X			X
Observatorio de la eólica marina de Galicia		X			X	X			

Título	PE	AC	TU	OR	TM	AP	ER	PG	AM	MP	TC	DM	ZV	II	PC	PN	PP	PS
Categoría 1: planes y estrategias transversales																		
POEMA para la demarcación del Atlántico Norte	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Plan de ordenación del litoral gallego (POL)															X	X	X	
Planificación y gestión integrada del litoral gallego	X	X	X	X		X	X							X	X	X	X	X
Plan de Cartografía e Información Geográfica de Galicia	X	X	X	X	X	X								X	X	X	X	
Programa de Ciencias del Mar de Galicia		X				X								X	X			

Deliverable 3.1. Reginal analysis report

Título	PE	AC	TU	OR	TM	AP	ER	PG	AM	MP	TC	DM	ZV	II	PC	PN	PP	PS
Categoría 2: planes y estrategias de protección y conservación																		
Estrategia Gallega de Infraestructura Verde y de la Conectividad y de la Restauración Ecológica			X	X											X		X	
Gestión integral de las dos reservas marinas gallegas.	X	X												X	X		X	
Plan Director de la Red Natura 2000 de Galicia																X		
Estrategia Paisajística de Galicia			X	X											X		X	
Categoría 3: Planes para sectores económicos y otros usos y actividades marinos																		
Estrategia Gallega de Acuicultura		X				X								X	X			
Planes de explotación y gestión del marisco	X	X				X												
Planes de gestión de especies marinas de interés en Galicia	X	X				X												
Plan Director 2021 - 2023 "Galicia Destino Seguro"				X														
Observatorio Eólico Marino de Galicia							X											

PE = Pesca, AC = Acuicultura, TU = Turismo marítimo y costero, OR = Actividades de ocio y recreo, TM = Transporte marítimo, AP = Actividades portuarias, ER = Energías renovables marinas, PG = Exploración y explotación de petróleo y gas, AM = Áridos marinos (extracción de arena para la regeneración de playas y la construcción), MP = Infraestructuras mineras de aguas profundas y robótica, TC = Tuberías y cables, DM = Defensa marítima, ZV = Zonas de vertido (ej. sedimentos o municiones), II = Investigación e Innovación, PC = Protección costera, PN = Protección de la naturaleza, PP = Protección del paisaje, PS = Patrimonio cultural subacuático.

Planes y estrategias transversales

Los Planes de Ordenación del Espacio Marítimo (POEM) son el resultado de la aplicación en España de la Directiva 2014/89/UE de la Unión Europea. Los POEM abordan los usos marinos y costeros, así como las interacciones tierra-mar. Dentro de los POEM se identifican diferentes categorías de interacciones tierra mar, referidas a aspectos gestionados principalmente por las CCAA. Para facilitar la puesta en marcha del proceso de ordenación del espacio marítimo y la recopilación de las especificidades de cada región y su territorio, se tomó como modelo el marco de gobernanza multinivel ya existente para la Directiva marco sobre la estrategia marina. Se creó un grupo de trabajo en ordenación marítimo espacial bajo el paraguas de la Comisión Interministerial de las Estrategias Marinas (CIEM), apoyado por los Comités de Seguimiento de las 5 demarcaciones marinas, que incluyen a las administraciones regionales.

Los objetivos del POEM se han articulado en torno a los distintos usos e intereses del medio marino. Para definirlos, la autoridad competente española en materia de ordenación del espacio marítimo elaboró un cuestionario que se envió a las autoridades nacionales y regionales con competencias en asuntos marítimos. El objetivo de esta encuesta era identificar: (i) la existencia de objetivos de carácter económico, social o medioambiental ya establecidos en las políticas sectoriales marítimas españolas; (ii) la existencia de herramientas de planificación en vigor; (iii) la vinculación con otras políticas europeas; (iv) las principales sinergias y conflictos entre usos, (v) los fondos disponibles para implementar las políticas previstas; y (vi) el sistema de competencias que regula estas políticas. Además del cuestionario, se celebraron reuniones entre la autoridad competente, los Ministerios con competencias en el mar y las Comunidades Autónomas. Además, se crearon grupos de trabajo ad hoc para la discusión de temas específicos.

Este proceso condujo a la formulación de un objetivo general de la ordenación del espacio marítimo y tres categorías de objetivos más específicos:

- Objetivo general de la ordenación del espacio marítimo: fomentar el crecimiento sostenible de los sectores marítimos de forma que sea compatible con la protección del medio ambiente y el uso sostenible de los recursos marinos.
- Objetivos de interés general de la ordenación del espacio marítimo: son objetivos prioritarios ya que emanan de políticas públicas destinadas a proteger el patrimonio común, la seguridad y la salud. Se refieren al medio ambiente marino; la seguridad del abastecimiento de agua dulce; el saneamiento, la

depuración y la calidad del agua, incluidas las aguas de baño; la defensa nacional; la vigilancia, el control y la seguridad marítimos; la investigación científica, el desarrollo y la innovación; y la protección del patrimonio cultural subacuático.

- Objetivos sectoriales de la ordenación del espacio marítimo: mejorar la competitividad y sostenibilidad de los distintos sectores, también en relación con las políticas que los regulan. Los sectores marítimos considerados son: acuicultura, pesca extractiva, sector energético (hidrocarburos offshore y energías renovables), sector del transporte de electricidad y telecomunicaciones, transporte marítimo, puertos y puertos, turismo y ocio.
- Objetivos de la ordenación marítimo espacial multisectorial: minimizar conflictos, facilitar la coexistencia y promover sinergias entre sectores, así como, generar certidumbre, mejorar la coordinación y cooperación, etc.

El caso de estudio de la región de Galicia está situado en la Demarcación marina noratlántica (DM-NOR). Posee un fuerte legado de actividad marítima, siendo la principal región pesquera de España y un sector pesquero clave dentro de la UE. Galicia también juega un papel importante en la producción acuícola, aportando más del 80% de los productos acuícolas generados en España. El elevado incremento de actividades como el turismo y las actividades recreativas marítimas y la posible instalación de parques eólicos marinos debido al elevado potencial eólico, entre otras, podrían representar un conflicto o solapamiento entre los usos de las actividades existentes o potenciales en la misma zona marítima. En este sentido, la ordenación del espacio marítimo se convirtió en una herramienta esencial para gestionar esta situación. De forma similar al plan de la estrategia marina para la demarcación marina levantino-balear (DM LEBA), el POEM de la DM-NOR identifica Zonas de Uso Prioritario para Actividades de Interés General y Zonas de Alto Potencial para determinadas actividades sectoriales cuyo desarrollo futuro es previsible, y para las que también es necesario identificar el espacio más adecuado para su desarrollo.

Mucho antes de la aprobación de los POEM, Galicia ha venido gestionando y regulando su litoral a través de otros instrumentos de planificación. El Plan de Ordenación del Litoral de Galicia (POL) surgió como un instrumento para promover la gestión integral del territorio costero gallego, considerando aspectos como la sostenibilidad y la preservación del paisaje. Entre sus objetivos generales se encontraba la consecución de una protección efectiva del litoral, considerando la línea de costa como una entidad espacial dotada de valor, que debe ser protegida desde una perspectiva integral. Este plan promovía dos objetivos principales: (i) establecer un marco de referencia para la ordenación urbanística de la zona costera a través de un conjunto de criterios,

principios y normas generales y (ii) aprobar la normativa para la conservación, protección y puesta en valor de las zonas costeras. Para la consecución de los objetivos señalados, ha sido necesario establecer un nuevo modelo territorial que identifique y caracterice sus diferentes ámbitos y elementos, establezca las relaciones entre ellos, determine los criterios, principios y normas generales para cada uno de estos elementos y especifique el régimen de usos de las zonas con valores reconocidos. Para llevar a cabo la caracterización y ordenación detallada se elaboró una cartografía específica considerando los hábitats asociados a la dinámica intermareal (llanuras y marismas) y otras formas geológicas reconocidas como acantilados, arenales, dunas, lagunas y humedales costeros.

La recientemente aprobada Ley 4/2023, de 6 de julio, Ordenación y Gestión Integrada del Litoral de Galicia pretende dar un paso más, pretendiendo implementar la ordenación y gestión del litoral a través de un enfoque ecosistémico e integrado. Esto será claramente relevante en términos de planificación y gestión del espacio marino y las interacciones tierra-mar relacionadas. La ley pretende establecer una organización administrativa del litoral que garantice una gestión integrada, mediante una adecuada coordinación, colaboración y participación, y regular los instrumentos de planificación costera. La ley también persigue determinar el régimen jurídico de los diferentes usos y actividades socioeconómicas que se desarrollan en el litoral, el otorgamiento y gestión de los títulos habilitantes para el uso de la costa y la identificación de actuaciones estratégicas para el desarrollo sostenible del litoral. También incluye la adopción de medidas adicionales para la protección de la costa que tengan en cuenta el mantenimiento de la calidad y los objetivos ambientales de las aguas costeras gallegas, el grado de resiliencia del litoral frente al cambio climático y el impacto económico y social de las actuaciones que se proyecten en la costa. Esta ley es un instrumento regional diferente e independiente del POEM de ámbito nacional. Establece en su articulado que todo el sector marítimo-pesquero gallego es estratégico y su acceso a los recursos, lugares y caladeros debe priorizarse sobre cualquier otro tipo de uso posible.

Entre las medidas relevantes incluidas en la Ley 4/2023, cabe destacar los instrumentos específicos previstos para la ordenación del litoral, como la estrategia gallega de economía azul, las directrices de ordenación del litoral de Galicia, el Plan de Ordenación del Litoral, el plan de gestión del medio marino, los planes especiales de ría, los planes especiales de playa, los planes sectoriales y los planes de prevención y lucha contra la contaminación del litoral. Además, se han definido tres tipos de espacios en función de sus condiciones y de las actuaciones a realizar:

- a) Zonas de protección ambiental, incluidas las zonas que conservan características naturales o paisajísticas singulares e insustituibles y valores ambientales excepcionales, que deben ser especialmente protegidos y preservados.
- b) Áreas de mejora ambiental y paisajística, incluyendo espacios que, sin cumplir las condiciones de las anteriores, permanecen en su mayor parte libres de procesos de urbanización o degradación, o han sufrido procesos de desnaturalización reversibles, por lo que requieren actuaciones de protección, recuperación y mejora de sus condiciones.
- c) Área de reurbanización, que incluye las áreas transformadas por la urbanización o por el desarrollo de usos y actividades económicas, así como las áreas degradadas por cualquier causa y de imposible o difícil renaturalización, que requieren actuaciones de reordenación, encaminadas a no agravar el deterioro, humanizar los espacios y renovar los elementos y su entorno.

El Plan de Cartografía e Información Geográfica de Galicia, puesto en marcha en 2022, tiene un notable enfoque transversal y una estrecha y amplia relación con el mar y las interacciones tierra-mar. Siendo su objetivo principal la producción de información geográfica para la caracterización y protección del territorio gallego, incluyendo la zona costera y la evaluación de sus usos del suelo, el Plan es claramente relevante en una perspectiva de ordenación marítima especial e interacciones tierra mar. La información desarrollada en el marco de este plan puede ser utilizada en los siguientes aspectos: planificación y gestión marina y costera, medio ambiente marino costero (incluyendo áreas marinas protegidas, preservación del medio ambiente costero, y mitigación y adaptación a los efectos del cambio climático), gestión del agua, defensa nacional, vigilancia marítima (control y seguridad), investigación científica, protección del patrimonio cultural (incluyendo el subacuático), desarrollo de la acuicultura, gestión de la pesca, adecuación de las energías renovables, estrategias de gestión del transporte marítimo y desarrollo del turismo sostenible. La información generada en el marco de la aplicación de este plan podría utilizarse para la zonificación y el análisis espacial. El desarrollo y mantenimiento de varias páginas web y visores de información geográfica previstos por el plan se considera una herramienta fundamental para la toma de decisiones y la evaluación, y proporciona datos para una gestión integrada de la zona costera y una ordenación marítimo espacial.

En el ámbito de la Investigación y la Innovación, el Programa de Ciencias Marinas de Galicia puesto en marcha en 2022 proporcionará conocimientos y datos clave relevantes para la ordenación del espacio marítimo. Este Programa forma parte del Programa Conjunto de Ciencias Marinas, que invita a las regiones costeras de España

a colaborar para desplegar una estrategia conjunta que permita abordar los nuevos retos en el seguimiento y observación del medio marino, el cambio climático, la acuicultura y otros sectores de la economía azul. El Programa se articula en 11 ambiciosos proyectos cuyos resultados serán especialmente relevantes para la ordenación marítima especial. Entre ellos, destaca el desarrollo de una Estrategia y Planificación para la gobernanza de la monitorización marina que incluye: la definición de una Estrategia de Observación Costera para Galicia, mecanismos para la implementación de un programa de monitorización a gran escala, productos y servicios para la toma de decisiones y la identificación de redes de monitorización que apoyen la gestión sostenible de los recursos marinos. Esta Estrategia se apoyará en el desarrollo de nuevas tecnologías y herramientas de monitorización con un alto grado de automatización para la recogida masiva y sistemática de datos esenciales para la gestión del mar. Otros resultados esperados incluyen herramientas genómicas para la gestión sostenible y la mejora de la productividad de la acuicultura, procedimientos y herramientas para mejorar y fortalecer la acuicultura de moluscos bivalvos, mejora de la capacidad de diagnóstico en acuicultura y sostenibilidad en la producción pesquera, desarrollo de nuevos sistemas de Acuicultura Multitrófica Integrada (IMTA) e intervenciones para la resiliencia del medio costero en Galicia.

Planes y estrategias de protección y conservación

Estrategia Gallega de Infraestructura Verde y Conectividad y Restauración Ecológica fue sometida a un amplio proceso de consulta y deberá ser aprobada y, por tanto, puesta en marcha antes de 2024. Se espera que regule la implantación y desarrollo de las Infraestructuras Verdes en Galicia, que se conciben como una red ecológicamente coherente y estratégicamente planificada de espacios naturales, seminaturales y otros elementos ambientales, diseñada y gestionada para la conservación de los ecosistemas y el mantenimiento de los servicios ecosistémicos que nos prestan. La Estrategia contempla ocho objetivos relevantes para el mar y para las interacciones tierra-mar y que tienen un componente espacial:

1. Identificar y delimitar espacialmente la red básica de la Infraestructura Verde
2. Reducir los efectos de la fragmentación y la pérdida de conectividad ecológica causadas por los cambios en el uso del suelo o la presencia de infraestructuras.
3. Restaurar hábitats y ecosistemas en zonas clave para favorecer la biodiversidad, la conectividad o la prestación de servicios ecosistémicos, dando prioridad a las soluciones basadas en la naturaleza.

4. Mantener y mejorar la prestación de servicios ecosistémicos de los elementos de la Infraestructura Verde
5. Mejorar la resiliencia de los elementos vinculados a la Infraestructura Verde, favoreciendo la mitigación y adaptación al cambio climático.
6. Garantizar la coherencia territorial de la Infraestructura Verde definiendo un modelo de gobernanza que asegure la coordinación entre los diferentes niveles administrativos e instituciones implicadas.
7. Incorporar de forma efectiva la Infraestructura Verde, la mejora de la conectividad ecológica y la restauración ecológica a las políticas sectoriales, especialmente en materia de ordenación del territorio y planificación del espacio marítimo y evaluación ambiental y
8. Garantizar una adecuada comunicación, educación y participación de los grupos de interés y de la sociedad en el desarrollo de la Infraestructura Verde.

Siguiendo con los fines de protección y conservación, la Estrategia del Paisaje de Galicia pretende integrar la preservación del paisaje en las políticas de ordenación del territorio y urbanismo, así como en otras políticas transversales y sectoriales que puedan incidir directa o indirectamente en el paisaje. En cuanto a las medidas, la Estrategia del Paisaje de Galicia se articula a través de tres acciones clave asimilables a medidas: (i) elaboración de instrumentos de protección, ordenación y gestión del paisaje (catálogos, directrices y planes de actuación en espacios protegidos), ii) integración paisajística (integración de arquitectura y paisaje) y iii) sensibilización, formación y divulgación sobre la protección del paisaje. Todas estas acciones se desarrollan en zonas costeras, por lo que son relevantes para el mar y las interacciones tierra mar.

Dos planes de áreas protegidas marinas integran el análisis de esta category. El plan de gestión integral de las reserva marina de "Os Miñarzos" - una Reserva Marina de Interés Pesquero situada en el noroeste de Galicia (Figura 2) - y de la "Ría de Cedeira" situada en el Norte. Estas áreas marinas protegidas fueron diseñadas y desarrolladas por científicos y miembros de la Xunta de Galicia en estrecha colaboración con los pescadores a través de un proceso altamente participativo. Su órgano de gestión y control está formado por representantes de la Consellería do Mar y de la Consellería de Medio Ambiente, la Cofradía local de pescadores y la Federación Gallega de Cofradías de Pescadores.

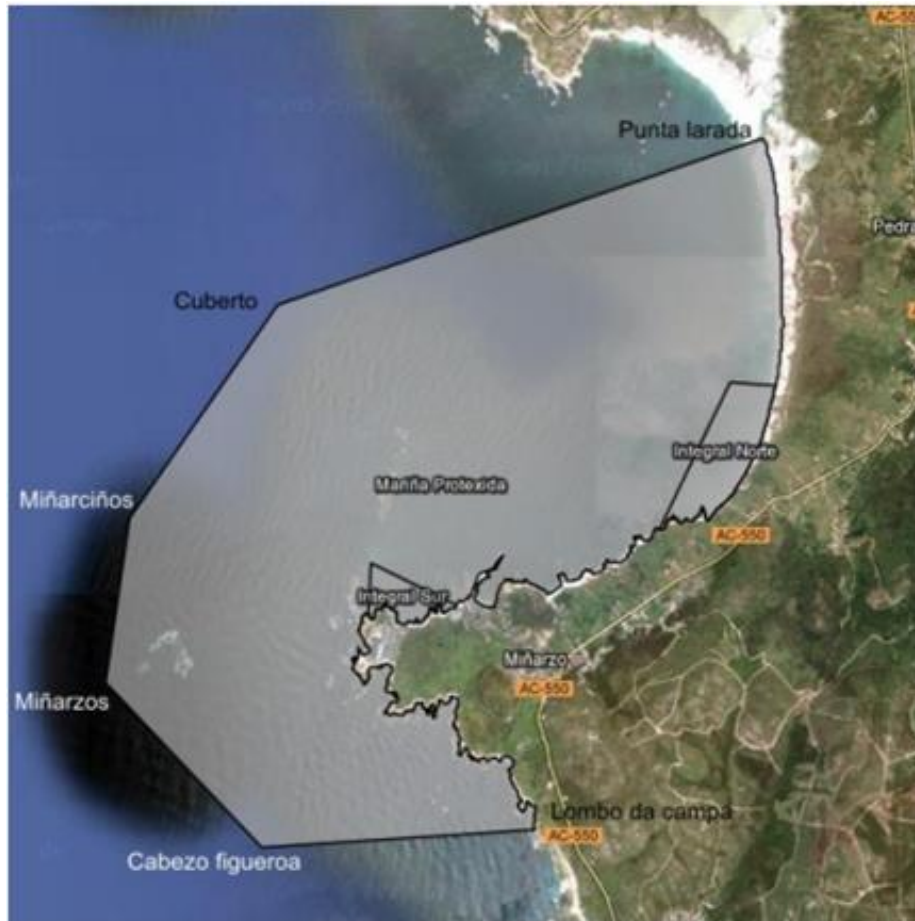


Figura 2. Mapa de la reserva marina de "Os Miñarzos " (Fuente: <http://ww3.intecmar.gal/Sigremar>)

Los planes tienen como objetivo la gestión sostenible de las actividades humanas para garantizar la protección de la diversidad biológica a largo plazo y mantener el flujo sostenible de productos y servicios naturales para satisfacer las necesidades de la comunidad pesquera local. En el ámbito de las dos reservas se establecen zonas especiales de protección integral. Se trata de hábitats de gran valor, en los que la pesca marítima, la recolección de fauna y flora y las actividades subacuáticas están totalmente prohibidas. Se ha establecido un protocolo de seguimiento científico para controlar los desembarques, las capturas y el esfuerzo pesquero. Las actividades pesqueras realizadas en las aguas de las dos reservas marinas están sujetas a las medidas establecidas en el Plan de Gestión Integral, reguladas por decreto ley. Esto incluye la delimitación de las áreas protegidas y su zonificación, las artes de pesca permitidas, las medidas de gestión de las distintas especies explotadas y las medidas de control.

Por último, el Plan Director de la Red Natura 2000 de Galicia (PORN) constituye el instrumento básico para una planificación, ordenación y gestión en red de los espacios protegidos de la Red Natura 2000 cumpliendo con los requisitos establecidos en las directivas europeas, normativa estatal y autonómica. Los objetivos de conservación propuestos por este plan para los espacios Natura 2000 de Galicia se clasifican en tres grupos tipológicos: a) zona costera, b) zonas húmedas y corredores fluviales, y c) zona de montaña. Establece objetivos y medidas agrupadas por espacios con tipos de hábitats de tipología similar. Este plan de gestión puede tener un desarrollo futuro y establecer medidas adicionales de conservación y gestión para cada ZEC y ZEPA, hábitats y especies o para determinados usos y actividades.

Planes para sectores económicos y otros usos y actividades marinos

Para esta categoría específica, se consideraron los planes y estrategias relacionados con la acuicultura, la pesca, el turismo y la energía en alta mar.

La Estrategia Gallega de Acuicultura pretende dotar a la actividad acuícola en Galicia de un modelo de desarrollo dinámico, sostenible, equilibrado y de calidad, considerando aspectos ambientales, sociales y económicos. Sus principales objetivos son:

- Promover la sostenibilidad medioambiental de la acuicultura mediante la preservación de la biodiversidad, la integración adecuada de las instalaciones acuícolas en el paisaje y la mejora de la eficiencia del consumo de energía y agua.
- Impulsar la actividad acuícola mediante la diversificación de las producciones, el refuerzo de las estructuras productivas, la promoción de la comercialización de los productos acuícolas y el fomento de la investigación y el desarrollo tecnológico.
- Generar empleo de calidad y riqueza en las zonas costeras periféricas, garantizar productos acuícolas de alta calidad y seguridad alimentaria, reforzar las capacidades de abastecimiento de alimentos y promover la formación especializada y el asociacionismo en el sector.

Esta estrategia acuícola promueve la planificación integral del sector acuícola, incluyendo el desarrollo de un Plan Director de Acuicultura Costera, un Plan de Planificación de Cultivos para la zona marítima (sistemas acuáticos) y otro para la zona marítimo-terrestre (sistemas acuáticos). Estos planes se complementan con el plan en curso para la recuperación de zonas marisqueras improductivas. También se busca la integración de la acuicultura en la ordenación del territorio de la Comunidad

Autónoma de Galicia, vinculando sus objetivos a las directrices generales establecidas en otros instrumentos de planificación estratégica del territorio gallego, como las Directrices de Ordenación del Territorio y el Plan de Ordenación del Litoral. El desarrollo de las actividades acuícolas en el ámbito marítimo se gestionará a través del Plan de Ordenación de Cultivos Marítimos (POCUMA), que establecerá la compatibilidad de la acuicultura pesquera y marisquera con la pesca y con la protección del medio ambiente en Galicia. En la zona marítimo-terrestre, las principales herramientas integradas en la Estrategia Gallega de Acuicultura para el desarrollo de las actividades acuícolas en este ámbito serán el Plan de Ordenación de Cultivos de la Zona Marítimo-Terrestre. En él se incluirá el Plan de Recuperación de Zonas Improductivas, apoyado por la reformulación de la normativa sobre cofradías de pescadores. También vinculado a la Estrategia Gallega de Acuicultura, el nuevo Decreto de Planificación de Parques Acuícolas regulará y ordenará la actividad, aportando la máxima seguridad jurídica.

Desde hace más de 30 años, los Planes Regionales de Explotación y Gestión marisquera regulan la recolección de este tipo de recursos. Los planes son jurídicamente vinculantes y se refieren a concesiones administrativas con delimitación espacial georreferenciada. Progresivamente se han ido incorporando distintas especies como objetivo de explotación. Se trata de bivalvos, invertebrados y algas con interés comercial (como almejas, berberechos, navajas, percebe, artemisa rayada, abalón, algas, erizo de mar, anémonas, gusanos poliquetos, caracoles de mar, etc.). Cada banco marisquero tiene un código en función del tipo de extracción que se realice (a pie, en barco, etc.); sus límites están establecidos por ley. Los planes establecen las especies que se pueden explotar y los bancos en los que se puede llevar a cabo esta explotación. Cualquier especie que no esté incluida en el plan no puede ser explotada. Los planes también establecen el régimen de explotación marisquera en Galicia para garantizar el aprovechamiento sostenible de los recursos, considerando aspectos ambientales, sociales y económicos. En los planes se incluyen medidas para la conservación y sostenibilidad de los recursos marisqueros, así como estrategias de comercialización para mejorar los precios de venta del marisco. Deben estar alineados con la Directiva MSFD de la UE, incluyendo acciones relacionadas con los siguientes descriptores: 1. 1. Mantenimiento de la biodiversidad, 2. Especies no autóctonas, 3. Población sana de especies de peces comerciales, 10. Desechos marinos. Desechos marinos. También incluyen prácticas de acuicultura semi-intensiva: limpiezas de acumulación de algas, plantación de almejas semilleras y protección con redes, traslados a zonas de baja producción, acondicionamiento del sustrato, etc.

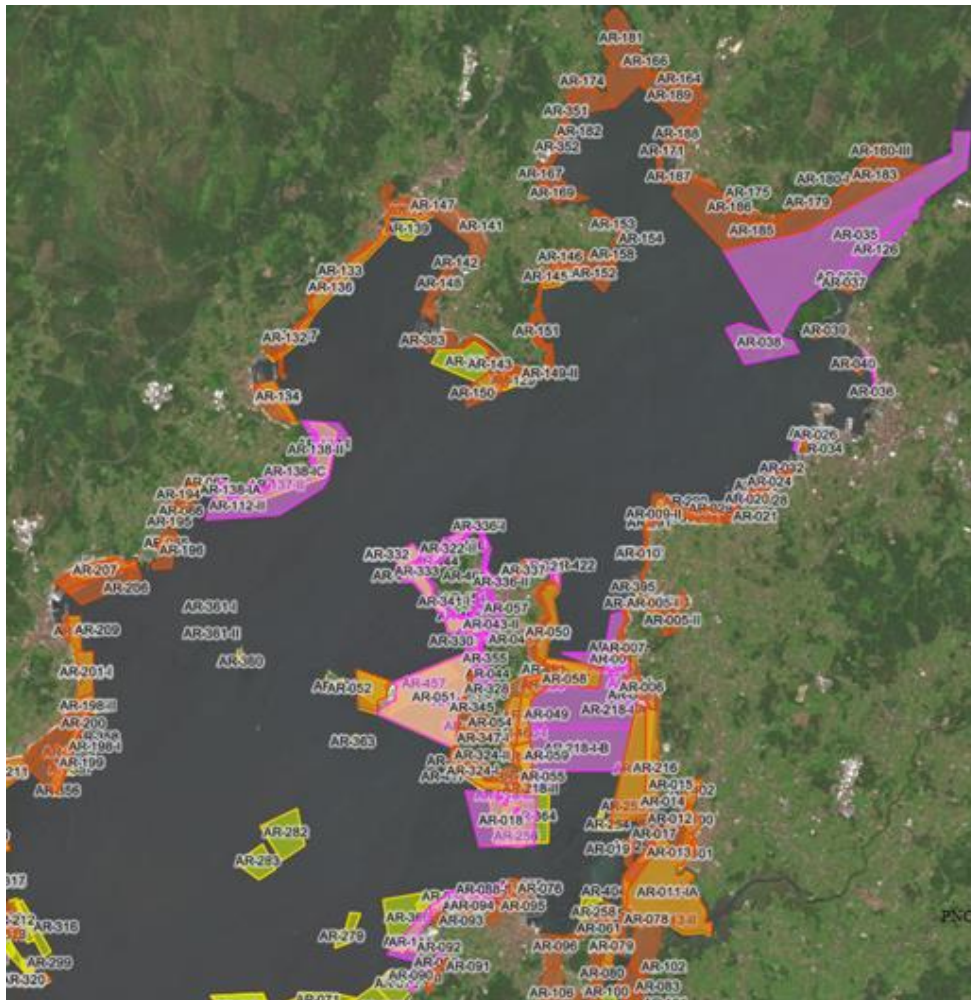


Figura 3. Identificación y delimitación de los bancos marisqueros en la Ría de Arousa según la modalidad y tipo de explotación. (Fuente: <http://ww3.intecmar.gal/Sigemar/>)

Al igual que el plan anterior, se han establecido los Planes de Ordenación de los Recursos Marinos de Interés de Galicia para regular las capturas pesqueras de especies concretas (pulpo, anguila, sardina, camarón y crustáceos decápodos) y el uso de artes de pesca. Se aplican a la pesca artesanal y a otras flotas costeras. Dependiendo del plan, el ámbito geográfico puede ser las aguas marinas sujetas a la normativa regional o zonas específicas como las "rías". La mayoría de estos bancos de producción se localizan en zonas sometidas a regímenes de protección ambiental (zonas de protección especial - ZEPA, Natura 2000 y Ramsar) incluso dentro del único parque nacional existente en Galicia "Parque Nacional de las Islas Atlánticas de Galicia" (por ejemplo, cofradías de Bueu, Cangas y Aguiño). Las actividades pesqueras y la

protección del medio ambiente coexisten normalmente sin grandes conflictos. Algunas otras zonas de producción están situadas en playas, donde durante los meses de verano se realizan actividades turísticas. La coexistencia pesca y turismo ha reportado problemas derivados del furtivismo ejercido sobre los recursos marisqueros, que sólo pueden ser recolectados por los miembros de las cofradías de pescadores, que disponen del correspondiente permiso de explotación para realizar la actividad profesional de recolección.

El Plan Director 2021 - 2023 "Galicia Destino Seguro" nace con el objetivo de impulsar la reactivación turística de Galicia tras la crisis sanitaria, económica y de empleo provocada por el COVID-19 en el sector. Este plan tiene 4 pilares fundamentales I) la calidad como seña de identidad del sector, II) la seguridad y hospitalidad del destino, III) el uso intensivo de la tecnología y el fomento de la innovación, y IV) la sostenibilidad como elemento vertebrador. A partir de estos pilares estratégicos, el plan se estructura en 7 objetivos estratégicos y 42 acciones. Uno de estos objetivos estratégicos se centra en el "agua como recurso turístico", considerando que el mar dota a Galicia de un importante potencial a la hora de articular experiencias turísticas. Se propusieron diferentes acciones operativas, entre otras: (i) impulso del Plan Territorial de sostenibilidad turística del litoral gallego, destacando el valor de los deportes náuticos, (ii) apoyo a los principales eventos deportivos celebrados en el litoral gallego, (iii) promoción del turismo marítimo y de experiencias turísticas que pongan en valor el patrimonio del mar, (iv) presencia en ferias náuticas internacionales, y (v) promoción del Centro Gallego de Vela como epicentro de la actividad náutica.

En julio de 2021, el Ministerio para la Transición Ecológica y el Reto Demográfico (MITECO) publicó el borrador de "Energías renovables marinas: Hoja de ruta para el desarrollo de la eólica marina y las energías marinas" para información pública. Su principal objetivo es garantizar el despliegue efectivo de las energías renovables marítimas en España. Además, se espera asegurar un despliegue ordenado de las instalaciones en aguas territoriales siendo respetuoso con el medio ambiente y compatible con otros usos y actividades. En este contexto surge el Observatorio de la Eólica Marina Galicia, que incluye las siguientes funciones: (i) promover foros de conocimiento técnico para el análisis de compatibilidades y usos del espacio marítimo, (ii) crear un espacio de información entre administraciones públicas y sectores económicos sobre cuestiones regulatorias, normativas o de planificación, tanto en el espacio marítimo como en infraestructuras, y (iii) elaborar estudios sobre oportunidades, impacto y potencial industrial relacionado con la Energía eólica offshore en Galicia. Para el desarrollo de su actividad técnica, el Observatorio aprobó en junio de 2021 la creación e inicio de la actividad de tres grupos de trabajo centrados en: Análisis y Planificación Normativa, Tecnología e Innovación e Impacto Social.

Elementos que contribuyen al Pacto Verde Europeo (PVE) y las estrategias de las cuencas marítimas

La mayoría de los planes y estrategias analizados contribuyen o contribuirán directa o indirectamente a alcanzar los objetivos del Pacto Verde Europeo, incluidos los de la Estrategia de Biodiversidad de la UE. La Ley 4/2023, de 6 de julio, de ordenación y gestión integrada del litoral de Galicia pretende mejorar la gestión de las actividades humanas en el litoral para garantizar el uso sostenible de sus recursos y el buen estado de los ecosistemas costeros desde una triple perspectiva (ambiental, social y económica), contribuyendo así a uno de los objetivos clave del Pacto Verde Europeo: preservar y restaurar los ecosistemas y la biodiversidad. Con un enfoque operativo, el Plan de Cartografía e Información Cartográfica de Galicia pretende proporcionar una sólida infraestructura de datos geoespaciales para resolver los problemas relacionados con la disponibilidad, calidad, organización, accesibilidad y puesta en común de la información geográfica. Actúa como herramienta de apoyo y transversal para el desarrollo de políticas públicas alineadas con el ámbito del pacto Verde Europeo.

Del mismo modo, tanto la Estrategia Gallega de Infraestructura Verde y de la Conectividad y de la Restauración Ecológica como la Estrategia de Paisaje están también alineadas con la Estrategia de Biodiversidad de la UE, siendo las soluciones basadas en la naturaleza una de las principales herramientas para alcanzar los objetivos medioambientales de la UE. La creación de redes de infraestructura verde, como los corredores ecológicos, mejora la conectividad entre hábitats y facilita el movimiento de especies. Esta estrategia subraya la importancia de integrar las consideraciones relativas a la biodiversidad en la ordenación del territorio y el desarrollo de infraestructuras, vinculadas a un enfoque de gestión basado en los ecosistemas. Coherentemente, la Estrategia del Paisaje de Galicia desarrolla medidas integradas para proteger y conservar los paisajes más significativos y característicos de la comunidad autónoma, de acuerdo con los principios de sostenibilidad e integración paisajística.

Los resultados esperados del Programa de Ciencias Marinas de Galicia, como la mejora de las tecnologías de seguimiento y las metodologías para la recogida de datos, tienen el potencial de generar un impacto positivo en varios aspectos del Pacto Verde Europeo, incluyendo por ejemplo la reducción de las emisiones de gases de efecto invernadero o la mejora de la adaptación al cambio climático de las zonas costeras.

La mayoría de los componentes de la Estrategia Gallega de Acuicultura contribuyen a los objetivos del Pacto Verde Europeo: la reducción y mejora del consumo de energía o de la utilización del agua, el desarrollo de nuevas formas de alimentación en la acuicultura, la minimización de los residuos y efluentes al tiempo que se promueve su reutilización contribuirán a la producción sostenible de productos del mar, así como a la mitigación del cambio climático y a la adaptación al mismo. La Estrategia también persigue la creación de empleo a través de la acuicultura, contribuyendo a algunos de los componentes de transición justa y equitativa del Pacto Verde. Por último, los planes de explotación y gestión del marisqueo y los planes de gestión integral de las reservas marinas de Galicia, que incluyen medidas para la conservación y la sostenibilidad de los recursos marisqueros y las zonas de producción, están contribuyendo a combinar la producción sostenible de marisco con la protección y la restauración de la biodiversidad y los ecosistemas y, por lo tanto, a los objetivos del Pacto Verde Europeo y de la UE en materia de biodiversidad.

Los reglamentos y planes mencionados también contribuyen al Pilar IV de la Estrategia Atlántica, cuyo objetivo es lograr unos océanos sanos y unas costas resilientes. Más concretamente, pueden contribuir potencialmente al objetivo 6 "Mayor resiliencia costera" y, dentro de este objetivo, a las siguientes acciones: (i) Desarrollar espacios de prueba, zonas piloto para probar métodos de protección costera y promover soluciones basadas en la naturaleza; (ii) Promover prácticas sostenibles en el turismo costero y marítimo, (iii) Compartir las mejores prácticas sobre la aplicación de la ordenación del espacio marítimo a la adaptación costera, la resiliencia y las evaluaciones ambientales aplicables, y (iv) Cartografiar los humedales costeros para su preservación y para supervisar su papel como sumideros de carbono.

Elementos acerca de la participación/compromiso de las partes interesadas

La mayoría de los planes y estrategias analizados a nivel regional han incluido procesos de participación y consulta de las partes interesadas y destacan la relevancia de estos aspectos también de cara al futuro.

La Estrategia Gallega de Acuicultura incluye una sección titulada "Desarrollo y participación", que destaca su intención de servir de marco participativo para todas las iniciativas y comunidades vinculadas a la acuicultura. La estrategia incluyó la puesta en marcha de un proceso de participación pública que permitió a las partes interesadas y al público en general realizar aportaciones al documento de la Estrategia Gallega de Acuicultura. Se expuso públicamente durante un mes, dando amplias oportunidades para recibir comentarios y aportaciones. Con mecanismos

similares, la propuesta inicial del Plan de Cartografía e Información Cartográfica de Galicia, elaborada por la Comisión de Coordinación de Sistemas de Información Geográfica y Cartografía, fue trasladada a las distintas administraciones públicas y entes instrumentales del sector público autonómico, a las entidades locales y, en su caso, a otros organismos de distintas administraciones públicas. El Programa de Ciencias Marinas de Galicia involucró desde su fase de definición a todas las instituciones gallegas de investigación marina relacionadas con el desarrollo marino. El grado de interacción con las partes interesadas se mantendrá muy alto también en la fase de implementación de este programa, ya que su participación se considera crucial para definir los objetivos y resultados esperados de la Estrategia de Observación Costera de Galicia.

En relación con la Estrategia Gallega de la Infraestructura Verde y de la Conectividad y Restauración Ecológicas se establecieron dos tipos de consultas: (i) presentaciones y reuniones, destinadas a implicar a ciudadanos, organizaciones, instituciones públicas y privadas en general y organismos sectoriales asociados y (ii) consultas realizadas a las diferentes consellerías de la Xunta de Galicia. En el proceso de elaboración de esta estrategia, hubo un proceso de participación pública a través de un formulario puesto a disposición al inicio del proceso en la página web creada a tal efecto. Además, los planes/proyectos ecológicos vinculados a esta Estrategia deberán integrar medidas que aseguren la información y participación efectiva de los diferentes actores territoriales, especialmente de las comunidades y autoridades locales, así como de las administraciones estatal y autonómica, organizaciones no gubernamentales e Instituciones de Investigación.

Asimismo, la Ley 7/2008 de Protección del Paisaje, establece la participación de los actores sociales en las distintas fases de elaboración de los instrumentos de protección, gestión y ordenación del paisaje, con el fin de incorporar sus consideraciones y aspiraciones sobre sus paisajes. A lo largo de la elaboración de la Estrategia de Paisaje de Galicia se diseñaron e implementaron diferentes procesos de participación así como consultas públicas.

Los Planes de las dos Reservas Marinas de Galicia fueron el resultado de un proceso de cogeneración en el que participaron los pescadores locales que faenan en las zonas de las áreas marinas protegidas. Se celebraron reuniones con este fin. Los planes también se sometieron a consulta y se abrió un proceso de alegaciones. Finalmente, los planes fueron aprobados por la Consejería del Mar. Sólo un pequeño número de planes de explotación y gestión marisquera son gestionados directamente por el propio sector extractivo. En su mayor parte, dependen exclusivamente de los organismos de la administración, que son los que finalmente determinan y coordinan

sus actividades de explotación. Algunos de los planes de gestión de especies marinas de interés de Galicia han constituido comités de seguimiento integrados por representantes del sector pesquero y de la administración; estos comités celebran reuniones periódicas

Lagunas persistentes en la planificación y gestión integradas del espacio marítimo

Aunque se han elaborado o se pondrán en marcha en breve normativas, planes y estrategias pertinentes, así como información geográfica, aún quedan algunas lagunas que afectan tanto al ámbito regional como al nacional.

La aplicación de los planes de ordenación del espacio marítimo en Galicia, así como de otros planes transversales y sectoriales de planificación y gestión del espacio marítimo, debe basarse en datos e información sólidos, actualizados y fiables. Es crucial la generación de conocimientos, datos y herramientas que apoyen la toma de decisiones y faciliten la evaluación del impacto de las actividades económicas sobre los recursos y ecosistemas marinos. Además, los estudios sobre presiones e impactos acumulativos deben realizarse con una resolución adecuada para proporcionar una distribución correcta de las zonas sometidas a altos niveles de presión.

Las costas gallegas, caracterizadas por numerosas rías, con una productividad excepcionalmente alta debido al fenómeno de afloramiento, concentran un elevado número de profesionales de la pesca y la acuicultura en un área restringida. Particularmente en la parte sur del territorio marítimo gallego ambos usos coexisten con actividades turísticas, recreativas y de ocio, por lo que se requiere una planificación y regulación detalladas para evitar conflictos y apoyar las sinergias. En el caso de posibles solapamientos de usos y conflictos asociados, los datos y conocimientos avanzados sobre el valor económico de los usos marítimos son de gran importancia para la toma de decisiones y para definir posibles mecanismos de compensación. A pesar de que algunos usos están bien caracterizados en Galicia y se conoce su importancia social en términos económicos (acuicultura, pesca, etc.), otras actividades como el turismo están muy fragmentadas y su caracterización desde el punto de vista económico requiere estudios más detallados.

Además, en una perspectiva de futuro, los posibles efectos de los parques eólicos sobre la pesca y la acuicultura representan una de las principales cuestiones para la gestión del mar territorial de Galicia. La estrechez de la plataforma continental y las condiciones del viento implican que las áreas de alto potencial para la producción de energía eólica se proyectan en las mismas zonas donde se desarrolla la pesca tradicional. Por ello, sería necesario conocer el impacto ecológico y económico que

supondría para esta actividad el establecimiento de parques eólicos. Las actividades de acuicultura offshore también podrían establecerse en las mismas zonas en un futuro próximo si los medios técnicos lo permiten. Con el fin de identificar las zonas mar adentro más adecuadas para los sistemas de acuicultura, habría que recopilar y analizar en profundidad las series de datos históricos disponibles (parámetros físicos, químicos y biológicos).

El cambio climático también afecta principalmente a usos como la pesca y la acuicultura, alterando la redistribución de las condiciones de los ecosistemas marinos y de importantes especies comerciales. Existe un consenso general sobre la necesidad de incorporar el cambio climático en el proceso de planificación marítimo espacial para una mejor preparación y para reducir la vulnerabilidad de los hábitats marinos y de los sectores marítimos. A nivel regional es muy necesario promover el desarrollo y la aplicación de modelos y herramientas para proyectar el impacto del cambio climático en los usos marítimos actuales y futuros e integrar medidas de adaptación.

Se están realizando avances a nivel regional en la disponibilidad y usos de datos y conocimientos sobre ordenación del espacio marítimo a través de los geoportales existentes y el desarrollo actual de la herramienta MARPLAN para apoyar la toma de decisiones de ordenación del espacio marítimo en Galicia, pero se requieren más esfuerzos e inversiones para completarlos y mejorar las resoluciones espaciales y temporales. Además, el desarrollo de análisis de compatibilidad y la valoración de los servicios ecosistémicos podrían apoyar la toma de decisiones y la selección de emplazamientos de la ordenación del espacio marítimo, especialmente en zonas en las que se produzcan solapamientos o conflictos de usos (por ejemplo, energía eólica *frente a* pesca). Serán de vital importancia los mecanismos e incentivos para fomentar la colaboración y el intercambio de información entre las autoridades regionales y nacionales sobre el proceso de la ordenación del espacio marítimo y para fomentar la participación de todos los agentes sociales implicados en la gestión costera desde el principio del proceso, así con las actividades de formación y sensibilización que impliquen a las distintas partes interesadas.

Regione Sardegna

Il processo italiano di Pianificazione dello Spazio Marittimo (PSM) ha avuto avvio con la trasposizione della Direttiva Quadro sulla PSM mediante il decreto legislativo 201/2016. Tale decreto ha designato il Ministero delle Infrastrutture e dei Trasporti come autorità competente per la PSM. L'articolo 6 del decreto ha istituito un Tavolo di Coordinamento Interministeriale, presieduto da un rappresentante della Presidenza del Consiglio dei Ministri (Dipartimento per le Politiche Europee) e composto da vari Ministeri competenti su temi marino-marittimi. I principali compiti del Tavolo di Coordinamento Interministeriale sono:

- Definire le aree marittime per lo sviluppo dei piani italiani di gestione dello spazio marittimo (piani PSM), identificate in conformità a quelle individuate per l'attuazione della Direttiva Quadro sulla Strategia per l'Ambiente Marino (MSFD), ovvero: l'Adriatico, lo Ionio e il Mediterraneo Centrale, il Tirreno e il Mediterraneo Occidentale (Figura 1).
- Elaborare linee guida che includono principi e criteri per l'attuazione della direttiva PSM e l'elaborazione dei relativi piani in Italia; tali linee guida sono state formalizzate attraverso il Decreto del Presidente del Consiglio dei Ministri del 1° dicembre 2017.
- Certificare che i piani PSM sviluppati per l'Italia siano conformi alle suddette linee guida.

Le competenze in materia di questioni marino-marittime in Italia sono piuttosto complesse e in parte frammentate. Lo Stato detiene il potere legislativo su temi inerenti alla protezione ambientale, nonché sulla conservazione del paesaggio e del patrimonio culturale. Lo Stato e le Regioni condividono competenze legislative su diverse questioni, quali quelle relative ai porti, al trasporto marittimo, alla produzione e alla distribuzione di energia, alla pianificazione territoriale, alla valorizzazione dei beni culturali e ambientali, alla ricerca scientifica e tecnologica e al supporto all'innovazione aziendale. Le Regioni detengono il potere legislativo in materia di pesca, acquacoltura, difesa costiera e turismo, aspetti che possono essere regolamentati anche dallo Stato in relazione all'attuazione degli obblighi internazionali e comunitari.

La frammentazione delle competenze amministrative tra diversi livelli di governance è ancora più accentuata. Tali competenze sono condivise tra lo Stato e le Regioni, coinvolgendo, per alcuni aspetti settoriali specifici (come il rilascio di licenze e concessioni), anche il livello locale. Ad esempio, lo Stato può istituire parchi nazionali,

riserve naturali nazionali e aree marine protette, mentre le Regioni possono istituire parchi e riserve naturali di interesse regionale e locale.

Anche in considerazione di questa articolata distribuzione di competenze e responsabilità, l'implementazione del processo PSM e l'elaborazione operativa dei piani sono state affidate ad un Comitato Tecnico coordinato dall'autorità competente per la PSM (il Ministero delle Infrastrutture e dei Trasporti) e che ha previsto il coinvolgimento di altri cinque Ministeri (Ministero dell'Ambiente e della Sicurezza Energetica; Ministero dell'Agricoltura, Sovranità Alimentare e Foreste; Ministero delle Imprese e del Made in Italy; Ministero della Cultura e Ministero del Turismo) e delle quindici amministrazioni regionali costiere. Tale Comitato è incaricato di sviluppare i tre piani PSM, con il supporto operativo di un team tecnico-scientifico formato da CNR-ISMAR, CORILA e l'Università IUAV. Ad oggi in Italia sono state elaborate tre proposte di piano, una per ciascuna delle tre aree marittime identificate. Tali proposte sono state sottoposte a consultazione pubblica a settembre 2022, parallelamente alla consultazione sui documenti redatti nell'ambito del processo di Valutazione Ambientale Strategica (VAS). La procedura di VAS è stata conclusa nell'ottobre 2023 e i piani PSM sono in fase di finalizzazione sulla base dei commenti ricevuti. Tale processo di finalizzazione dovrà tenere conto anche degli indirizzi del Piano Nazionale del Mare, approvato il 31 luglio 2023 dal Comitato Interministeriale per le Politiche del Mare (CIPOM). Questo piano di alto livello definisce le direzioni strategiche per lo sviluppo di un'economia blu sostenibile in Italia, riconoscendo l'importante ruolo che la PSM può svolgere al riguardo.

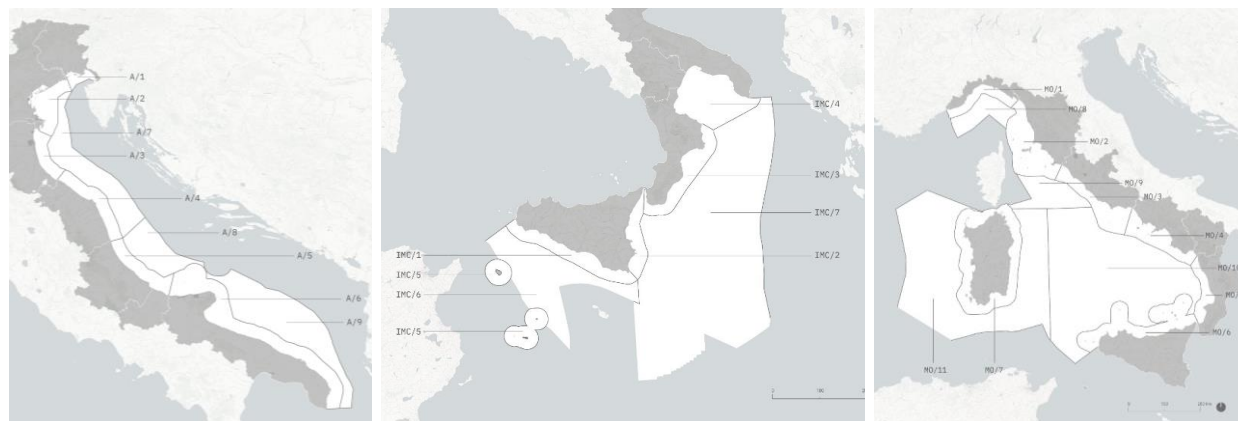


Figura 1. Ambito geografico dei tre piani PSM italiani; da sinistra a destra: Adriatico, Ionio e Mediterraneo Centrale, e Tirreno e Mediterraneo Occidentale (Fonte: Proposte dei piani SM disponibili su <https://www.sid.mit.gov.it/login>).

I piani PSM italiani mirano ad integrare e armonizzare i piani trasversali e settoriali esistenti e di prossimo sviluppo. Hanno una natura prevalentemente strategica e sono legalmente vincolanti. L'area marittima di ciascun piano è suddivisa in sub-aree, comprese quelle ricadenti all'interno della delimitazione delle acque territoriali (le cosiddette sub-aree costiere) e quelle che si estendono oltre le acque territoriali fino alla delimitazione della piattaforma continentale (le cosiddette sub-aree offshore). In quanto membri del Comitato Tecnico, le Regioni costiere italiane hanno avuto un ruolo diretto nell'elaborazione dei piani PSM. Con il supporto del team tecnico-scientifico, le Regioni hanno sviluppato gli elementi del piano rilevanti per la loro sub-area costiera, ovvero: una visione regionale, un insieme di obiettivi specifici (in coerenza con quelli strategici definiti per l'intero spazio marittimo italiano), una suddivisione dell'area costiera in unità di pianificazione con diverse priorità d'uso, e un insieme di misure specifiche di livello regionale volte all'implementazione delle priorità individuate, alla minimizzazione dei conflitti e alla valorizzazione delle sinergie tra gli usi (in coerenza con le misure identificate dal piano PSM a livello nazionale).

Piani e strategie analizzati

Il caso di studio in questione si concentra sull'area del Nord della Sardegna, compresa tra l'isola dell'Asinara a nord-ovest e il golfo di Olbia a sud-est (Figura 2). Si tratta di un'area costiera estesa e altamente diversificata, caratterizzata da paesaggi e habitat marino-costieri di grande valore. Questa zona ospita anche importanti attività economiche, alcune delle quali dipendono dall'integrità del paesaggio e delle risorse naturali. Le attività economiche più rilevanti includono il turismo (articolato in diverse tipologie come il turismo balneare, le attività ricreative e sportive, la croceristica, l'ecoturismo e altre forme di turismo esperienziale), la navigazione da diporto, le attività portuali e marittime (nei porti di Porto Torres e Olbia), la pesca e l'acquacoltura (comprendente sia la piscicoltura che la molluschicoltura).

La proposta di piano PSM per l'area marittima del Tirreno e del Mediterraneo Centrale include disposizioni di pianificazione (visione, obiettivi specifici, zonizzazione e misure) per la sub-area marittima della Sardegna (identificata come MO/7 dal sistema di codifica utilizzato nei piani PSM italiani), che si estende dalla costa sino alla delimitazione delle acque territoriali. Il piano si basa su un approccio multi-scalare. Parte dalla definizione a livello nazionale di una visione comune per l'intero spazio marittimo italiano e dall'identificazione dei relativi obiettivi strategici. Questi elementi sono ulteriormente dettagliati a livello di sub-aree (livello regionale), in termini di visione e obiettivi specifici, nonché di misure di livello regionale. A loro volta, le sub-aree sono suddivise in diverse unità di pianificazione (scala sub-regionale) in cui viene definita una zonizzazione più dettagliata, come meglio illustrato nella sezione successiva.

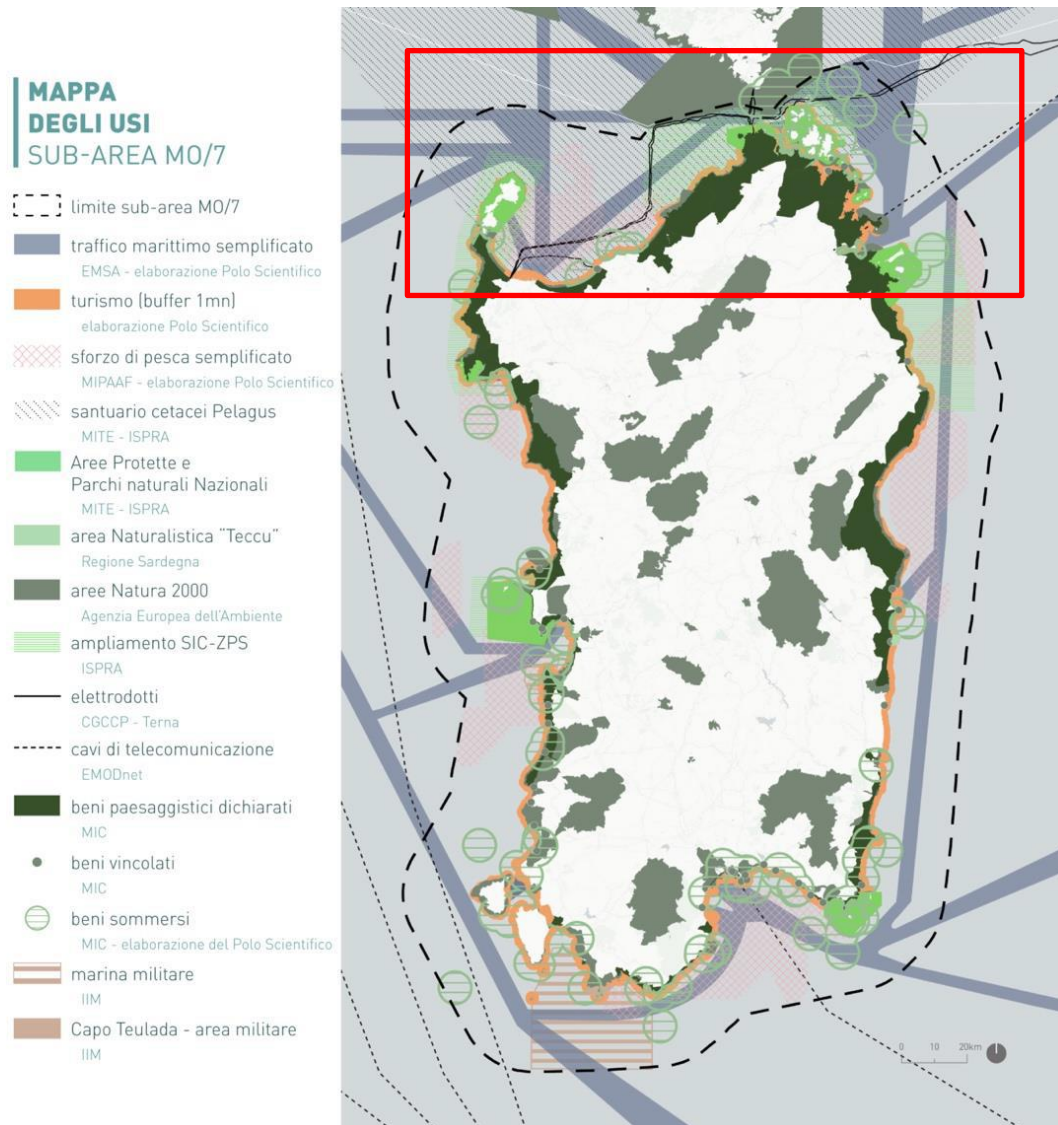


Figura 2. Mappa riassuntiva dei principali usi marittimi nella sub-area marittima della Sardegna MO/7. Il riquadro in rosso identifica l'area del caso di studio (Fonte: Proposta di piano SM per l'area marittima del Tirreno e del Mediterraneo Occidentale, disponibile su <https://www.sid.mit.gov.it/login>).

Data la loro natura trasversale, i piani PSM italiani considerano tutti i settori e gli usi presenti in una determinata area, compresi quelli di possibile sviluppo futuro. L'analisi delle strategie e dei piani trasversali è integrata con altri due documenti regionali: (i) il Programma Azione Coste Sardegna, che tratta a livello strategico le principali minacce e i rischi costieri, e (ii) la Strategia Regionale di Adattamento ai Cambiamenti Climatici (SRACC), che nella sua versione del 2019 affronta in modo marginale il sistema costiero

senza considerare il mare. Entrambi hanno una natura strategica e non includono misure rilevanti per l'area marina o le interazioni terra-mare.

Dato il suo significativo valore paesaggistico e naturale, il Nord della Sardegna ospita diverse aree sottoposte a regimi di conservazione differenti, tra cui in particolare: due Parchi Nazionali (quello della Maddalena e quello dell'Asinara; il secondo comprendente anche un'AMP), altre due AMP e diversi siti Natura 2000 costieri e/o marini (alcuni sovrapposti con parchi nazionali e AMP). La conservazione degli habitat e della biodiversità è l'obiettivo primario di tutti questi strumenti, nei quali vengono definite misure vincolanti per regolare le attività umane in base alla specifica vulnerabilità delle diverse zone protette. L'area del Nord della Sardegna è anche inclusa nel Santuario Pelagos, istituito attraverso un accordo tra Francia, Italia e Monaco, che ha una natura più strategica, ma include alcune misure ad esempio, legate al monitoraggio dei cetacei. L'analisi dei piani orientati alla protezione e conservazione è completata dal Piano Paesaggistico Regionale, il cui principale scopo è la preservazione dell'identità ambientale, storica e culturale del territorio sardo, considerando il suo alto valore paesaggistico. Questo piano di scala regionale ha una doppia natura strategica e vincolante, dato che include misure per garantire la protezione del paesaggio.

L'analisi è completata da cinque piani o strategie settoriali. Due di essi riguardano il trasporto marittimo (il piano dell'Autorità del Sistema Portuale del Mare di Sardegna e l'Area Marina Particolarmente Sensibile nello Stretto di Bonifacio), uno il turismo (il Piano strategico di sviluppo e marketing turistico della Sardegna) e un altro il segmento specifico del turismo legato alla navigazione da diporto (il Piano Regionale della Rete di Portualità Turistica). Un elemento di pianificazione, ancora in fase di sviluppo, fa riferimento all'identificazione delle Zone marine Assegnate per l'Acquacoltura. Le principali caratteristiche e i settori considerati nelle strategie e nei piani analizzati sono riassunti rispettivamente nella prima e nella seconda tabella sotto riportate. Tutte le strategie e i piani considerati si applicano direttamente a livello regionale o locale. Il piano PMS ha una valenza nazionale; tuttavia, basandosi su un approccio multi-scalare, definisce obiettivi, disposizioni spaziali (zonizzazione) e misure direttamente rilevanti per le scale regionale e sub-regionale. La maggior parte dei piani ha una natura regolamentare. I piani trasversali tendono ad essere più strategici e a coprire tutti i settori.

Deliverable 3.1. Reginal analysis report

Titolo	Scala			Legalmente vincolante		Tipologia			Presenza di misure
	Locale	Regionale	Nazionale	SI	NO	Strategico	Regolamentare	Entrambe	
Categoria 1: piani e strategie trasversali									
Proposta di Piano SM per la Regione Marittima Tirrenica e del Mediterraneo Occidentale		X	X	X		X			X
Programma Azione Coste Sardegna		X			X	X			
Strategia Regionale di Adattamento ai Cambiamenti Climatici (SRACC)		X			X	X			
Categoria 2: piani e strategie orientati a protezione e conservazione									
Parco Nazionale dell'Isola dell'Asinara	X			X			X		X
Parco Nazionale dell'Arcipelago di La Maddalena	X			X			X		X
AMP Tavolara - Punta Coda Cavallo	X			X			X		X
AMP Capo Testa - Punta Falcone	X			X			X		X

Deliverable 3.1. Reginal analysis report



Titolo	Scala			Legalmente vincolante		Tipologia			Presenza di misure
	Locale	Regionale	Nazionale	SI	NO	Strategico	Regolamentare	Entrambe	
Siti Natura 2000 costieri e marini	X			X			X		X
Accordo e piano del Santuario Pelagos			internazionale		X	X			X
Piano Paesaggistico Regionale		X		X				X	X
Categoria 3: piani per settori economici e altri usi e attività marine									
Piano dell'Autorità di Sistema Portuale del Mare di Sardegna		X		X				X	X
PSSA dello Stretto di Bonifacio	X	X (transfrontaliero)		X			X		X
Piano Regionale della Rete di Portualità Turistica		X			X	X			X
Piano strategico di sviluppo e marketing turistico		X			X	X			X
Piano Zone marine Assegnate per l'Acquacoltura (AZA)		X		X				X	X

Deliverable 3.1. Reginal analysis report

Titolo	PE	AC	TC	AR	TM	AP	RM	PG	AM	EP	GC	DM	AS	RI	PC	PN	PP	PC
Categoria 1: piani e strategie trasversali																		
Proposta di Piano SM per la Regione Marittima Tirrenica e del Mediterraneo Occidentale	X	X	X	X	X	X					X	X		X	X	X	X	X
Programma Azione Coste Sardegna			X												X			
Strategia Regionale di Adattamento ai Cambiamenti Climatici			X												X	X		
Categoria 2: piani e strategie orientati a protezione e conservazione																		
Parco Nazionale dell'Isola dell'Asinara	X		X	X	X									X	X	X	X	X
Parco Nazionale dell'Arcipelago di La Maddalena	X		X	X	X									X	X	X	X	X
AMP Tavolara - Punta Coda Cavallo	X		X	X	X									X		X		
AMP Capo Testa - Punta Falcone	X		X	X	X									X		X		
Siti Natura 2000 costieri e marini	X		X	X	X									X		X		
Accordo e piano del Santuario Pelagos			X	X	X									X		X	X	
Piano Paesaggistico Regionale																X	X	
Categoria 3: piani per settori economici e altri usi e attività marine																		
Piano dell'Autorità di Sistema Portuale del Mare di Sardegna					X	X												
PSSA dello Stretto di Bonifacio					X													
Piano Regionale della Rete di Portualità Turistica			X	X	X	X												

Deliverable 3.1. Reginal analysis report



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Titolo	PE	AC	TC	AR	TM	AP	RM	PG	AM	EP	GC	DM	AS	RI	PC	PN	PP	PC
Piano strategico di sviluppo e marketing turistico			X															
Piano Zone marine Assegnate per l'Acquacoltura (AZA)		X																

PE = Pesca, AC = Acquacoltura, TC = Turismo Costiero e Marittimo, AR = Attività Ricreative e Tempo Libero, TM = Trasporto Marittimo, AP = Attività Portuali, RM = Energia Marina Rinnovabile, PG = Esplorazione ed Estrazione di Petrolio e Gas, AM = Aggregati Marini (estrazione di sabbia per rinforzo delle spiagge e costruzione), EP = Infrastrutture e Robotica per l'estrazione in Profondità, GC = Gasdotti e Cavi, DM = Difesa Marittima, AS = Aree di Scarico (ad esempio, sedimenti o munizioni), RI = Ricerca e Innovazione, PC = Protezione Costiera, PN = Protezione della Natura, PP = Protezione del Paesaggio, PC = Patrimonio Culturale Subacqueo.

Piani e strategie trasversali

L'analisi del caso studio del Nord Sardegna ha preso in considerazione tre documenti di pianificazione trasversali. Il primo è la proposta di piano PSM per la regione marittima del Tirreno e del Mediterraneo Occidentale, che include, tra gli altri, la sub-area della Sardegna (MO/7). Come descritto nell'introduzione, gli elementi di pianificazione per questa sub-area sono stati sviluppati dall'amministrazione regionale. Analogamente ad altre esperienze regionali, è stato istituito un gruppo di lavoro sulla PSM che ha coinvolto dipartimenti con competenze diverse. La proposta di piano per la Sardegna include:

- Una visione di livello regionale, che riconosce l'importanza strategica dell'economia blu sostenibile per la regione, garantendo nel contempo la tutela dell'ambiente e del paesaggio, due elementi chiave per diverse attività economiche di interesse regionale, quali in particolare il turismo.
- Un insieme di trenta obiettivi specifici correlati a: sicurezza marittima, navigazione e sorveglianza; pesca; acquacoltura; trasporto marittimo e porti; energia (produzione e distribuzione); protezione costiera, turismo costiero e marittimo; protezione dell'ambiente e gestione delle risorse naturali; paesaggio e patrimonio culturale; e ricerca scientifica e innovazione.
- L'identificazione e delimitazione di 40 unità di pianificazione (Figura 3). Per ciascuna unità di pianificazione (UP) dei piani PSM italiani, vengono definite le priorità d'uso. Le unità di pianificazione possono appartenere a quattro tipologie di livello crescente di uso esclusivo:
 - UP Generiche: nessuna priorità è definita per queste unità di pianificazione, poiché tutti gli usi sono considerati ugualmente importanti e sono presi in considerazione dal piano.
 - UP Prioritarie: unità di pianificazione per le quali i piani PSM identificano vocazioni prioritarie per usi esistenti o in sviluppo, indicando anche gli altri utilizzi da garantire.
 - UP Limitate: unità di pianificazione in cui viene indicato un uso prevalente ed in cui possono essere presenti altri utilizzi, con o senza limitazioni specifiche, solo se compatibili con quello prevalente.
 - UP Riservate: aree riservate per un uso specifico. Altri utilizzi sono consentiti esclusivamente per le necessità dell'uso riservato o in caso di concessioni specifiche fornite dal gestore dell'uso riservato.

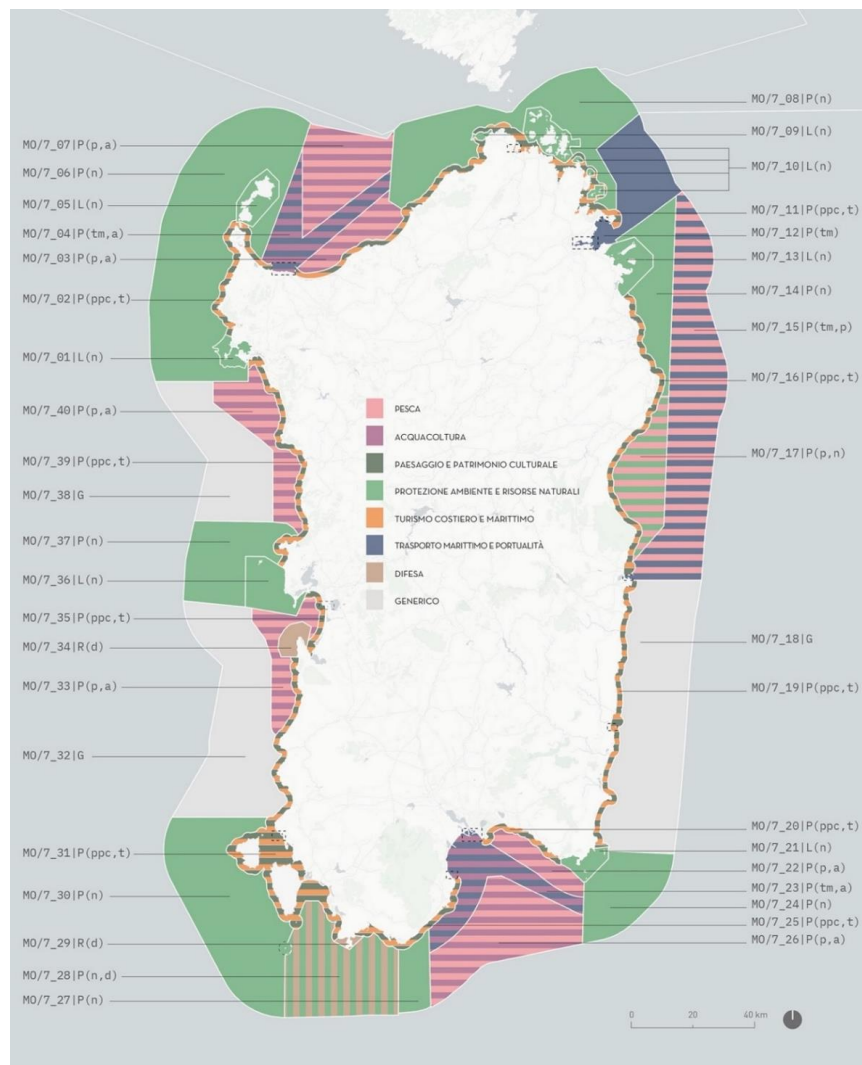


Figura 3. Unità di pianificazione e relative vocazioni d'uso per la sub-area marittima della Sardegna MO/7" (Fonte: Proposta di piano marittimo per l'area marittima del Tirreno e del Mediterraneo Occidentale, disponibile su <https://www.sid.mit.gov.it/login>).

L'area del caso di studio (Nord della Sardegna) include diverse unità di pianificazione di tipologia limitata e prioritaria con vocazione a protezione dell'ambiente e delle risorse naturali (in verde nella Figura 3). Tali UP si sovrappongono con le aree protette esistenti, ovvero parchi nazionali, AMP e siti Natura 2000, come descritto nella sezione successiva di questo capitolo. Le strette UP disposte lungo la fascia costiera definiscono delle priorità per e protezione del paesaggio, riconoscendo la stretta interrelazione tra i due aspetti. Vocazioni prioritarie sono individuate per il trasporto marittimo nelle unità di pianificazione situate di fronte ai porti di Olbia e Porto Torres,

in questo secondo caso in combinazione con l'acquacoltura. Lo sviluppo dell'acquacoltura è considerato particolarmente rilevante per l'intero Golfo dell'Asinara, dove viene sottolineata anche l'importanza della pesca in termini di priorità.

Le strategie e i piani trasversali elaborati a livello regionale includono altri due documenti. Il Programma Azione Coste Sardegna (2013) fornisce un'estesa base conoscitiva per la pianificazione strategica del sistema costiero della regione, in particolare per quanto riguarda i rischi costieri (erosione, inondazioni e frane), la protezione degli ecosistemi costieri e la pianificazione urbanistica. Il piano identifica le aree maggiormente a rischio e fornisce conoscenze a supporto della pianificazione e dell'attuazione di interventi di difesa costiera, sia nelle spiagge che nelle coste rocciose.

La Strategia Regionale di Adattamento ai Cambiamenti Climatici (SRACC; 2019) analizza i rischi in un quadro strategico più ampio, che considera la vulnerabilità ai cambiamenti climatici dell'intero territorio sardo, dei suoi valori ambientali e delle attività economiche. La SRACC fornisce un quadro metodologico per la valutazione degli impatti dei cambiamenti climatici per 5 settori chiave: agricoltura, allevamento, foreste, instabilità idrogeologica e acque interne. Per gli stessi settori la SRACC identifica possibili approcci di adattamento. L'amministrazione regionale ha previsto l'estensione della SRACC ad altri macro-settori di rilevanza prioritaria, ovvero: (i) l'ambiente urbano, considerato per vari aspetti (pianificazione urbana, infrastrutture, servizi e funzioni urbani, salute e benessere), e (ii) le coste e i sistemi di transizione terra-mare, con riferimento alla protezione della biodiversità e dei servizi ecosistemici, alla difesa costiera e allo sviluppo turistico, prevedendo in queste aree l'implementazione di nature based solutions. L'elaborazione della SRACC del 2019 e lo sviluppo della nuova strategia sono supportati da un gruppo interdisciplinare di esperti provenienti dal mondo accademico e da agenzie di protezione nazionali e regionali.

Un collegamento diretto a questi documenti di pianificazione non è incluso nel piano PSM. Tuttavia, il piano affronta - sia a livello nazionale che regionale, attraverso obiettivi e relative misure - la questione dell'adattamento ai cambiamenti climatici nelle aree costiere, inquadrando la stessa nel contesto più ampio della Gestione Integrata delle Zone Costiere (GICZ). Una delle misure specifiche (MO/7_MIS|22) definite per la sub-regione della Sardegna prevede l'elaborazione di linee guida per sostenere il processo della GICZ ai fini dello sviluppo sostenibile delle coste dell'isola. La misura MO/7_MIS|24 inoltre prevede l'elaborazione di una strategia regionale per contrastare l'erosione costiera, che necessariamente dovrà essere sviluppata coerentemente con gli indirizzi definiti dal Programma Azione Coste Sardegna.

Piani e strategie per la protezione e conservazione

La parte settentrionale della Sardegna è nota per la sua elevata biodiversità e per la presenza di habitat di grande valore. Di conseguenza in tale area sono presenti molteplici aree soggette a tutela. Queste includono due parchi nazionali. Il piano del Parco Nazionale dell'Isola dell'Asinara (e dell'AMP connessa) mira a proteggere e conservare la biodiversità, il paesaggio e i valori culturali e storici di quest'isola, nonché a promuovere l'educazione, la divulgazione scientifica e l'uso sostenibile delle sue risorse ambientali. Per garantire la protezione dell'ambiente marino e costiero, il parco ha definito restrizioni alle attività umane, nonché azioni di mitigazione degli impatti e di recupero di habitat terrestri e marini degradati (ad esempio, quelli a *Posidonia oceanica*). Le misure definite dall'Ente parco includono: limitazioni alla balneazione e alle immersioni, divieto di frequentazione con imbarcazioni da diporto, limitazioni per barche a vela, regolamentazione della pesca turistica e ricreativa, divieto di scarico di rifiuti, divieto di scarico di acque reflue non trattate e di acque di sentina, limitazioni all'ormeggio e all'ancoraggio, divieto di passaggio per navi da crociera, limitazioni alla navigazione in generale, limitazioni alla pesca professionale, divieto di sviluppo di attività di acquacoltura, ecc. Tali restrizioni si applicano attraverso un sistema di zonizzazione a tre livelli, che include: zone di tipo A di riserva integrale (o "no-take zone"); non sono consentite attività umane tranne la ricerca scientifica; zone di tipo B di riserva generale; sono consentite solo attività tradizionali, il turismo è permesso secondo le regole del parco; zone di tipo C di riserva parziale con vocazione agricola o urbana (Figura 4). Il piano fa anche riferimento a azioni volte alla gestione adattativa delle risorse naturali dell'Asinara, evidenziando il ruolo rilevante della ricerca in questo contesto.

Analogamente al Parco dell'Asinara, il Parco Nazionale dell'Arcipelago della Maddalena ha definito misure per regolamentare, limitare o vietare le attività umane, quali turismo, pesca, agricoltura, allevamento, estrazione mineraria, costruzioni, navigazione. Le principali criticità sono legate a una pressione antropica eccessiva durante la stagione estiva a causa del turismo, che implica un aumento dello scarico di acque reflue, scarichi incontrollati di rifiuti e impatto diretto delle imbarcazioni da diporto (ad esempio, sub habitat bentonici e spiagge). Sono previsti diversi livelli di protezione a terra e a mare. Nell'area marina sono identificate: zone di riserva generale (zone MB) dove sono vietati le attività non autorizzate di navigazione, ancoraggio, ormeggio, pesca sportiva e immersione, e zone di riserva integrale (zone MA) dove sono severamente vietati tutte le attività umane (Figura 5).

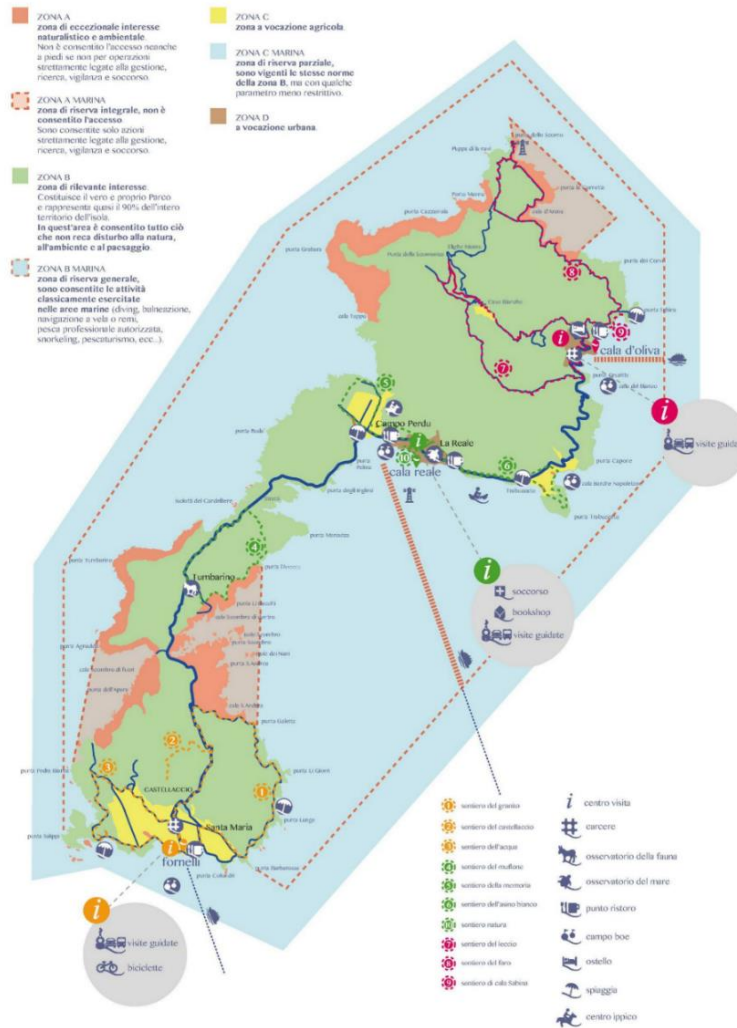


Figura 4. Mappa del Parco Nazionale dell'Isola dell'Asinara; arancione: zona di tipo A, verde: zona di tipo B, giallo e marrone: zona di tipo C. L'area blu chiaro all'interno della linea tratteggiata rossa identifica la zona di tipo B a mare (Fonte: <https://www.parcoasinara.org>).

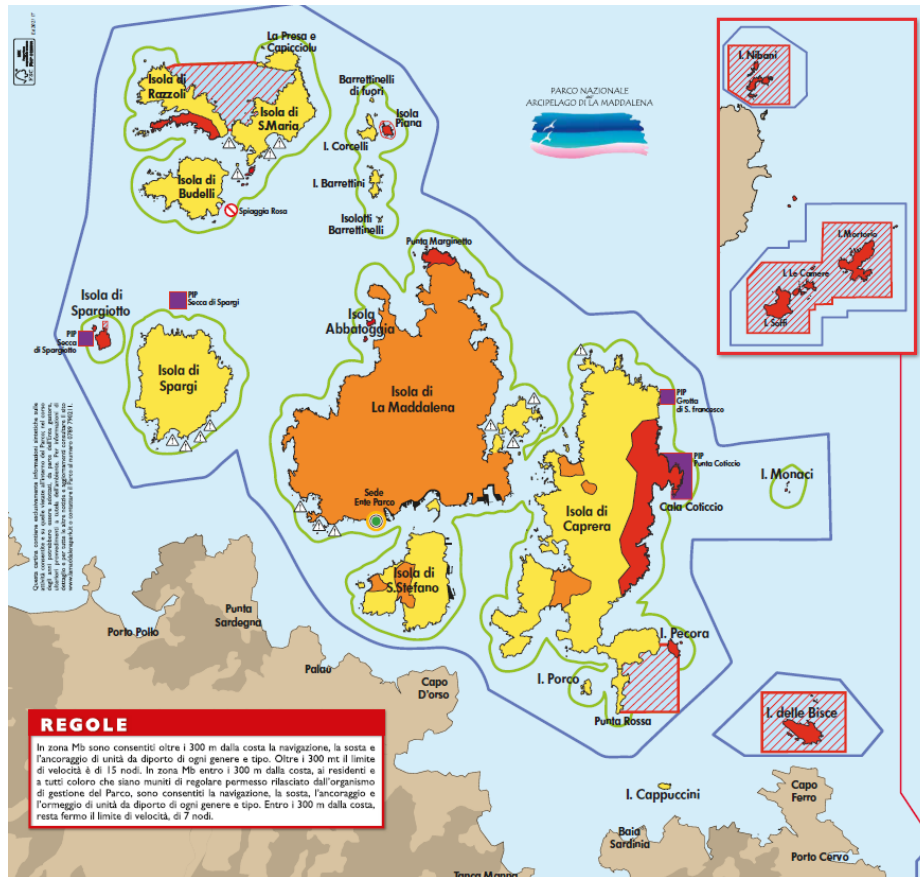


Figura 5. Zonizzazione del Parco Nazionale dell'Arcipelago di La Maddalena. La zona MB di riserva generale a mare è delimitata dalla linea blu; la zona MA di riserva integrale a mare è identificata dalla retinatura in rosso (Fonte: www.lamaddalenapark.it).

La protezione della biodiversità marina nel nord della Sardegna è garantita anche da altre due AMP. Il piano dell'AMP di Tavolara - Punta Coda Cavallo prevede diversi obiettivi e misure che mirano a ridurre le pressioni antropiche nell'area, quali:

- divieto di accesso turistico a dune e zone rocciose, introduzione di animali domestici, raccolta di materiale geologico, introduzione di flora aliena, scarico di rifiuti, scarico di acque reflue non trattate e acqua di sentina, attività di acquacoltura, ecc.
- limitazioni alle attività di balneazione e immersione, vela, navigazione a motore, ormeggio e ancoraggio, pesca professionale, pesca ricreativa, pesca turistica.

Deliverable 3.1. Reginal analysis report

- regolamentazione di alcune attività umane per ridurre gli impatti ambientali, ad esempio mediante l'uso di attrezzature da pesca che limitano il by-catch o limitazioni della velocità di navi e barche per evitare collisioni con megafauna.
- limitazioni dell'inquinamento luminoso e acustico, così come delle emissioni atmosferiche.

Simili divieti, limitazioni e regolamentazioni sono anche definiti dal piano dell'AMP di Capo Testa - Punta Falcone. In entrambe le AMP, le limitazioni e le restrizioni si applicano attraverso un sistema di zonizzazione a tre livelli (Figura 6).

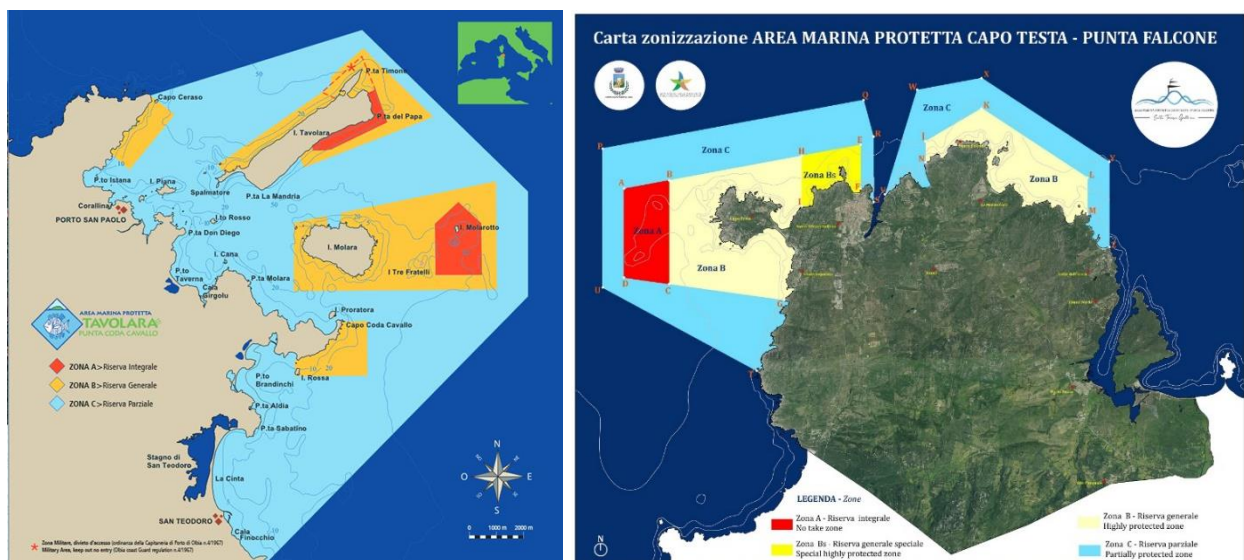


Figura 6. A sinistra, zonizzazione dell'AMP di Tavolara - Punta Coda Cavallo; rosso: zona di tipo A, arancione: zona di tipo B, azzurro chiaro: zona di tipo C (Fonte: www.amptavolara.com). A destra, zonizzazione dell'AMP di Capo Testa - Punta Falcone; rosso: zona di tipo A; giallo e giallo chiaro: zona di tipo B, azzurro chiaro: zona di tipo C (Fonte: areamarinaprotettacapotestapuntafalcone.it).

La costa settentrionale della Sardegna comprende anche diversi siti Natura 2000 costieri e marini (Figura 7), alcuni dei quali si sovrappongono ai parchi naturali e alle AMP descritte in precedenza. Alcuni di questi siti sono dotati di piani di gestione che mirano a garantire la conservazione degli habitat e delle specie di importanza comunitaria, promuovendo contemporaneamente l'istruzione, la ricerca, la sensibilizzazione (sia per i cittadini che per i turisti) e lo sviluppo socio-economico sostenibile in linea con l'obiettivo primario di protezione ambientale. Esempi di misure previste dai piani di gestione dei siti Natura 2000 includono: protezione delle aree rilevanti per le specie chiave (ad esempio, aree di nidificazione per l'avifauna),

regolamentazione dell'accesso a specifiche aree marine e terrestri, limitazione o regolamentazione dell'ormeggio e dell'ancoraggio delle imbarcazioni, monitoraggio continuo di habitat e specie a rischio, nonché delle attività umane che generano pressioni ambientali. Per diverse aree Natura 2000, sono definite misure specifiche aventi l'obiettivo di migliorare la protezione del delle praterie di *Posidonia oceanica*.



Figura 7. Siti Natura 2000 in Sardegna settentrionale (Fonte: www.sardegnanatura.com).

L'area del caso studio è quasi interamente compresa nel Santuario Pelagos, istituito attraverso un Accordo stipulato tra Francia, Italia e Monaco. L'implementazione dell'Accordo Pelagos avviene tramite un Piano di Gestione e d'Azione (2022-2027), che include obiettivi e misure finalizzati alla valutazione dello stato delle popolazioni di mammiferi marini presenti nell'area, alla valutazione delle pressioni insistenti su di essi (inquinamento, rumore, catture accidentali, lesioni da collisione con navi, ecc.), all'identificazione e all'attuazione di misure di mitigazione, all'armonizzazione delle politiche nazionali per la salvaguardia dei mammiferi marini, nonché alla diffusione di informazioni e di buone pratiche per la sostenibilità delle attività di navigazione. Il piano sottolinea l'importanza di coinvolgere una vasta gamma di portatori di interesse.

Tutte le tipologie di aree protette individuate e sopra descritte sono state considerate ed integrate nella proposta di piano PSM per la porzione settentrionale della sub-area della Sardegna. La delimitazione dei parchi nazionali in mare e delle AMP è stata utilizzata per identificare unità di pianificazione di tipo limitato con una vocazione finalizzata alla protezione naturale. La presenza di siti Natura 2000 marini e costieri già istituiti e pianificati ha determinato la delimitazione di unità di pianificazione di tipo prioritario, per le quali la principale vocazione è ancora la conservazione della natura. L'Accordo Pelagos è menzionato in diverse parti del piano PSM per il Mar Tirreno ed il Mediterraneo occidentale, e la sua estensione è stata considerata nella delimitazione delle unità di pianificazione con vocazioni prioritarie per la protezione ambientale nel Mar Tirreno, compresa l'area di fronte alla costa settentrionale della Sardegna.

L'analisi dei piani per la protezione e conservazione è completata dal Piano Paesaggistico Regionale (2006). Il suo obiettivo principale è la conservazione e valorizzazione dell'identità ambientale, storica e culturale del territorio sardo. Dato l'importante valore paesaggistico delle coste sarde, il piano ha anche implicazioni per aspetti di rilevanza per la PSM, in particolare per quanto riguarda le interazioni (paesaggistiche) tra terra e mare. A tale proposito, il Piano Paesaggistico Regionale include obiettivi che concernono la limitazione dello sviluppo urbano e della sua pressione nelle aree costiere, la conservazione e il ripristino delle zone umide, e la gestione e il ripristino degli ecosistemi marini. L'elaborazione dei piani PSM ha riservato grande attenzione agli aspetti legati alla protezione del paesaggio e del patrimonio culturale. Grazie a un dialogo costante con gli uffici regionali delle soprintendenze afferenti al Ministero della Cultura, sono stati identificati e mappati gli elementi più importanti del paesaggio e del patrimonio culturale, sia sulla terraferma (lungo costa) che sotto il mare. In linea con il Piano Paesaggistico Regionale, il piano PSM per la Sardegna include obiettivi specifici e misure finalizzati a garantire la protezione del paesaggio costiero e marino, la mappatura e la conservazione del patrimonio culturale subacqueo, il ripristino delle strutture costiere di elevato valore storico e architettonico, e la preservazione e promozione della cultura e delle tradizioni regionali legate alla navigazione e al mare in generale. Inoltre, il piano PSM identifica unità di pianificazione di tipo prioritario con vocazione a protezione del paesaggio (in combinazione con il turismo) lungo l'intera costa della Sardegna, compresa la sua porzione settentrionale.

Piani per settori economici e altri usi e attività marine

Relativamente alla terza categoria di analisi, sono stati identificati piani e strategie settoriali di rilevanza regionale per i tre principali attività economiche rilevanti per l'area del caso di studio: attività portuali e navigazione, turismo e acquacoltura.

L'obiettivo generale del piano operativo dell'Autorità di Sistema Portuale del Mare di Sardegna (2021-2023) è la gestione delle aree portuali della Sardegna e delle attività di navigazione correlate, compresi gli aspetti operativi, logistici e normativi. Tale piano ha valenza per tutti i porti della Sardegna, compresi quelli ricadenti nell'area del caso di studio, ovvero Porto Torres e Olbia. Il piano regionale prescrive che le aree portuali si sviluppino senza causare danni agli ecosistemi naturali e al paesaggio, favorendo inoltre l'integrazione delle strutture portuali con gli schemi di pianificazione urbana (ad esempio, per quanto riguarda la minimizzazione degli effetti negativi del traffico urbano indotto e dell'inquinamento in generale). Inoltre, il piano descrive una serie di interventi volti a rendere le operazioni portuali più sicure ed efficienti (ad esempio, attraverso la riqualificazione delle infrastrutture portuali). Infine, nel piano sono considerati progetti di bonifica, anche per minimizzare gli impatti ambientali delle operazioni portuali, sia nelle aree terrestri che marine.

L'area della Sardegna settentrionale si sovrappone allo Stretto di Bonifacio, che separa l'isola dalla Corsica. Si tratta di un'area sensibile per la navigazione, a causa della presenza di numerosi scogli e piccole isole; la navigazione è possibile lungo una stretta fascia larga tre miglia e alle navi viene richiesto di seguire un percorso consigliato largo poco più di un miglio. In relazione a tali considerazioni, all'importanza dell'area per la navigazione e alla sua alta biodiversità, è stata definita nello Stretto di Bonifacio un'Area Marina Particolarmente Sensibile (PSSA; Figura 8), con l'obiettivo di minimizzare il rischio di danni causati sulla megafauna dallo speronamento delle navi, ridurre l'inquinamento causato dalle attività di navigazione e prevenire il degrado degli habitat. Il regolamento della PSSA include misure rigorose come il divieto per le navi francesi e italiane che trasportano materiali pericolosi di transitare nello Stretto di Bonifacio. Inoltre, la segnalazione delle rotte delle navi è resa obbligatoria, mentre è fortemente raccomandato che i comandanti delle navi che navigano attraverso lo stretto utilizzino i servizi di un pilota qualificato. La PSSA dello Stretto di Bonifacio è inclusa nella più ampia Area Marina Particolarmente Sensibile del Mediterraneo Nord-Occidentale, designata dal Comitato per la Protezione dell'Ambiente Marino dell'Organizzazione Idrografica Internazionale con la risoluzione MEPC.380(80) adottata il 7 luglio 2023. Questa nuova PSSA include l'esistente "Corridoio di Migrazione dei Cetacei del Mediterraneo" spagnolo e il Santuario Pelagos.

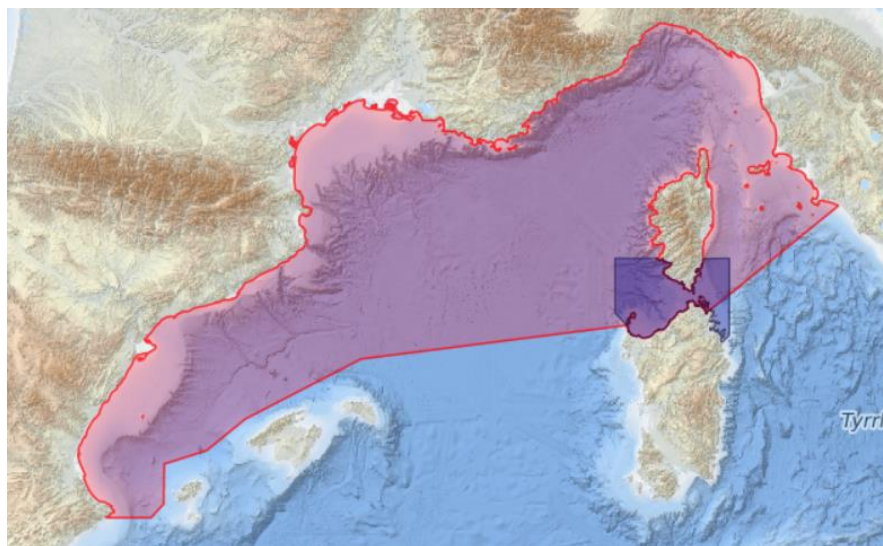


Figura 8. PSSA del Mar Mediterraneo Nord-occidentale (in rosa) and PSSA dello Stretto di Bonifacio in blu (Fonte: Tools4MSP geoportal).

La Sardegna ha anche un piano specifico dedicato ai porti turistici. Lo scopo principale del Piano Regionale della Rete di Portualità Turistica è lo sviluppo di una rete regionale che colleghi i porti dedicati al turismo nell'isola, con l'obiettivo generale di aumentare la qualità e l'attrattiva del settore e migliorarne la sicurezza. Il piano mira a implementare un sistema di punti di accesso (strutture portuali e loro connessioni) per aumentare l'attrattività turistica a livello regionale. Il piano considera sia infrastrutture portuali turistiche esistenti che nuove, prevedendo la loro ottimizzazione in termini di accessibilità, usabilità, efficienza e sicurezza. L'operatività delle strutture portuali è fortemente legata al concetto di "porti verdi"; diverse disposizioni del piano mirano a migliorare le strutture per la gestione delle acque reflue, la prevenzione e gestione dell'inquinamento marino, terrestre e atmosferico e la gestione dei rifiuti solidi, nonché ad evitare l'alterazione della qualità del paesaggio, ridurre il consumo di energia e di acqua dolce.

Il Piano strategico di sviluppo e marketing turistico (2018-2021) riconosce la grande importanza di questa attività economica per l'economia dell'isola. Essendo un piano strategico orientato al marketing, il suo principale obiettivo è aumentare la competitività e l'attrattiva del settore turistico nella regione. La promozione della Sardegna come destinazione turistica comprende obiettivi specifici che mirano a proteggere le risorse naturali e la biodiversità attraverso misure e azioni specifiche. Queste comprendono la promozione dell'efficienza nell'uso delle risorse (acqua ed energia) e nella gestione dei rifiuti, l'installazione di strutture ecologiche per i turisti sulle

spiagge, attività di sensibilizzazione ed educazione, e il miglioramento dei sistemi di certificazione ambientale (es. EMAS per le strutture turistiche).

Il Piano AZA (Zone marine Assegnate per l'Acquacoltura), attualmente in fase di finalizzazione, mira ad identificare le aree idonee per le attività di acquacoltura in Sardegna. Lo sviluppo del piano ha incluso una valutazione completa delle condizioni ambientali, sociali ed economiche esistenti e previste. Il piano si propone di favorire lo sviluppo sostenibile dell'acquacoltura in Sardegna (sia nelle aree costiere che nelle acque interne), garantendo la protezione dell'ambiente e minimizzando i potenziali conflitti tra diverse attività marittime. L'obiettivo ultimo è quello di incoraggiare l'integrazione e la promozione degli interessi economici e sociali nelle aree designate per l'acquacoltura. Il piano mira anche a rafforzare il coordinamento tra le diverse amministrazioni coinvolte nell'emissione di concessione per le attività di acquacoltura. Secondo il piano AZA, le acque costiere e interne sono classificate in tre tipologie: zona 1, aree idonee per le attività di acquacoltura; zona 2, aree idonee per le attività di acquacoltura soggette a regolamentazione/limitazione; zona 3, aree non idonee per le attività di acquacoltura. Si prevede che questo piano regionale venga approvato entro il 2024.

Diversi degli elementi definiti nei piani e nei processi di pianificazione sopra menzionati sono stati presi in considerazione nell'elaborazione delle componenti relative alla Sardegna del piano PSM, sia direttamente (facendo riferimento al piano o al processo specifico) che indirettamente. Di seguito sono riportati alcuni esempi:

- Gli obiettivi specifici e le relative misure del piano PSM relative all'attività portuale mirano a: migliorare l'attrattività dei porti commerciali sardi in una prospettiva mediterranea, sviluppare misure per migliorare la sostenibilità delle infrastrutture portuali (in particolare per l'uso efficiente dell'energia) in linea con il concetto di "porto verde", promuovere la riconversione delle attività economiche in difficoltà nei porti verso opportunità nel settore cantieristico e nell'economia circolare.
- Un obiettivo specifico del piano - e la misura ad esso correlata - promuove l'uso obbligatorio del pilotaggio qualificato nella PSSA dello Stretto di Bonifacio (attualmente solo raccomandato e utilizzato su base volontaria).
- Il piano include un pacchetto diversificato di obiettivi e misure relative al settore turistico, mirando a migliorare la qualità dei servizi offerti, estendere l'offerta turistica in particolare attraverso lo sviluppo di attrazioni culturali sulla costa e nell'entroterra, integrare la rete di porti turistici esistenti con quelli nuovi e incoraggiare la modernizzazione di quelli esistenti come parte di progetti più ampi di rigenerazione urbana.

- Il risultato preliminare dell'elaborazione del piano AZA è stato preso in considerazione nell'identificazione delle aree prioritarie con vocazione per l'acquacoltura. Inoltre, due misure di livello regionale affrontano questa questione, richiedendo che il piano AZA venga finalizzato in coerenza con i contenuti del piano PSM e prevedendo la creazione di un sistema di monitoraggio per valutare e mitigare gli impatti ambientali dell'acquacoltura e i suoi conflitti con altre attività marine.

Contributo al Green Deal europeo e alle strategie dei bacini marittimi

I piani PSM italiani includono diversi riferimenti al Green Deal dell'Unione Europea (EGD). Questo avviene a vari livelli, dalla visione di insieme dei piani, al livello degli obiettivi strategici e specifici, fino a quello delle misure nazionali e regionali. L'obiettivo strategico OS_SS|03 evidenzia l'intenzione dei piani PSM italiani di contribuire attivamente alla transizione dei settori dell'economia marittima verso un paradigma di economia blu sostenibile, in linea con le aspettative dell'EGD. Diverse politiche correlate all'EGD (ad esempio, le strategie dell'Unione Europea in materia di energia rinnovabile offshore, adattamento ai cambiamenti climatici, protezione della biodiversità e produzione sostenibile di cibo, o la comunicazione 98 (2020) sull'economia circolare) sono direttamente citate nei piani PSM e sono state considerate per la definizione degli obiettivi e delle misure dei piani. La misura nazionale NAZ_MIS|08 prevede l'istituzione di un gruppo di lavoro volto a identificare esigenze e strategie comuni per sfruttare appieno le opportunità offerte dall'EGD ai fini dello sviluppo sostenibile delle aree costiere e marittime nel contesto della PSM. Questi collegamenti espliciti tra l'EGD e i piani PSM italiani sono probabilmente dovuti alla natura strategica dei piani medesimi e al momento della loro preparazione, che è iniziata operativamente nel 2021, consentendo la possibilità di fare riferimento direttamente ai processi di policy più recenti, come appunto quello dell'EGD. Un'analisi dettagliata su come gli elementi marini dell'EGD siano integrati nei piani PSM italiani (e nei piani di altri paesi dell'UE) è inclusa nel Deliverable 2.1 del progetto MSP GREEN finanziato dal programma EMFAF²⁵.

Le componenti marine dell'EGD sono richiamate anche in diversi elementi specificamente definiti dal piano PSM per la sub-area della Sardegna, a partire dalla visione regionale e dall'obiettivo specifico che collega il piano PSM a quanto definito dalla Strategia Regionale per lo Sviluppo Sostenibile (per una Sardegna più intelligente, più verde, più connessa, più giusta e più vicina ai cittadini). Diversi obiettivi specifici e

²⁵ MSP-GREEN. Cornet, A., Arki, V., Bocci, M., Ramieri, E., et al., 2023. The Green Deal Component of the EU MSP Plans.

misure di livello regionale fanno riferimento direttamente o indirettamente alle componenti dell'EGD, ad esempio in relazione a:

- adattamento delle aree costiere ai rischi correlati ai cambiamenti climatici e al conseguente innalzamento del livello del mare;
- transizione verde del settore marittimo e dei porti e riconversione delle attività economiche in crisi nei porti verso iniziative di economia circolare;
- estensione delle aree marine protette, in linea con gli obiettivi stabiliti dalla strategia dell'UE sulla biodiversità, nonché miglioramento delle misure di conservazione in atto;
- miglioramento della sostenibilità delle attività di pesca, anche attraverso il sostegno alla pesca artigianale;
- sviluppo dell'acquacoltura sostenibile, attraverso l'individuazione delle aree più adatte (AZA), la gestione dei conflitti con altri usi e l'ambiente, la diversificazione delle produzioni, il supporto all'acquacoltura integrata multi-trofica e a pratiche di acquacoltura a basso livello trofico, l'innovazione tecnologica, l'uso sostenibile delle risorse e l'implementazione di pratiche di economia circolare;
- contributo alla decarbonizzazione attraverso la produzione di energia rinnovabile offshore (evitando conflitti con altri usi e impatti sull'ambiente e sul paesaggio terrestre e marino) e il miglioramento dell'efficienza energetica per i settori dell'economia blu;
- promozione di opportunità di economia circolare basate sul riciclo di rifiuti marini e rifiuti portuali.

Molti degli altri piani analizzati fanno riferimento ad alcuni elementi dell'EGD solo in modo indiretto. Ciò è dovuto sicuramente al fatto che molti di questi sono stati adottati prima della formulazione dell'EGD. Tuttavia, anche la dimensione regionale di tali piani gioca un ruolo in questa prospettiva. Mentre l'integrazione dell'EGD nei piani e nelle strategie di livello nazionale sta in qualche modo progredendo (sebbene con differenze da contesto a contesto e con sfide ancora aperte), è probabile che la sua penetrazione dell'EGD nelle strategie e nei piani di livello regionale e locale sia ancora limitata. Connessioni evidenti con la tematica della produzione sostenibile di cibo e con gli obiettivi della strategia Farm to Fork possono essere evidenziati per il piano AZA attualmente in fase di finalizzazione, che mira effettivamente a sostenere lo sviluppo sostenibile del settore in Sardegna. Il piano dell'Autorità di Sistema Portuale del Mare di Sardegna e il Piano Regionale della Rete della Portualità Turistica fanno riferimento al concetto di "porto verde", con misure volte a ridurre le emissioni di gas serra (uso di

fonti di energia rinnovabile, cold ironing, corretta gestione e riciclaggio dei rifiuti, ecc.) e misure di economia circolare. L'articolato sistema di parchi nazionali, AMP e siti Natura 2000 del nord della Sardegna mira principalmente alla conservazione della biodiversità e degli habitat, attraverso la regolamentazione delle attività umane e delle pressioni da esse esercitate. Questo sistema fornisce la base per contribuire agli obiettivi per il 2030 stabiliti dalla Strategia UE per la biodiversità. In ogni caso, la possibile estensione delle aree marine soggette a protezione ed una loro migliore connessione devono essere inquadrati in una prospettiva nazionale. Nell'area del caso di studio, anche la dimensione transfrontaliera svolge un ruolo importante ai fini della conservazione naturale, data la vicinanza della Corsica e delle sue aree protette. Il piano PSM per la sub-area della Sardegna include un obiettivo specifico e una misura che mirano a promuovere iniziative per la creazione di un'AMP transfrontaliera nello stretto di Bonifacio. La Strategia Regionale di Adattamento ai Cambiamenti Climatici del 2019 (SRACC) considera solo parzialmente i sistemi costieri senza considerare espressamente aspetti marini. La sua futura integrazione dovrebbe colmare parzialmente questa lacuna, includendo analisi su sistemi costieri e su quelli di transizione terra-mare.

I collegamenti alla strategia WestMED non sono espressamente considerati nei piani analizzati. Gli obiettivi, le misure e gli elementi spaziali del piano PSM e degli altri piani e strategie trasversali e settoriali considerati, fanno riferimento in modo indiretto ad alcuni dei pilastri dell'iniziativa WestMED, come: conservazione e ripristino della biodiversità e degli habitat marini; sviluppo delle comunità costiere, della pesca e dell'acquacoltura sostenibili; sicurezza marittima e lotta contro l'inquinamento marino; capacity building. Alcuni esempi sono richiamati nelle precedenti sezioni di questo capitolo.

Elementi relativi al coinvolgimento dei portatori di interesse

I piani PSM italiani sono il risultato di un processo di co-sviluppo che ha coinvolto Ministeri e Regioni costiere, con l'obiettivo di trarre benefici dalla conoscenza condivisa e dall'esperienza sia di livello nazionale che sub-nazionale. Per contribuire attivamente a tale processo, diverse amministrazioni regionali (tra cui la Sardegna) hanno istituito gruppi di lavoro PSM che coinvolgono vari dipartimenti regionali e presentano diversi livelli di formalizzazione. Il coinvolgimento di diversi funzionari regionali ha anche fornito l'opportunità di definire collegamenti diretti o indiretti con alcuni portatori di interesse regionali (ad esempio, rappresentanti delle autorità portuali, operatori turistici, operatori del settore della pesca, ecc.), sebbene solo parzialmente. In questo contesto, le Regioni costiere hanno svolto il duplice ruolo di partecipanti al processo di co-pianificazione e di portatori di interesse. I funzionari regionali sono stati coinvolti

attraverso una serie di workshop online, supportati dalla condivisione di informazioni, compresa la mappatura della distribuzione delle principali componenti ambientali e degli usi marini. Inoltre, l'identificazione degli elementi del patrimonio culturale costiero e sottomarino, così come degli elementi ad alto valore paesaggistico a livello regionale e locale, ha beneficiato della continua collaborazione con gli uffici regionali delle Soprintendenze del Ministero della Cultura.

Come previsto dalla legislazione nazionale, le proposte di piano italiane sono state sottoposte a consultazione, aperta a tutti i portatori di interesse ed al pubblico in generale. Questo è avvenuto parallelamente alla fase di consultazione parte della procedura di Valutazione Ambientale Strategica. Nonostante il già menzionato approccio di co-progettazione a più livelli e gli sforzi nella promozione del processo di pianificazione attraverso dedicati eventi online e siti web (anche nell'ambito di progetti dell'UE, come l'MSP-MED), il processo formale di coinvolgimento dei portatori di interesse nella PSM non è stato considerato sufficiente, come evidenziato da diversi commenti ricevuti durante la consultazione pubblica. Per affrontare questo problema, i piani PSM includono una misura a livello nazionale volta a sviluppare e rendere operativa una strategia a lungo termine per la partecipazione e il coinvolgimento dei portatori di interesse nel processo di implementazione, monitoraggio, valutazione e revisione dei piani di PSM. A tal proposito, si sottolinea che particolare attenzione dovrebbe essere prestata al coinvolgimento dei settori di maggiore rilevanza sociale, delle amministrazioni locali e del pubblico in generale (società civile).

Per alcuni dei piani e delle strategie analizzati, le informazioni sul processo di coinvolgimento dei portatori di interesse sono documentate e quindi disponibili, almeno in parte. Ad esempio, rappresentanti di istituzioni pubbliche, operatori economici del settore privato, membri di associazioni di categoria, membri della società civile, ricercatori e membri di ONG sono stati attivamente coinvolti nel processo di consultazione e co-creazione della Strategia Regionale per l'Adattamento ai Cambiamenti Climatici. Lo sviluppo del Piano strategico di sviluppo e marketing turistico della Sardegna ha previsto l'organizzazione di 17 eventi partecipativi (workshop e tavole rotonde, che hanno coinvolto più di 600 partecipanti), organizzati in tutta la regione, nei quali sono state discusse varie tematiche rilevanti per lo sviluppo del turismo, quali la sostenibilità delle attività turistiche, la protezione dell'ambiente e del paesaggio, l'innovazione e lo sviluppo tecnologico a supporto del turismo. Lo studio che supporta il processo di pianificazione delle AZA ha previsto l'organizzazione di diversi eventi pubblici in varie zone della Sardegna, aperti alla partecipazione del pubblico e volti al coinvolgimento di diverse tipologie di portatori di interesse.

In altri casi, il coinvolgimento dei portatori di interesse non è adeguatamente documentato (o almeno tale documentazione non è immediatamente disponibile), sebbene possa essere comunque avvenuta. Questo accade in particolare per processi di pianificazione più lontana nel tempo e/o di livello locale, come quelli legati alla protezione e conservazione della natura.

Lacune persistenti nella pianificazione e nella gestione integrata dello spazio marino

I piani PSM italiani si basano su un approccio multi-scalare, che include tre livelli spaziali (aree marine, sub-aree e unità di pianificazione). Tale approccio ha permesso la definizione di obiettivi di pianificazione, opzioni di zonizzazione e misure con differenti risoluzione o dettaglio. Il numero e la dimensione delle unità di pianificazione variano in funzione delle caratteristiche locali dell'ambiente marino, del sistema degli usi, delle esigenze e degli obiettivi locali e della disponibilità di dati e conoscenze. I piani PSM italiani mirano ad integrare ed armonizzare le disposizioni degli altri piani esistenti e di quelli in fase di sviluppo. L'analisi delle strategie e dei piani trasversali e settoriali rilevanti per il caso di studio in esame ha evidenziato come tale integrazione sia essenzialmente avvenuta nel caso della regione Sardegna e della sua area settentrionale in particolare (attraverso la definizione di vocazioni per le unità di pianificazione, obiettivi specifici e/o misure regionali in linea con quanto previsto da altri piani). In ogni caso, persistono alcune discrepanze, legate al processo PSM stesso o alla natura stessa di altri piani che considerano solo marginalmente lo spazio marino, come nel caso della versione attuale della Strategia Regionale di Adattamento ai Cambiamenti Climatici.

I piani PSM italiani hanno prevalentemente una natura strategica e non forniscono disposizioni dettagliate e regolamentanti. In questa prospettiva, i piani potrebbero apparire troppo generali per soddisfare le esigenze e i bisogni delle comunità costiere locali. L'approccio flessibile e multi-scalare adottato consente l'incorporazione di nuovi dati e conoscenze ai fini dell'adattamento progressivo dei piani PSM, ad esempio per dettagliare ulteriormente la zonizzazione per aree e/o settori specifici. Questa è una sfida importante per molte sub-aree costiere, caratterizzate da un'alta densità di usi marittimi e, in alcuni casi, da conflitti tra usi diversi. Questo è anche il caso dell'area della Sardegna settentrionale. Alcuni dei principali conflitti possono essere identificati tra: (i) acquacoltura e attività portuale nel Golfo di Olbia, (ii) trasporto marittimo e protezione ambientale, pesca artigianale e trasporto marittimo, pesca ricreativa e pesca artigianale nel Golfo dell'Asinara, (iii) turismo/navigazione da diporto e protezione ambientale nell'arcipelago della Maddalena.

Un'analisi più dettagliata di questi conflitti, anche attraverso il coinvolgimento dei portatori di interesse, e l'individuazione di possibili soluzioni attraverso nuove opzioni di zonizzazione e misure sono obiettivi considerati nell'ambito dello sviluppo del caso di studio della Sardegna settentrionale del progetto REGINA MSP. Ci si aspetta che queste attività contribuiscano ad allineare ulteriormente la PSM alle disposizioni definite dalle strategie e dai piani locali e regionali, migliorino l'accettazione a livello locale del piano PSM e contribuiscano a soddisfare le aspettative e le ambizioni di livello locale. In questo senso, un buon esempio è rappresentato dall'integrazione dei risultati in progress del processo di identificazione delle AZA nel piano PSM, integrazione che potrà comunque essere maggiormente dettagliata nel prossimo futuro. L'esito preliminare dell'elaborazione del piano AZA è stato preso in considerazione per l'individuazione delle aree prioritarie con vocazione acquacoltura. Una volta che il piano AZA sarà finalizzato e approvato, potrebbe essere necessario apportare alcuni aggiustamenti al piano PSM per allinearli meglio alle disposizioni spaziali e regolamentari incluse in questo piano.

La limitata disponibilità di alcuni dati specifici rappresenta una lacuna importante ai fini dell'analisi spaziale di alcuni settori e conflitti tra settori. Questo è il caso, ad esempio, della distribuzione spaziale e temporale di alcune attività marittime come la pesca artigianale, la pesca ricreativa o la navigazione da diporto, così come di alcune componenti ambientali, quali ad esempio gli habitat bentonici. La co-costruzione della base informativa mediante il coinvolgimento di diversi portatori di interesse può contribuire a colmare alcune delle lacune conoscitive evidenziate.

A differenza di diversi altri paesi dell'UE, le Regioni italiane hanno avuto un ruolo diretto e attivo nel processo di PSM. È essenziale che tale ruolo venga mantenuto e rafforzato, per collegare ulteriormente gli interessi di livello nazionale con le esigenze e gli obiettivi rilevanti per la scala regionale e locale. In questo contesto, appare molto importante consolidare il gruppo di lavoro sulla PSM creato all'interno dell'amministrazione regionale della Sardegna. Allo stesso tempo, una delle principali sfide è rappresentata da un'efficace e più ampia partecipazione dei portatori di interesse a livello regionale (ma lo stesso potrebbe essere sostenuto anche a livello nazionale). La creazione di una community of practice intra-regionale sulla PSM potrebbe contribuire ad aggregare ulteriormente i portatori di interesse regionali e locali.

Provence Alpes Cote d'Azur - PACA

Les articles L 219-1 et suivants du code de l'environnement posent les principes d'une gestion intégrée de la mer et du littoral. L'Etat élabore une stratégie nationale de la mer et du littoral en concertation avec le Conseil national de la mer et du littoral et, en application, une stratégie par bassin maritime en concertation avec le Conseil maritime de façade. L'objectif est de parvenir à une utilisation optimale de la mer et du littoral dans une perspective de développement durable et d'améliorer la prise en compte mutuelle de l'ensemble de ses enjeux.

En mer, le domaine public maritime²⁶ (DPM) est principalement dédié à l'usage direct du public ou à l'accueil de services publics liés à l'utilisation ou à l'exploitation des ressources maritimes. Le DPM est inaliénable et imprescriptible. Le DPM naturel doit être utilisé conformément à sa destination d'utilité publique : tout projet de construction ou d'installation destiné à être édifié sur ce domaine doit préalablement obtenir une autorisation de l'Etat, qui est temporaire, précaire et révocable et qui donne lieu au paiement d'une redevance. Le Domaine public maritime artificiel est composé des installations portuaires et des ouvrages de sécurité pour la navigation. Les conditions d'utilisation du DPM sont fixées dans le Code général de la propriété des personnes publiques.

Sur terre, le Code de l'urbanisme est le corpus réglementaire relatif à l'utilisation et à l'aménagement du territoire et fixe les exigences relatives à l'élaboration des plans d'urbanisme aux différents niveaux. Il comprend la Loi littoral sur l'aménagement, la protection et la mise en valeur du littoral dont l'objectif est de préserver les espaces naturels et l'équilibre écologique en bord de mer, de développer les activités économiques proches de la mer, de mettre en place une protection échelonnée en fonction de la proximité du rivage.

Au niveau de la façade²⁷, quatre directions interrégionales de la mer (DIRM) dépendant du secrétariat d'Etat à la mer sont chargées d'adapter la stratégie nationale mer et littoral à leurs spécificités de façade élaborant une stratégie de façade, dont un schéma d'espace marin. Les documents stratégiques de façade (DSF) comportent une dimension spatiale, précisée dans le cadre des mesures de transposition de la directive européenne du 24 juillet 2014 sur les PSM. Ils comprennent également les éléments requis par la DCSMM. Tous les plans, programmes, schémas et projets en mer et sur

²⁶ Le Domaine Public Maritime naturel (DPMn) est constitué, pour l'essentiel, des terrains historiquement recouverts par la mer mais dont elle s'est retirée, ainsi que ceux encore immergés compris entre le rivage de la mer et la limite des eaux territoriales.

²⁷ La France est divisée en 4 façades maritimes (Manche Est-Mer du Nord, Atlantique Nord-Manche Ouest, Atlantique Sud et Méditerranée).

l'interface terre-mer doivent être compatibles avec le DSF. À terre, s'ils ont une influence sur la mer, ils doivent tenir compte des orientations et des dispositions du CVD. De plus, il doit y avoir une compatibilité réciproque entre le schéma directeur d'aménagement et de gestion des eaux (SDAGE) et les objectifs environnementaux de la stratégie de façade. La compatibilité ou la prise en compte se fait au moment de la révision des documents concernés ou en tout cas dans un délai de trois ans.

Le préfet maritime est responsable de la délivrance des concessions et détient le pouvoir de police au-delà de la limite des 12 milles nautiques. Au niveau régional, le Conseil régional des élus - appelé Région dans ce document - est responsable du schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) qui s'impose aux plans locaux d'urbanisme. La réforme territoriale engagée au niveau national, à travers les lois MAPTAM (2014) et NOTRe (2015), renforce les compétences des Régions en matière de développement économique et d'aménagement du territoire, et leur confère le rôle de chef de file en matière de climat, d'air, d'énergie, de préservation de la biodiversité et d'aménagement du territoire. Elle transfère également la gestion des fonds européens de l'État aux Régions.

Le service déconcentré de l'Etat en charge de l'environnement, de l'aménagement et du logement (DREAL) est responsable, entre autres compétences, de l'animation de la politique de l'eau, du réseau des sites Natura 2000, des trames vertes et bleues.

Au niveau du département²⁸, le conseil départemental des élus est responsable de l'amélioration de l'accessibilité des services au public, des routes départementales et de certains ports lorsqu'ils ont reçu les compétences de l'Etat. Les services de l'État intervenant au niveau départemental (DDTM) sont chargés de la gestion du domaine public maritime naturel et des autorisations d'occupation et d'environnement des ouvrages en mer jusqu'à la limite des 12 milles nautiques.

Au niveau intercommunal, les élus des groupements de communes sont responsables de la définition du Schéma de Cohérence Territoriale (SCoT), qui peut s'appliquer jusqu'à la limite des 12 milles nautiques, mais qui en général ne s'applique qu'à la limite de la côte ou à la limite des 3 milles nautiques (voire 1 nm). Les municipalités sont alors responsables de l'élaboration du plan local d'urbanisme (PLU) sur leur territoire, qui doit être conforme au SCoT ou au code de l'urbanisme s'il n'y a pas de SCoT défini pour le territoire. La commune est responsable de la sécurité des plages et de la police

²⁸ Le département est une circonscription administrative et le territoire de compétence des services de l'Etat et de la collectivité locale composée d'élus chargés de conduire les missions relevant de ses compétences. La région PACA compte 3 départements : Bouches-du-Rhône, Var et Alpes-Maritimes.

des activités nautiques et des sites de baignade jusqu'à la ligne des 300 mètres du littoral. Les municipalités sont invitées à planifier les équipements légers et les zones d'amarrage et ont généralement la possibilité d'agir en tant que gestionnaires de sites Natura 2000.

Les ports peuvent être gérés par différents acteurs à différents niveaux : des services de l'État pour les principaux ports de commerce (Marseille et Saint-Nazaire) à la métropole (Métropole des ports de Nice) en passant par le département ou le syndicat mixte (ports de Toulon). La gestion du domaine public maritime artificiel est déléguée à l'autorité responsable du port. Les ports de plaisance sont gérés par des communes ou des départements dans certains cas.

La Figure 1 fournit une représentation schématique des compétences en mer et sur le littoral en France.

		Limites	Principaux textes juridiques	Autorisations, gestion, pouvoir de police	Planification
Mer	Zone Economique Exclusive	12 - 200 milles	Code de l'environnement; Code des transports; EMR* : Code de l'énergie; Pêche : Code rural et de la pêche maritime	Préfet maritime : concessions (pour EMR: autorisation environnementale unique), pouvoir de police (incl. la mise en place du plan ministériel de contrôle des pêches)	Direction Interrégionale de la Mer (DIRM) responsable du Document Stratégique de Façade (DSF) sous la co-responsabilité du Préfet maritime et du Préfet de région DSF opposable Établissement public responsable du Projet stratégique du Grand port maritime Autres ports : autorités locales Conseil régional : responsable du Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) Groupement intercommunal responsable du Schéma de cohérence territoriale (SCoT) Commune responsable du Plan local d'urbanisme (PLU)
Interface terre-mer	Domaine Public Maritime**(DPM)	0 - 12 milles	Code général de la propriété des personnes publique; Code de l'environnement; EMR : Code de l'énergie; Port : Codes des transports ; Code des ports maritimes ; Code général des collectivités territoriales; Pêche : Code rural et de la pêche maritime	Préfet de région : gestion des pêches et des risques Préfet de département : concessions (notamment pour EMR), autorisation d'occupation temporaire Services de l'environnement de l'Etat (DREAL) : Projets soumis à autorisation environnementale	
Terre	Territoire côtier	Trait de côte	Code de l'urbanisme (incluant la Loi littoral); Code de l'environnement; Code général des collectivités territoriales	Maires : permis de construire, réglementation des activités de baignade et nautiques dans la bande des 300 m) Services de l'environnement de l'Etat (DREAL) : Projets soumis à autorisation environnementale	

*EMR : Energies marines renouvelables

**constitué, pour l'essentiel, des terrains historiquement recouverts par la mer mais dont elle s'est retirée, ainsi que ceux encore immergés compris entre le rivage de la mer et la limite des eaux territoriales.

Figure 1. Représentation schématique des compétences en mer et sur le littoral en France (Source : élaboration propre; CEREMA)

Stratégies et plans analysés

Les stratégies et plans transversaux suivants ont été identifiés et analysés. La stratégie nationale pour la mer et le littoral a été déclinée en document stratégique de façade (DSF) par les Directions interrégionales de la mer (DIRM) pour chacune des quatre façades maritimes (Manche Est Mer du Nord, Atlantique Nord Manche Ouest, Atlantique Sud et Méditerranée), en concertation avec les acteurs maritimes et littoraux concernés. Il existe donc un DSF pour la façade méditerranéenne. Comme tous les DSF, il est composé de deux documents : un document stratégique (adopté en 2019) et un document opérationnel (adopté en 2022). Le DSF s'oppose aux plans d'urbanisme régionaux et locaux.

Il existe une stratégie de gestion du domaine public maritime naturel (DPMn) pour deux des trois départements de la région. La stratégie du département du Var, élaborée en 2014, n'a pas été révisée depuis la publication du DSF. La stratégie du département des Bouches-du-Rhône qui a été élaborée plus tard, en 2019, a pris en compte les orientations stratégiques du DSF. Le département des Alpes-Maritimes a commencé à élaborer sa stratégie pour le DPMn mais cette dernière n'a pas été publiée.

Au niveau régional, la version actuelle du schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) comprend, entre autres, des orientations générales et des règles concernant le développement d'activités économiques nécessitant la proximité immédiate de la mer et la prise en compte des impacts du changement climatique et des corridors écologiques. Il est actuellement en cours de révision pour mieux intégrer la prise en compte du changement climatique et les orientations du DSF. Au niveau local, 2 des 11 schémas de cohérence territoriale (SCoT) comportent un schéma de mise en valeur de la mer. 41 des 43 communes côtières ont élaboré un plan local d'urbanisme (PLU ou PLUi). Seul un d'entre eux a été analysé car la même approche s'applique pour tous. Un schéma d'aménagement de plage a été analysé (Schéma d'aménagement de la plage de Pampelonne de la commune de Ramatuelle).

La Région PACA a défini son plan mer et littoral (2019) qui détaille les actions économiques et de protection de la zone côtière. Ce plan est volontaire comme il s'agit d'une initiative qui n'est pas prévue par la loi. Un des trois départements côtiers de la région a élaboré un plan volontaire pour la mer Méditerranée pour les Alpes-Maritimes (2023), mais il n'est pas une déclinaison du plan mer et littoral de la Région ni du DSF.

Le schéma directeur d'aménagement et de gestion des eaux (SDAGE) issu de la mise en œuvre de la Directive Cadre sur l'Eau (DCE) et son adaptation au niveau des bassins versants locaux - le schéma d'aménagement et de gestion des eaux (SAGE) - visent à

stopper la détérioration des masses d'eau et à atteindre le bon état des cours d'eau, des lacs et des nappes souterraines. Les orientations stratégiques du DSF et du SDAGE doivent être cohérentes et complémentaires, c'est pourquoi le DSF a été élaboré en tenant compte du SDAGE existant. Il existe trois SAGE côtiers dans la région qui ne couvrent qu'une partie du territoire car ils ont été élaborés en raison de problèmes de gestion de l'eau spécifiques aux territoires concernés selon une unité hydrographique cohérente. Le SAGE favorise la protection de l'environnement marin et peut promouvoir l'organisation des usages en mer comme par exemple la promotion des mouillages écologiques. Enfin, il existe trois contrats de baie qui sont des outils de programmation intégrés pour la préservation et la protection des écosystèmes côtiers. Ils assurent le financement d'actions locales conformes au SDAGE et au SAGE en associant différents acteurs publics et privés.

Concernant les plans de protection des écosystèmes marins et côtiers, la stratégie méditerranéenne de gestion des mouillages petite et grande plaisance (2021) et la stratégie de gestion durable des sites de plongée en Méditerranée (2019) au niveau de la façade identifient les bonnes pratiques à mettre en œuvre au niveau local pour limiter les impacts du tourisme marin et du mouillage des bateaux de plaisance. Le document stratégique pour l'implantation des récifs artificiels (2012) a été élaboré pour garantir la cohérence entre les autorisations d'installations de récifs artificiels accordées par les différentes DDTM.

Dans la zone d'étude de cas, trois schémas territoriaux de restauration écologique (STERE) sont validés et trois sont en cours d'élaboration. Ils sont issus de la déclinaison du document stratégique pour la restauration écologique en Méditerranée (2019). Les STERE doivent s'intégrer autant que possible aux plans ou outils de gestion existants comme par exemple le volet mer et littoral du SCoT, les contrats de baie, les zones N2000 ou encore les aires marines protégées (AMP), tout en prenant en compte la stratégie de gestion des mouillages. Ces plans et stratégies liés à la conservation sont complémentaires avec la stratégie régionale de conservation terrestre et les plans de gestion des AMP : (i) la stratégie régionale du Conservatoire du littoral²⁹ qui vise à orienter l'action du Conservatoire pour protéger et restaurer les zones côtières ; (ii) deux chartes de parcs nationaux avec une zone marine (Calanques et Port-Cros), (iii) une charte de parc naturel régional avec une zone côtière (Camargue), (iv) un plan de gestion de parc marin (Côte Bleue) et (v) 13 sites marins Natura 2000 document d'objectifs (DOCOB).

²⁹ Le Conservatoire du littoral est un organisme public chargé d'acquérir des parcelles côtières menacées par l'urbanisation ou la dégradation afin de sauvegarder les zones côtières, de respecter les sites naturels et l'équilibre écologique.

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En ce qui concerne les plans économiques, le schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII) est élaboré par la Région. Par ailleurs, plusieurs stratégies et plans sectoriels s'appliquent au territoire PACA dont le schéma régional de développement de l'aquaculture marine (SRDAM), le schéma des structures des exploitations de cultures marines au niveau départemental, la stratégie nationale portuaire, la charte croisière durable Méditerranée, la charte régionale des ports de plaisance et de pêche, le schéma logistique et d'intermodalité de l'axe Méditerranée-Rhône-Saône et le projet stratégique du Grand port maritime de Marseille. La stratégie nationale pour la gestion durable des granulats terrestres et marins et des matériaux et substances de carrières a été analysée. Contrairement à d'autres façades, ce document national n'a pas dû être adapté au niveau méditerranéen comme il n'y a pas d'exploitation commerciale de granulats marins dans le bassin méditerranéen français.

Les principales caractéristiques et les secteurs couverts par les stratégies et plans analysés sont résumés respectivement dans le premier et le deuxième tableau ci-dessous.

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Titre	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationale	OUI	NON	Stratégique	Réglementaire	Les deux	
Catégorie 1 : plans et stratégies transversaux									
DSF pour la façade méditerranéenne			X (façade)	X				X	X
Plan mer et littoral de la région PACA		X			X	X			
Stratégie de gestion du domaine public maritime naturel (DDTM du Var et des Bouches-du-Rhône)	X				X			X	X
Plan pour la mer Méditerranée 06 (Département des Alpes-Maritimes)	X				X	X			
Schéma directeur d'aménagement et de gestion des eaux (SDAGE)			X (bassin du Rhône)	X				X	
Schémas locaux d'aménagement et de gestion des eaux (SAGE)	X			X				X	X
Contrats de baie	X				X	X			X
Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET)		X		X				X	
Schémas de cohérence territoriale (SCoT) incluant un schéma de mise en valeur de la mer	X			X				X	X
Plan local d'urbanisme (PLU)	X			X				X	X

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Titre	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationale	OUI	NON	Stratégique	Réglementaire	Les deux	
Schéma d'aménagement de plage	X			X			X		X
Catégorie 2 : plans et stratégies axés sur la protection et la conservation									
Stratégie méditerranéenne de gestion des mouillages petite et grande plaisance			(X) façade		X	X			X
Stratégie de gestion durable des sites de plongée en Méditerranée			(X) Interrégional		X	X			
Document stratégique pour la restauration écologique en Méditerranée			(X) façade		X	X			X
Document stratégique pour l'implantation des récifs artificiels			(X) façade		X	X			
Schémas territoriaux de restauration écologique (STERE)	X				X	X			X
Stratégie du Conservatoire du littoral		X			X	X			X
Plan de gestion du parc marin de la Côte Bleue	X				X			X	X
Plan de gestion du parc national des Calanques	X			X				X	X
Plan de gestion du parc national de Port-Cros	X			X				X	X

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Titre	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationale	OUI	NON	Stratégique	Réglementaire	Les deux	
Documents d'objectifs des sites marins Natura 2000	X			X		X			X
Charte du parc naturel régional de Camargue	X			X				X	X
Plan de gestion du sanctuaire Pelagos			International		X	X			X
Catégorie 3 : Plans pour les secteurs économiques et les autres utilisations et activités marines									
Stratégie portuaire nationale			X		X	X			
Stratégie nationale pour la gestion durable des granulats terrestres et marins			X	X				X	
Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII)		X		X				X	
Schéma régional de développement de l'aquaculture marine (SRDAM)		X		X		X			X
Schéma des structures des exploitations de cultures marines	X			X				X	X
Charte croisière durable Méditerranée			X façade		X	X			
Charte des ports		X			X	X			

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Titre	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationale	OUI	NON	Stratégique	Réglementaire	Les deux	
Schéma logistique et d'intermodalité de l'axe Méditerranée-Rhône-Saône			X (interrégionale)		X	X			
Projet stratégique du Grand port maritime de Marseille	X			X		X			X

Titre	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Catégorie 1 : plans et stratégies transversaux																		
Document stratégique de façade (DSF) pour la façade méditerranéenne	X	X	X	X	X	X	X		X		X			X	X	X	X	X
Plan mer et littoral de la région PACA			X	X		X	X								X	X	X	
Stratégie de gestion du domaine public maritime naturel		X	X	X		X			X						X	X	X	

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Titre	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Plan pour la mer Méditerranée 06 (Département des Alpes-Maritimes)	X		X	X		X									X	X	X	
Schéma directeur d'aménagement et de gestion de l'eau		X	X	X		X			X					X	X	X	X	
Planification et gestion de l'eau - régimes locaux		X	X	X		X			X						X	X	X	
Contrats de baie		X	X	X		X			X						X	X		
Schéma régional d'aménagement, de développement durable et d'égalité des territoires		X	X	X		X	X											
Schémas de cohérence territoriale (SCoT) incluant un schéma de mise en valeur de la mer	X	X	X	X	X	X								X	X	X	X	
Plan local d'urbanisme (PLU)	X	X	X	X	X	X								X	X	X	X	
Schéma d'aménagement de plage			X	X											X	X	X	
Catégorie 2 : plans et stratégies axés sur la protection et la conservation																		
Stratégie méditerranéenne de gestion des mouillages petite et grande plaisance			X	X											X	X		
Stratégie de gestion durable des sites de plongée en Méditerranée			X	X										X		X		X
Document stratégique pour la restauration écologique en Méditerranée	X		X	X	X										X	X		
Document stratégique pour l'implantation des récifs artificiels	X		X	X		X								X	X	X		
Schémas territoriaux de restauration écologique (STERE)	X		X	X		X			X					X	X	X		
Stratégie du Conservatoire du littoral			X	X											X	X	X	

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Titre	FI	AQ	TO	RA	MT	PA	M R	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Plan de gestion du parc marin de la Côte Bleue	X		X	X										X	X	X	X	
Plan de gestion du parc national des Calanques	X		X	X	X	X	X			X				X	X	X	X	X
Plan de gestion du parc national de Port-Cros	X		X	X	X	X	X			X				X	X	X	X	X
Documents d'objectifs des sites marins Natura 2000	X	X	X	X	X	X	X			X				X	X	X	X	X
Charte du parc naturel régional de Camargue	X		X	X										X	X	X	X	
Plan de gestion du sanctuaire Pelagos			X	X	X									X		X	X	
Catégorie 3 : Plans pour les secteurs économiques et les autres utilisations et activités marines																		
Stratégie portuaire nationale						X	X											
Stratégie nationale pour la gestion durable des granulats terrestres et marins									X									
Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII)					X	X												
Schéma régional de développement de l'aquaculture marine (SRDAM)		X														X		
Schéma des structures des exploitations de cultures marines		X													X	X		
Charte croisière durable Méditerranée			X		X											X		
Charte des ports			X	X		X										X		
Schéma logistique et d'intermodalité de l'axe Méditerranée-Rhône-Saône					X	X	X											
Plan stratégique du port de Marseille					X	X	X							X				

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FI = Pêche, AQ = Aquaculture, TO = Tourisme côtier et maritime, RA = Activités récréatives et de loisirs, MT = Transport maritime, PA = Activités portuaires, MR = Énergies marines renouvelables, OG = Exploration et exploitation du pétrole et du gaz, MA = Agrégats marins (extraction de sable pour le remblayage des plages et la construction), DM = Infrastructures d'exploitation minière en eaux profondes et robotique, PC = Pipelines et câbles, MD = Défense maritime, DA = Zones d'immersion (par exemple pour les sédiments ou les munitions), RI = Recherche et innovation, CP = Protection côtière, NP = Protection de la nature, LP = Protection du paysage, UC = Patrimoine culturel subaquatique.

Stratégies et plans transversaux

Au niveau de la façade méditerranéenne française, le document dédié à la planification en mer est le DSF qui est composé d'une partie stratégique adoptée en 2019 et d'une partie opérationnelle (programme de suivi et plan d'action) adoptée en 2022. Il couvre tous les secteurs maritimes, à l'exception des câbles et pipelines et de la défense. La partie stratégique du document identifie 30 zones de vocations (Figure 2) pour illustrer les objectifs stratégiques de l'espace maritime, dont les périmètres ont été définis en fonction de défis environnementaux similaires et de la répartition des activités, indépendamment des limites administratives. La mise en œuvre des objectifs stratégiques du document est suivie par la DIRM au moyen d'indicateurs clés. Concernant la partie opérationnelle, le DSF comprend un plan d'action détaillé avec certaines mesures spatiales telles que la localisation du potentiel de développement des parcs éoliens en mer, l'adaptation locale des stratégies (par exemple la stratégie de mouillage ou de restauration), l'identification des zones potentielles pour le développement de la thalassothermie, des navettes marines ou des projets d'aquaculture. D'autres mesures non spatiales sont définies en partenariat avec les acteurs de l'écosystème mer et littoral dont les collectivités territoriales, afin d'améliorer les connaissances, de sensibiliser ou d'entamer des réflexions stratégiques sur des sujets spécifiques.

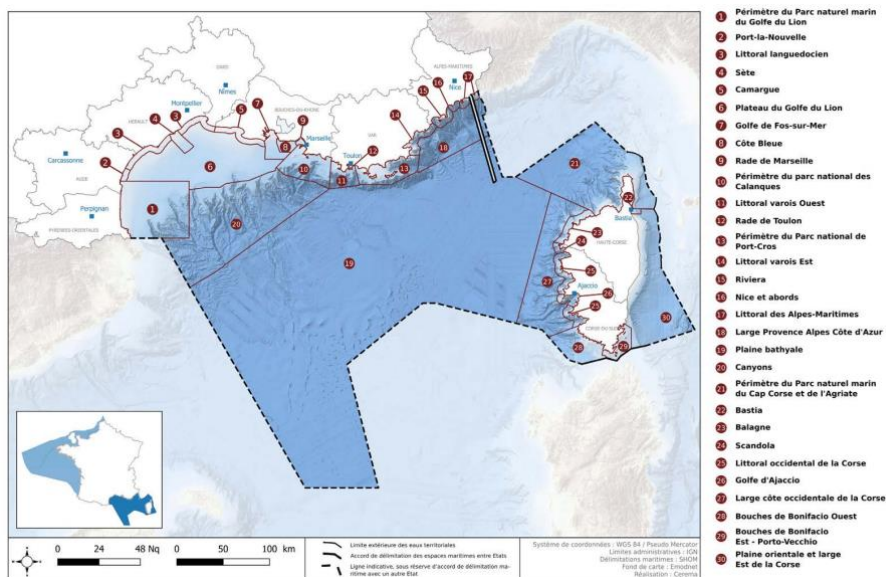


Figure 2. Extrait de la partie stratégique du DSF (2019) montrant la façade méditerranéenne décomposée en 30 zones de vocation (Source : DSF Méditerranée).

Au niveau de la Région, il n'existe pas de planification de l'espace marin contraignant étant donné que les zones marines ne sont pas sous la compétence de la Région. Cependant, le SRADDET planifie le développement du territoire régional, y compris les zones côtières, ce qui a des implications pour certaines activités maritimes. Sa version actuelle (2019), dont le périmètre n'inclut pas l'espace maritime, définit quelques orientations générales concernant la stratégie régionale en matière de transport portuaire et fluvial, les énergies marines renouvelables, l'attractivité de l'espace maritime régional et la conservation des écosystèmes côtiers et marins. Certaines règles sont attachées à ces orientations. Par exemple, le SRADDET favorise le développement des activités économiques nécessitant la proximité immédiate de la mer en anticipant les effets du changement climatique et en luttant contre les risques littoraux. Il contribue également aux objectifs stratégiques du Conservatoire du littoral sur les 13 unités littorales de la région en priorisant le potentiel économique foncier. Cependant, il n'y a pas de mesure spatiale ni d'objectif inclus dans le SRADDET pour le développement des activités mentionnées. La Région a par ailleurs défini son plan mer et du littoral (2019) qui n'est pas contraignant et ne comporte pas de mesures spatiales. Il contient des mesures comme la mise en place d'un fonds pour la création et la modernisation des centres nautiques, le développement d'un label pour les ports de plaisance ou l'élaboration d'un plan de développement de l'éco-tourisme.

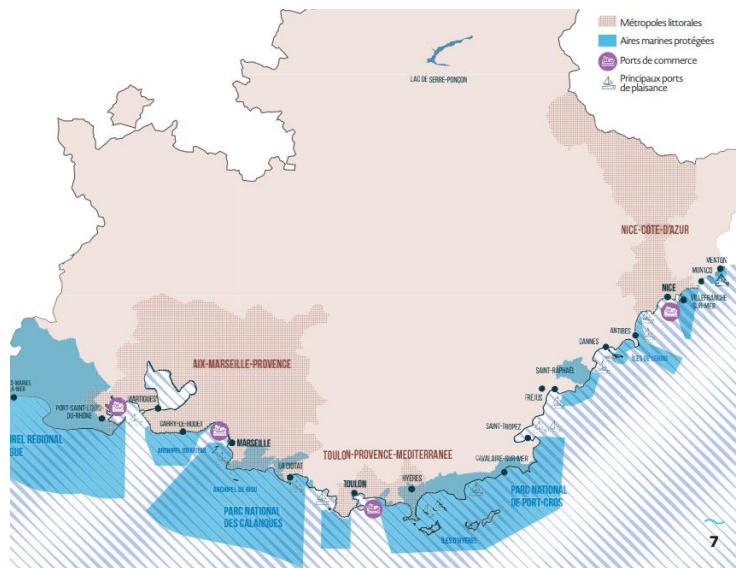


Figure 3. Périmètre du plan mer et littoral volontaire de la Région PACA (2019) mettant en évidence les métropoles littorales, les aires marines protégées, les ports de commerce et les principaux ports de plaisance (Source : Plan mer et littoral 2019).

Au niveau départemental, les services de l'État des départements des Bouches-du-Rhône et du Var ont élaboré respectivement une stratégie de gestion du domaine

public maritime naturel (DPMn). La stratégie de la DDTM des Alpes-Maritimes pour le DPMn n'a pas encore été approuvée. Ces stratégies ne sont pas contraignantes mais fixent les orientations et les actions de l'État pour la protection et le développement durable du DPMn. Leur contenu n'est pas uniformisé et varie donc d'un département à l'autre. Seul celui des Bouches-du-Rhône a pris en compte les objectifs stratégiques du DSF puisqu'il a été révisé après la publication du DSF. Ces stratégies hiérarchisent les enjeux de la gestion du DPMn selon les enjeux territoriaux locaux et abordent par exemple la gestion des concessions de plage, la gestion des mouillages et l'érosion du trait de côte. En plus de guider les actions des services de l'État, ces stratégies peuvent également promouvoir les actions des autorités locales avec des thèmes prioritaires définis par zone géographique (par exemple, "obtenir un plan de développement stratégique pour le port de Toulon") sachant que ces stratégies sont prises en compte lors de l'autorisation des projets ou des plans correspondants.

Le Conseil Départemental des Alpes-Maritimes a rédigé un plan volontaire pour la mer Méditerranée (2023) fixant les priorités du Département, notamment en matière de protection de la biodiversité. Il comprend des mesures spatiales développées en partenariat avec d'autres institutions (par exemple, la création de sentiers sous-marins dans les AMP, la surveillance des AMP et des zones de cantonnement de pêche).

A l'échelle intercommunale, le SCoT joue le rôle de document transversal pivot adaptant les politiques sectorielles au territoire concerné. Jusqu'en 2021, il pouvait inclure un schéma de mise en valeur de la mer, élaboré volontairement par la collectivité responsable du SCoT en coordination avec l'État pour prévoir et planifier le développement de la zone côtière et maritime des communes à un horizon de 10 à 20 ans. 2 des 11 SCoT côtiers ont élaboré un schéma de mise en valeur de la mer. Leur limite en mer se situe généralement à 3 milles du littoral. Le SCoT définit les vocations et les orientations du territoire (tourisme durable, réduction des impacts liés aux transports, lutte contre l'érosion, renforcement durable des activités traditionnelles) et assure la cohérence entre les usages et les besoins de protection (mesures de restauration, prévention des pollutions, gestion et protection des habitats et des espèces essentielles). Certains éléments d'orientation sont cartographiés afin d'être ensuite traduits dans les plans d'urbanisme locaux (par exemple, la localisation des zones préférentielles pour la mise en œuvre de la réglementation des mouillages et des propositions de zones d'interdiction de la pêche). Aujourd'hui, les SCoT des territoires côtiers doivent inclure un volet mer et littoral dont le contenu a été défini dans les grandes lignes seulement. En ce qui concerne les SCoT qui n'ont pas élaboré de schéma de mise en valeur de la mer, certains ont inclus des orientations spécifiques sur les activités maritimes sans développer un chapitre spécifique et un zonage en mer.

Par exemple, le SCoT Esterel Côte d'Azur comprend des orientations sur les activités portuaires et sur la mise en œuvre de la loi littorale.

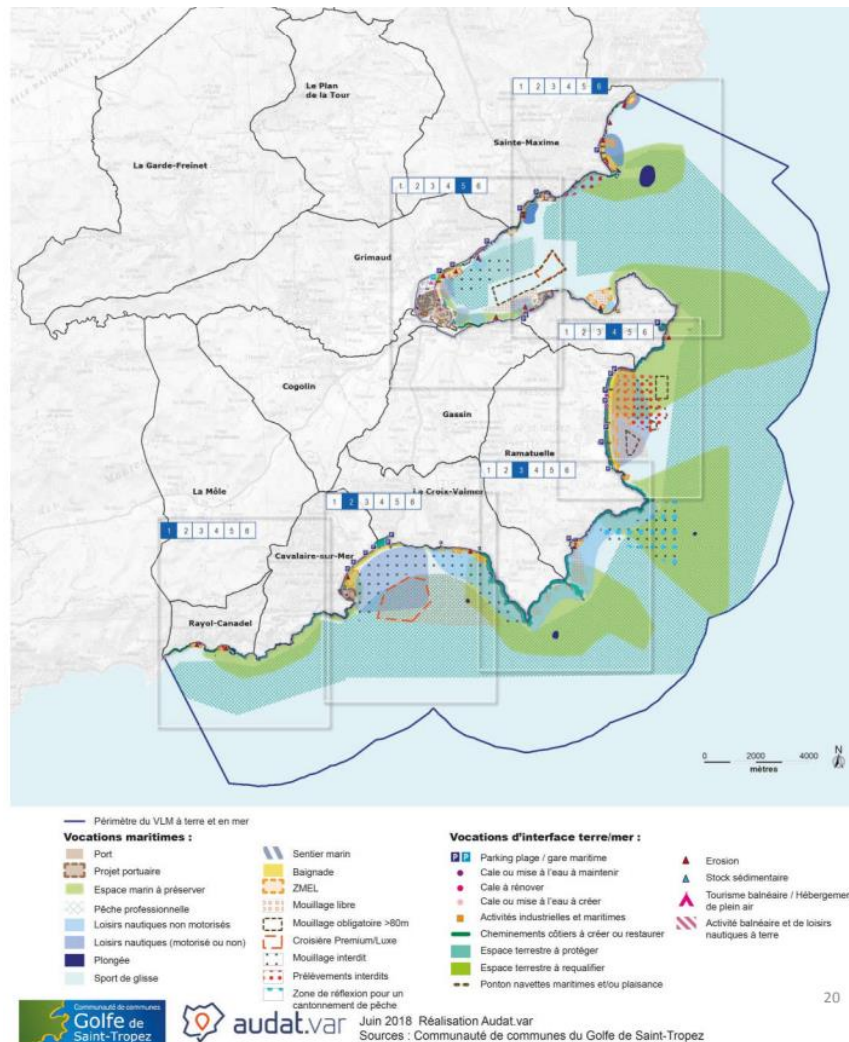


Figure 4. Carte des vocations maritimes incluse dans le schéma de mise en valeur de la mer de la Communauté de Communes du Golfe de Saint-Tropez (2019) (Source : Schéma de mise en valeur de la mer du Golfe de Saint-Tropez).

Le SCoT doit intégrer les orientations du SAGE relatives à la bonne qualité des eaux marines. Cela peut passer par la création de contrats de baie (ex : Golfe de Saint-Tropez). Le plan local d'urbanisme (PLU) à l'échelle de la commune définit le zonage du territoire communal en tenant compte de la loi littorale qui prévoit la préservation de

la bande des 100 mètres du littoral, la protection de l'environnement et de la biodiversité et l'adaptation au changement climatique. Le PLU définit des orientations pour le développement du territoire communal qui peut inclure l'espace marin (par exemple, travaux portuaires, développement de secteurs économiques, protection de zones importantes, mise en place d'équipements pour la gestion des eaux pluviales). Si le SCoT qui s'applique sur le territoire communal comprend un volet mer et le littoral, le PLU doit se conformer aux orientations du SCoT pour le zonage. Le PLU peut identifier des zones protégées pour mettre en œuvre la trame verte et bleue, protéger les espaces naturels de l'urbanisation ou délimiter des zones dans lesquelles les constructions, travaux, installations et aménagements doivent respecter des normes environnementales renforcées. Il est opposable aux travaux d'aménagement. En ce qui concerne la protection du littoral et la lutte contre l'étalement urbain, des dérogations sont accordées pour les ouvrages nécessitant un accès à la mer (dans des conditions spécifiques) tels que les fermes aquacoles, certaines activités portuaires nécessitant un accès direct (entrepôts, réservoirs, etc.) ou les stations d'épuration des eaux usées. Enfin, il existe un schéma d'aménagement de plage qui a été élaboré pour la plage de Pampelonne par la commune de Ramatuelle afin de permettre l'octroi d'une nouvelle concession de plage à la municipalité par l'Etat, autorisant la mise en place de bâtiments sur cette zone définie comme un "espace naturel remarquable". Ce schéma d'aménagement de plage figure en annexe du PLU de la commune.

Les 3 SAGE côtiers existants contribuent à l'amélioration du milieu marin via la définition d'objectifs tels que la réduction des pollutions ou l'amélioration du transit sédimentaire dans les cours d'eau au bénéfice des milieux côtiers, des lagunes et des poissons migrateurs. Le SAGE comprend un diagnostic de la situation actuelle et des enjeux en matière de gestion de l'eau, un plan d'aménagement et de gestion durable et un règlement directement opposable aux tiers. Il fixe notamment les règles pour les projets ayant un impact sur l'eau et pour les installations ayant un impact sur l'environnement. Il peut identifier des secteurs à préserver pour la protection des milieux aquatiques ou des usages. Il peut également favoriser la mise en cohérence de différents outils (par exemple, la planification spatiale des zones à restaurer ou des zones d'application des équipements d'ancrage léger, la planification spatiale pour la gestion des sites de plongée ou le contrôle des déchets portuaires et nautiques). L'élaboration d'un contrat de baie permet d'opérationnaliser les objectifs du SAGE. Les 3 contrats de baie existants dans la zone d'étude permettent la mise en œuvre de mesures dans un mode partenarial avec des fonds dédiés et des échéances fixes pour restaurer les zones maritimes et côtières, en améliorant le suivi et la gouvernance, en réduisant les sources de pollution et en garantissant l'organisation des usages maritimes. Les mesures peuvent inclure la réduction de l'utilisation des pesticides,

l'amélioration des processus d'épuration des eaux, le contrôle des pollutions portuaires, le développement d'un schéma territorial de restauration écologique (STERE), le développement d'une trame bleue, le contrôle des récifs artificiels, etc.



Figure 5. Exemple de périmètre de contrat de baie (Source : extrait du contrat de baie de la métropole Aix-Marseille-Provence 2023-2024)

Stratégies et plans de protection et de conservation

Le document stratégique pour l'implantation des récifs artificiels (2012), le document stratégique pour la restauration écologique en Méditerranée (2019), la stratégie de gestion durable des sites de plongée en Méditerranée (2019) et la stratégie méditerranéenne de gestion des mouillages petite et grande plaisance (2021) sont des stratégies qui visent la protection et/ou la restauration des écosystèmes marins et côtiers. Elles ont été élaborées par la DIRM au niveau de la façade ou au niveau interrégional pour contrôler les pressions des activités humaines (principalement le

tourisme et la navigation de plaisance) sur les écosystèmes côtiers et marins menacés. Les trois dernières sont intégrées au plan d'action du DSF.

La Région PACA a fait partie du comité technique pour la rédaction de ces stratégies. Elles visent à être déclinées au niveau local par le biais d'actions volontaires menées par les municipalités, de contrats de baie ou d'AMP (par exemple, réglementation des mouillages pour protéger les herbiers de posidonie, gestion des banquettes de posidonie sur les plages, etc.). Au cours des dernières années, des récifs artificiels ont été installés pour protéger la biocénose marine, augmenter la production de biomasse mais aussi limiter physiquement l'accès de certains engins de pêche à des zones spécifiques, comme les activités de chalutage illégal dans la bande côtière des 3 milles. Le document stratégique pour l'implantation de récifs artificiels dans les régions PACA et Occitanie vise à assurer la cohérence des autorisations accordées par les DDTM pour ces installations.

Le document stratégique pour la restauration écologique en Méditerranée vise à mieux intégrer la restauration écologique des écosystèmes marins côtiers dans les politiques existantes de gestion des usages en mer et sur le littoral. Elle identifie 6 zones prioritaires au sein de la région PACA où développer des stratégies de restauration des eaux côtières par les autorités locales, les STERE. Cette stratégie prend en compte les dispositions de la stratégie méditerranéenne de gestion des mouillages petite et grande plaisance et invite les autorités locales à s'appuyer autant que possible sur les plans ou outils de gestion existants pour développer leurs STERE (par exemple, le chapitre mer et littoral du SCoT, les contrats de baie, N2000, les AMP). Aujourd'hui, 3 STERE sont finalisés et 3 sont en cours d'élaboration. Le STERE analysé a passé en revue les projets qui peuvent avoir un impact négatif sur les zones côtières de 0 à 40 m de profondeur (par exemple, l'extension des ports, les projets agricoles) et a défini des zones prioritaires pour les actions de restauration, par exemple, les zones d'alevinage et les habitats détériorés, de préférence dans les sites où les activités sont déjà réglementées (interdiction de mouillage, du chalutage, du dragage; réglementation ou interdiction de la pêche). Il s'agit d'un exemple de stratégie adaptée localement sur la base d'outils de gestion existants. Si la zone concernée ne bénéficie pas d'un outil de gestion existant, le projet STERE devra en proposer un. Le plan d'actions du STERE peut être intégré dans d'autres documents stratégiques (par exemple, les contrats de baie).

La stratégie de gestion durable des sites de plongée vise à améliorer les connaissances sur les impacts environnementaux des activités de plongée et à renforcer les pratiques respectueuses de l'environnement en établissant des zones prioritaires où renforcer la

surveillance de cette activité. L'une des actions du DSF consiste à adapter cette stratégie au niveau local.

La stratégie méditerranéenne pour la gestion des mouillages petite et grande plaisance identifie des zones prioritaires où réglementer le mouillage récréatif et diminuer la pression sur les herbiers de posidonie afin d'aider les DDTM dans les processus de délivrance des autorisations d'occupation, de financement et de suivi des mouillages. Cette stratégie vise à promouvoir des actions volontaires des collectivités locales à inclure dans les plans ou outils existants (SCoT, SAGE, contrats de baie, chartes d'AMP, etc.), comme la mise en place de zone de mouillage en équipement léger.

Outre ces stratégies transversales visant à protéger les écosystèmes marins côtiers, il existe une stratégie régionale du Conservatoire du littoral qui décline la politique nationale d'acquisition de terres du Conservatoire aux spécificités régionales. L'espace marin régional est couvert par plusieurs AMP relevant de différents régimes de protection qui, dans certains cas, se chevauchent. Dans la zone de 0 à 50 m de profondeur³⁰, 57% de l'espace maritime régional est couvert par 13 sites Natura 2000 (qui sont soit gérés par des communes, des parcs nationaux, des parcs régionaux, des parcs marins ou l'Office français de la biodiversité), 26% est couvert par deux parcs marins nationaux gérés par des établissements publiques, 3% par un parc marin cogéré par les autorités locales et des organisations de pêche professionnelle (le taux de couverture N2000 se chevauche avec les autres types de protection, les chiffres ne peuvent donc pas être additionnés). 0,5 % de la même zone est couverte par des zones où la pêche est réglementée par des organisations de pêche, qui ne sont pas considérées comme des AMP et ne bénéficient pas de plan de gestion. Il existe également un parc régional (Camargue) comprenant une zone côtière cogérée par les autorités régionales et locales et une zone marine cogérée entre le parc et l'État. Les parcs nationaux, régionaux ou marins ont pour objectif de définir un projet de développement durable du territoire couvert puis de définir des mesures de protection qui servent ce projet, alors que les sites Natura 2000 sont spécifiquement désignés pour protéger des habitats - comme les herbiers de phanérogames marines (posidonies), les habitats à *Cystoseira*, les fonds coralligènes - ou des espèces (comme les oiseaux marins, la tortue caouanne, le grand dauphin). Chacun des quatre parcs susmentionnés gère au moins un site Natura 2000 qui a été désigné au sein de ses limites.

³⁰ 2017, Rapport MEDAMP, Observatoire des réserves sous-marines et des aires marines protégées des côtes françaises de la Méditerranée Université Nice Sophia Antipolis - Université Côte d'Azur - CNRS Lab. ECOMERS.

Deliverable 3.1. Reginal analysis report

Les deux chartes des parcs nationaux (Calanques et Port-Cros) gérés par un établissement public présentent la même structure qui est réglemantée par la loi. Les deux parcs comprennent des zones marines et terrestres considérées comme un seul territoire interdépendant et qui sont divisées spatialement en une zone cœur de parc, une aire optimale d'adhésion et une aire maritime adjacente. Le cœur de parc est ensuite divisé en zones de vocation distinctes avec une réglementation spécifique : réserve intégrale, zone à vocation naturelle, zone de gestion de la fréquentation du public, zone de renforcement de la faune avec réglementation spatialisée des activités. L'aire optimale d'adhésion à terre et l'aire maritime adjacente en mer ne fixent pas de règles mais des orientations de développement durable, partagées entre tous les acteurs, l'établissement public et les communes membres. Les chartes peuvent être mises en œuvre par le biais d'un plan d'action pluriannuel.

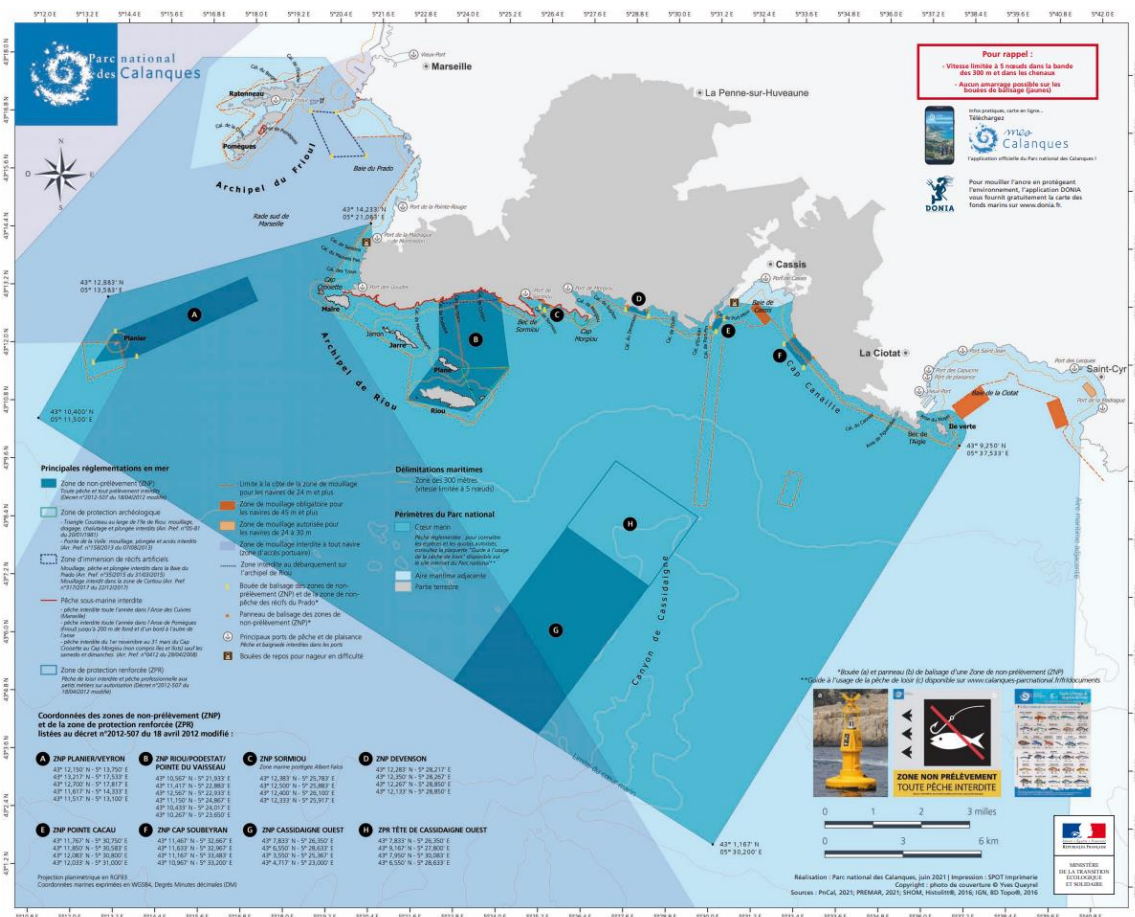


Figure 6. Exemple de périmètre et de répartition de la zone cœur de parc (en bleu foncé avec les zones d'interdiction de pêche en bleu plus foncé), de l'aire optimale d'adhésion (en gris à terre) et de l'aire maritime adjacente (en bleu clair) du parc national des Calanques (Source : Charte du parc national des Calanques).

L'accord pour le sanctuaire Pelagos a été conclu entre la France, l'Italie et Monaco et couvre une vaste zone côtière et au large cruciale pour les mammifères marins. La zone couverte par l'accord sert de laboratoire pour tester des mesures visant à réduire l'impact des activités humaines sur les mammifères marins, notamment le transport maritime et les activités d'observation des baleines. Le sanctuaire mène également plusieurs campagnes d'acquisition de connaissances et d'études. Le parc national de Port Cros est l'animateur du sanctuaire côté français.

La charte du Parc régional de Camargue est un document contractuel qui fixe les orientations de protection et de développement du Parc pour une période de 12 ans. Elle est élaborée en concertation avec les acteurs concernés, les communes signataires de la charte devant s'y conformer. Les documents d'urbanisme locaux doivent être compatibles avec les orientations et les mesures de la charte. La limite du parc régional s'arrête au littoral, cependant, la charte exprime des orientations et des mesures pour le littoral et l'espace maritime et élabore une convention qui est signée entre le Parc et les services de l'Etat en charge de la mer.

Le parc marin de la Côte Bleue est une AMP originale gérée par un syndicat mixte composé des collectivités régionale, départementale et locales et d'organisations professionnelles de la pêche, l'un des objectifs du parc étant de protéger la pêche artisanale. Comme l'organe de gestion du parc est gestionnaire de la zone N2000 de la Côte Bleue, le parc est légalement considéré comme une AMP. Le plan de gestion du parc marin couvre le périmètre des communes de la Côte Bleue (43 km de côtes) et 3 milles en mer grâce à une concession du domaine public maritime qui permet au parc de mettre en œuvre des actions en mer telles que l'implantation de récifs artificiels. Son plan de gestion n'est pas contraignant, il définit des recommandations concernant les réglementations fixées par les services de l'Etat ou oriente les politiques des territoires littoraux concernés. Le Parc contribue à la définition des stratégies et plans locaux, apporte aux communes une assistance technique pour la gestion de la bande des 300 mètres, suit les actions sur la frange littorale (banquettes de posidonies, échouages de mammifères marins, etc.) et participe à la gouvernance des plans locaux (contrat de baie). Ce mode de gouvernance est un bon exemple de la façon dont les collectivités locales peuvent définir des objectifs communs sur leur territoire maritime.

Enfin, les documents d'objectifs des 13 sites Natura 2000 se concrétisent par des contrats entre les acteurs maritimes et les usagers et ayants droit de ces mêmes sites Natura 2000. En signant la charte pour 5 ans, les usagers et ayants droit s'engagent à respecter les objectifs de conservation des habitats naturels et des espèces définis dans le document d'objectifs. Enfin, les projets ou plans susceptibles d'avoir des

incidences significatives sur le site Natura 2000 doivent faire l'objet d'une procédure d'évaluation environnementale (par exemple, les documents d'urbanisme du territoire).

Stratégies et plans pour les secteurs économiques et les activités maritimes

Le conseil régional est responsable de l'élaboration du schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII), qui définit les objectifs généraux du développement économique de la région, y compris l'économie sociale et circulaire. Le SRDEII s'impose aux actes des collectivités territoriales et de leurs groupements en matière d'aides aux entreprises. Cependant, il est principalement terrestre et a peu d'objectifs dédiés à l'économie maritime, à l'exception des objectifs suivants : (i) l'amélioration de la performance multimodale et environnementale des ports et le verdissement de leurs flottes avec des infrastructures de connexion électrique pour les navires à quai et (ii) le développement des industries maritimes, de la pêche et de l'aquaculture marine à travers l'innovation, la formation et la sécurité. La Région est également responsable du schéma régional de développement du tourisme et des loisirs, qui ne comporte pas de volet côtier ou maritime spécifique.

Au-delà de ce plan intersectoriel, plusieurs stratégies ou plans sectoriels sont pertinents dans la zone d'étude de cas. Le bassin méditerranéen français n'est pas concerné par l'exploitation commerciale de granulats marins, la stratégie nationale pour la gestion durable des granulats terrestres et marins (2012) n'a pas dû être adaptée au niveau régional. L'extraction de granulats dans les bassins méditerranéens français ne concerne que le sable utilisé pour le rechargement des plages. Pour des raisons de coûts de transport, les matériaux de rechargement des plages proviennent de carrières terrestres proches, de gisements de sable côtiers ou marins en aval de la zone à recharger, ou d'une zone voisine en cours d'accrétion. Aucune ligne directrice commune n'a été définie pour le dragage des ports ni pour les opérations de remblayage des plages.

Le schéma régional de développement de l'aquaculture marine (SRDAM) est mis en place par la DIRM pour recenser les fermes aquacoles de la région et identifier les sites potentiels sur le littoral pour le développement de l'aquaculture qui est actuellement entravé par une forte concurrence avec d'autres usages tels que la pression immobilière et le tourisme côtier. Le plan vise à concilier ces conflits et à favoriser le développement de cette activité en identifiant les sites où le développement de l'aquaculture aurait le moins d'impact sur l'environnement, le paysage, le patrimoine et

la protection du littoral. Une fois adopté par arrêté du préfet de région, il sera intégré dans le prochain DSF et devra être pris en compte lors des procédures d'autorisation d'occupation temporaire du domaine public maritime. Le schéma des structures des exploitations de cultures marines élaboré par la DDTM définit les conditions nécessaires pour assurer une exploitation aquacole durable et viable dans les limites du département. Des conditions spécifiques sont définies pour les fermes localisées dans les AMP et pour la culture d'espèces non indigènes. Les organisations professionnelles de l'aquaculture et la commission des cultures marines regroupant des représentants de l'État, du département et des organismes professionnels ont été consultées pour l'élaboration de ce document.

La stratégie nationale portuaire (2021) "Pour un réseau de ports au cœur des chaînes logistiques, du développement économique et des transitions écologique et numérique " vise à augmenter la part du fret conteneurisé à destination et en provenance de France manutentionné dans les ports d'ici 2050, à doubler le nombre d'emplois liés à l'activité portuaire d'ici 2050 et à augmenter la part des modes de transport massifiés dans le pré et le post acheminement d'ici 2030. Elle est pilotée par le Comité interministériel de la mer dont le secrétariat est assuré par le Secrétariat général de la mer dépendant du Premier ministre. La mise en œuvre de cette stratégie se fera notamment par la mise en place de contrats d'objectifs et de performance pour les grands ports maritimes, en lien avec les documents de planification (contrats de plan État-Région PACA notamment).

Le Schéma logistique et d'intermodalité de l'Axe Méditerranée-Rhône-Saône (2019), piloté par la Délégation interministérielle au développement de l'axe logistique et portuaire Méditerranée-Rhône-Saône, priorise les actions à mettre en œuvre pour optimiser l'utilisation de chaque mode de transport dans leurs domaines de pertinence. Ce schéma propose des mesures opérationnelles à intégrer dans les futurs contrats de plan Etat-Région (CPER) telles que le développement des autoroutes ferroviaires et des autoroutes de la mer pour réduire le transport routier de transit international, la création de nouvelles lignes et de nouveaux sites.

Le projet stratégique du Grand Port Maritime de Marseille (GPMM) pour 2020-2024 présente les objectifs stratégiques pour le développement du port afin d'améliorer sa compétitivité tout en faisant face aux défis environnementaux. Il est élaboré par le conseil d'administration du port et doit être présenté au comité de surveillance du port, composé de 18 membres, dont les collectivités régionales et locales. Il comprend : le positionnement stratégique et la politique de développement du port ; les programmes de financement et d'investissement prévus ; les modalités d'exploitation des équipements ; la politique de développement durable identifiant la vocation des

espaces du port, y compris ceux avec des enjeux de protection de la nature (cette section comprend également la relation entre le port et les collectivités territoriales) et les services d'accès au port ; et la politique concernant l'intermodalité, notamment pour le train et le transport fluvial. L'un des objectifs est "Un port vert au service de l'économie bleue", qui vise à concilier excellence environnementale, compétitivité et attractivité économique.

Enfin, certains documents volontaires sont pertinents dans la zone d'étude de cas. La Charte de la croisière durable en Méditerranée française est signée volontairement par les armateurs pour limiter les impacts de la croisière sur les herbiers de phanérogames et d'autres habitats spéciaux en Méditerranée, le risque de collision entre les navires de croisière et les cétacés et les nuisances sonores, les eaux usées et les déchets solides des navires, les émissions atmosphériques des navires. Certaines mesures volontaires comprennent le traitement des eaux usées et le contrôle des émissions d'oxydes de soufre. La charte des ports invite les ports de plaisance et de pêche, les utilisateurs professionnels et les ONG à signer volontairement la charte susmentionnée afin de s'engager à développer la consultation et la co-construction pour maintenir des normes élevées en matière d'innovation et de bonnes pratiques de gestion portuaire. Une initiative nationale intitulée "Ports propres en France" est menée par la Fédération française des ports de plaisance depuis 2011. La Région PACA est chef de file de cette initiative

Contribution au "Green Deal" de l'UE et aux stratégies de bassins maritimes

La quasi-totalité des plans analysés ont été rédigés avant la publication du Pacte vert européen (*European Green Deal*, soit EGD), de sorte que seuls quelques documents le mentionnent, comme par exemple le plan pour la mer Méditerranée du Département des Alpes-Maritimes. Peu de documents englobent toutes les composantes de l'EGD à la fois. Les plans transversaux tels que le DSF et les documents d'aménagement du territoire englobent plusieurs piliers de l'EGD. Les plans de protection contribuent à l'atténuation du changement climatique (par exemple par le biais du carbone bleu) et à l'adaptation au changement climatique, à la protection et à la restauration de la biodiversité et des écosystèmes, tandis que les plans économiques peuvent contribuer positivement à quelques piliers (par exemple la transition énergétique) sans prendre suffisamment en compte les autres piliers comme la conservation de la biodiversité.

En ce qui concerne les plans transversaux, les documents de niveau national, façade ou régional affichent des objectifs qui contribuent aux piliers de l'EGD; cependant, il est difficile d'évaluer la mise en œuvre effective de ces objectifs qui, en général, ne sont

pas suffisamment contraignants et dépendent donc de la volonté politique, des outils et des moyens des acteurs locaux. Par exemple, le volet stratégique et le plan d'action du DSF affichent des orientations cohérentes avec les objectifs de l'EGD lorsqu'ils relèvent de la prérogative de l'État, comme par exemple pour la planification des énergies renouvelables en mer. Un processus de suivi exhaustif des volets stratégiques et opérationnels via les indicateurs clés du DSF est entrepris et consolidé par la DIRM au niveau de la façade. Cependant, les orientations stratégiques qui dépendent d'autres acteurs peuvent être interprétées et mises en place différemment par les collectivités et acteurs locaux, en raison de volontés politiques ou de moyens existants différents d'un territoire à l'autre. Ainsi, sur des thématiques qui reposent sur les acteurs locaux comme l'adaptation au changement climatique, le niveau de mise en œuvre peut être différent.

Concernant le pilier biodiversité, protection et restauration des écosystèmes, le SRADDET doit inclure le schéma régional de cohérence écologique (SRCE) qui identifie les corridors de biodiversité de la région à maintenir ou à restaurer. Les SCoT et les PLU peuvent être pertinents pour la mise en œuvre locale des composantes de l'EGD, en s'appuyant sur des objectifs nationaux, de façade et régionaux. Par exemple, concernant la protection et restauration des écosystèmes et l'adaptation au changement climatique, le SCoT doit déterminer l'équilibre entre les zones urbaines et à urbaniser et les zones naturelles, agricoles ou forestières. Il identifie également les espaces et sites naturels ou urbains à protéger. Il peut donner à ces espaces une reconnaissance juridique et ainsi les protéger des pressions du développement urbain. Les prescriptions définies dans le SCoT au sujet des trames vertes et bleues doivent être appliquées au niveau des plans locaux d'urbanisme (principe de compatibilité entre le SCoT et le PLU). Cependant, le niveau d'adoption de ces trames dans les PLU est différent d'un plan à l'autre. Enfin, peu de SCoT abordent les piliers de la production durable des produits de la mer et de l'économie circulaire bleue dans leur plan jusqu'à présent, car la plupart d'entre eux ne comprennent pas de volet mer et littoral.

Les stratégies du DPMn contribuent à plusieurs piliers du pacte vert comme l'adaptation au changement climatique sur le littoral en favorisant une gestion durable du DPMn pour lutter contre l'érosion du trait de côte avec des solutions naturelles ou une production durable de produits de la mer en protégeant le DPMn pour assurer la pérennité et le développement des cultures marines (par exemple dans la rade de Toulon). Au niveau départemental, il faut noter le cas particulier du plan pour la mer Méditerranée des Alpes-Maritimes qui s'inscrit expressément dans le cadre de la politique départementale du pacte vert européen.

Les plans et stratégies axés sur la protection et la conservation contribuent à l'opérationnalisation des piliers "atténuation du changement climatique" et "adaptation au changement climatique", "protection et restauration de la biodiversité et des écosystèmes" de l'EGD, en particulier lorsqu'ils sont spatialisés. La stratégie du Conservatoire du littoral contribue efficacement à la création d'un réseau dynamique et interconnecté d'habitats naturels côtiers (objectif de lutte contre la fragmentation des habitats et de création de trames vertes et bleues). Le document stratégique pour la restauration écologique en Méditerranée favorise une approche intégrée de la restauration écologique en invitant les autorités locales à définir simultanément des politiques de régulation des usages marins et des actions de restauration. Les actions de restauration doivent participer à la reconquête de la biodiversité et au contrôle des pressions à l'origine de la dégradation. Pour ce faire, le plan d'actions doit présenter des indicateurs de suivi qui prouvent l'efficacité du contrôle et de la minimisation des pressions. Enfin, les chartes de parcs nationaux et autres documents d'AMP bien gérés contribuent efficacement à la conservation de la biodiversité et aux autres piliers de l'EGD sur leurs territoires par les mesures qu'ils mettent en œuvre ou par les actions découlant de l'adhésion des autorités locales à leurs chartes.

Les plans économiques analysés affichent des objectifs sur la transition énergétique, mais peu d'entre eux incluent plusieurs piliers de l'EGD. Le schéma logistique et d'intermodalité pour l'axe Méditerranée-Rhône-Saône affiche des objectifs qui contribuent au nouvel objectif de l'UE d'atteindre un report modal vers le fret ferroviaire de 75 % d'ici 2050. L'un des 4 objectifs de la stratégie portuaire nationale est d'"accélérer la transition écologique des ports en simplifiant les procédures d'implantation d'activités économiques innovantes pour faciliter l'accueil de nouveaux clients industriels et logistiques dans les zones industrialo-portuaires". Chaque grand port maritime devra définir un plan de "transition écologique portuaire", avec un volet relatif à l'économie circulaire et à l'écologie industrielle. Ces plans incluront une feuille de route pour le déploiement de carburants alternatifs d'ici 2025. Cependant, cet objectif n'est associé qu'à un seul indicateur clé, l'empreinte carbone des ports et n'inclut donc pas les autres piliers de l'EGD (biodiversité, pollution, économie circulaire, etc.). Le projet stratégique du Grand port maritime de Marseille comprend un chapitre consacré à la politique de développement durable du port. Parmi les actions figurent l'intensification des flux et le report modal du ferroviaire vers le fluvial, la mise en place de branchements électriques à quai, la promotion des services d'énergie renouvelable sur le domaine public portuaire, la réalisation d'un schéma directeur des espaces naturels pour la zone industrialo-portuaire de Fos-Sur-Mer afin de définir la stratégie de préservation et de restauration de la zone. Cependant, l'augmentation prévue du nombre de bateaux de croisière et du transport maritime en général remet en cause

la contribution globale de cette stratégie aux piliers de l'EGD, notamment en ce qui concerne la pollution atmosphérique des activités industrielles situées à proximité des zones urbaines ou les pollutions des sédiments ou des eaux côtières.

Les chartes volontaires définies au niveau de la façade ou de la région, telles que la charte des ports et la charte de la croisière durable, affichent des objectifs conformes aux piliers "atténuation du changement climatique" et "pollution zéro" de la stratégie européenne pour le développement durable. Toutefois, comme ces chartes seront mises en œuvre sur une base volontaire, un suivi serait nécessaire pour mesurer les résultats réels.

Certains plans mentionnent des actions de coopération avec certains des États membres de l'initiative WestMED pour l'économie bleue qui sont indirectement pertinentes pour l'un des 6 piliers de sa stratégie : (i) développement de clusters maritimes, (ii) conservation et restauration de la biodiversité et de l'habitat marin, (iii) consommation et production durables, (iv) développement des communautés côtières et de la pêche et de l'aquaculture durables, (v) développement et circulation des compétences, (vi) sécurité maritime et lutte contre la pollution marine. Toutefois, aucun plan ne mentionne expressément cette stratégie. Quelques exemples sont rappelés ci-dessous.

Le DSF comprend des actions visant à réduire le risque de collision pour les cétacés le long du littoral méditerranéen par la soumission à la création d'une zone maritime particulièrement sensible (PSSA) développée conjointement avec l'Italie, Monaco et l'Espagne et acceptée par l'Organisation maritime internationale (OMI) en 2023) et à développer des méthodes de localisation en temps réel afin d'améliorer l'efficacité et l'utilisation de la localisation en temps réel des cétacés (REPCET).

Au niveau régional, la stratégie régionale pour la mer et le littoral mentionne la coopération avec les Etats riverains comme une ambition de la Région, notamment en charge de la gestion des fonds européens. Enfin, le projet Interreg Bluemed impliquant 13 pays européens de la rive Nord de la Méditerranée est mentionné comme une initiative clé à prendre en compte à l'horizon 2020 pour dessiner les lignes directrices d'une croissance durable dans la Région. La Charte de la croisière durable en Méditerranée française ne mentionne pas la stratégie, mais elle peut d'une certaine manière diffuser les changements concernant la réduction de la pollution dans tout le bassin méditerranéen, étant donné que les armateurs opèrent dans toute la mer Méditerranée

Concertation et participation des parties prenantes

Tous les acteurs concernés sont impliqués dans le processus d'élaboration du DSF via le conseil maritime de façade animé par la DIRM qui se réunit au moins une fois par an. Il est composé de 80 membres issus de 5 collèges (l'État et ses établissements publics dont un représentant des parcs nationaux, les collectivités locales et leurs groupements, les activités professionnelles et les entreprises, les représentants des salariés des entreprises, les ONG environnementales et les associations d'usagers de la mer). Des commissions spécialisées sont également mises en place sur des sujets spécifiques tels que la planification des éoliennes en mer et la mise en place de protection forte au sein des AMP en réunissant les acteurs concernés pour définir les mesures et suivre leur mise en œuvre. La Région est bien intégrée dans le processus d'élaboration et d'animation du DSF et participe aux comités de mise en œuvre des actions du DSF.

Les autres stratégies menées par la DIRM ont également impliqué les parties prenantes concernées pour leur élaboration. Par exemple, les consultations pour la stratégie pour la gestion durable des sites de plongée ont été menées avec les acteurs concernés dans les régions (représentants des clubs et des structures de la profession, gestionnaires, scientifiques et représentants institutionnels). Les organisations de pêche, les usagers de la mer et les professionnels ont été impliqués dans la définition du document stratégique pour l'implantation de récifs artificiels. Les services départementaux de l'État sont chargés de faciliter la mise en œuvre des politiques de la mer et du littoral dans leur département, mais ils manquent parfois de ressources pour soutenir l'adaptation locale du DSF par les autorités locales. Un Parlement de la mer a été créé en 2022 par la Région PACA et vise à rassembler les acteurs maritimes régionaux (économie maritime, y compris la pêche et l'aquaculture, les sports et l'attractivité, la biodiversité). Cependant, son objectif est de favoriser l'échange d'informations sur les usages et la protection du milieu marin et non de consulter les parties prenantes sur des décisions spécifiques.

Concernant la gestion de l'eau, le SDAGE et le SAGE incarnent de bonnes pratiques pour l'implication des acteurs locaux à la fois pour l'élaboration du document et pour sa mise en œuvre. Les comités locaux de gestion de l'eau sont créés par le préfet de département pour élaborer le SAGE et suivre la mise en œuvre du document. Par exemple, la commission locale de l'eau doit émettre un avis sur tous les projets soumis à autorisation environnementale. Ils sont composés de 3 collèges d'acteurs : (i) les communes (qui doivent représenter au moins la moitié des membres du comité), (ii) les usagers (agriculteurs, industriels, etc.), (iii) les propriétaires fonciers, les organisations professionnelles, les ONG (au moins un quart des membres), les services

de l'État et les exploitants (au plus un quart des membres). Il doit inclure les acteurs maritimes lorsqu'il s'agit d'une zone côtière. Le comité est animé par un élu du territoire. Les contrats de baie portés par le SAGE font également figure de bonne pratique pour l'implication des acteurs. Le comité de baie réunit des collèges de représentants des collectivités (région, département, métropole, etc.), des usagers et des organisations professionnelles, des représentants qualifiés (parcs naturels, scientifiques) et des opérateurs publics et de l'État. Par exemple, le contrat de baie d'Aix-Marseille-Provence implique 70 acteurs, dont des acteurs économiques, tant pour l'élaboration que pour la mise en œuvre du contrat.

Concernant les documents d'urbanisme (SRADDET, SCOT, PLU), l'engagement des parties prenantes est réglementé et ces instances pourraient également être utilisées pour discuter de certaines orientations relatives à la mer et au littoral. Pour le plan d'urbanisme (PLU), les personnes publiques associées doivent être consultées (le préfet, la Région et le Département, les représentants des organismes publics, les chambres consulaires). Une enquête publique doit a minima être organisée avant publication du document. Toutefois, des mesures de dialogue supplémentaires peuvent être mises en place pour favoriser l'implication des acteurs et construire des objectifs partagés pour le territoire. Au-delà de la mise en œuvre « réglementaire et automatique » du document, d'autres actions volontaires peuvent être définies par l'autorité responsable du document pour faciliter le projet de territoire, la gouvernance et la mise en œuvre d'actions concrètes.

Pour les parcs nationaux et régionaux, les parties prenantes sont activement impliquées dans la rédaction du document. Par exemple, pour le parc national de Port Cros, plusieurs réunions bilatérales ont été organisées au cours de l'élaboration de la charte avec les services de l'État et les collectivités locales. Six ateliers de consultation ont été mis en place pour chacune des six ambitions. Une place importante a été donnée dans ces ateliers aux 64 membres du Conseil économique, social et culturel (CESC). Ces ateliers ont été co-présidés par un élu d'une des communes de l'aire optimale d'adhésion et un agent du parc national. Le parc marin de la Côte Bleue est un autre exemple d'engagement actif des acteurs concernés tant pour l'élaboration que pour la mise en œuvre de la charte. Le fait qu'il soit géré par des représentants des pêcheurs et des autorités locales peut également être souligné.

La stratégie du Conservatoire du littoral a été soumise à la consultation des associations, des communes et des services de l'Etat. La mise en œuvre opérationnelle de cette stratégie est suivie au niveau du site grâce au partenariat entre le Conservatoire et l'entité qui gère le site à travers une répartition détaillée des rôles et des responsabilités.

Concernant l'engagement des autorités locales dans le projet stratégique du Grand port maritime de Marseille, le dialogue Ville/Port a été mis en place en 2019 avec la mise en œuvre d'une charte pour initier un dialogue permanent entre les deux autorités et faciliter le partage des données du port vers la ville, notamment sur le thème de la capacité d'accueil des ferries. Ces discussions ont pour objectif de mieux engager les organisations d'usagers de la mer au niveau local et prendre en compte les besoins des habitants de la ville.

La charte des ports pilotée par la Région a été mise en place avec les acteurs économiques (fédération des industries nautiques, comité régional des pêches et de l'aquaculture, association du patrimoine maritime méditerranéen, comités régionaux olympiques et sportifs, Réseau Mer) pour développer la concertation et la co-construction dans le maintien d'un haut niveau d'innovation et de bonnes pratiques de gestion portuaire.

Défis de la gestion intégrée de l'espace maritime

Pour ce premier cycle d'élaboration du DSF, les principaux conflits d'usage identifiés pour la façade méditerranéenne française se situent dans les zones côtières, dans la bande des 3 milles nautiques. Par exemple, les zones autour des ports de commerce sont caractérisées par une combinaison intense d'activités qui sont compatibles sous certaines conditions. Il existe plusieurs plans au niveau local qui réglementent ou gèrent ces activités dans les zones côtières (schémas de mise en valeur de la mer des SCOT, chartes des parcs nationaux, STERE, etc.). Cependant, une analyse plus approfondie serait utile pour identifier les chevauchements éventuels de ces documents ou au contraire les lacunes qui existent, afin de s'appuyer sur les outils existants pour une planification en mer locale.

Pour ce premier cycle de mise en place du DSF, il semble qu'il manque de liant entre le niveau de façade du DSF géré par la DIRM et les documents d'urbanisme régionaux et locaux (par exemple, SRADDET, SCoT, PLU), même si le DSF est opposable à ces documents. Plusieurs facteurs pourraient être à l'origine de cela. Tout d'abord, les objectifs stratégiques du DSF sont assez larges et laissent donc une marge de manœuvre quant à leur application au niveau intercommunal ou communal en l'absence de principes d'opérationnalisation. De même, les cartes de vocation des plans du DSF sont suffisamment larges pour ne pas impacter les cartographies incluses dans les documents d'aménagement du territoire de niveau inférieur. De plus, le principe de compatibilité entre les documents de niveau supérieur et inférieur est difficile à évaluer. Cependant, ce résultat est nuancé par le fait qu'il s'agit du premier

cycle de planification de l'espace maritime et que certaines actions permettront d'aboutir à des plans d'actions ou des objectifs plus détaillés pour les niveaux régional et local. Enfin, la plupart de ces documents d'urbanisme abordent peu la thématique maritime, la mer étant historiquement gérée par l'État. Les services départementaux de l'Etat (DDTM) chargés de faciliter les politiques de la mer et du littoral et de réglementer le domaine public maritime au niveau départemental peuvent jouer un rôle clé dans le partage des principes du DSF au sein du territoire départemental, mais il ne leur est pas demandé de produire une stratégie ou un document à leur niveau, à l'exception de la stratégie pour la gestion du domaine public maritime naturel. Au niveau régional, le SRADDET est essentiellement un document terrestre mais il est en cours de révision pour inclure des orientations et des règles sur l'adaptation du littoral au changement climatique, ce qui renforcera le rôle de la Région sur ce sujet.

L'analyse met également en évidence le fait que l'échelle de mise en œuvre de la planification en mer dépend de l'activité prévue et que la planification au niveau local pourrait se développer en s'appuyant sur les outils existants. Pour les activités planifiées au niveau de la façade ou de la région, les processus d'engagement des collectivités et acteurs locaux semblent être cruciaux pour assurer l'acceptabilité sociale et pourraient être renforcés. Par exemple, les secteurs émergents de l'économie bleue sont planifiés dans un premier temps à l'échelle de façade dans le DSF (éoliennes en mer, thalassothérapie), mais ce processus de planification à l'échelle de la façade doit être accompagné d'un processus d'appropriation par les autorités locales et les parties prenantes. Par exemple, des zones potentielles de développement de l'aquaculture sont planifiées au niveau régional et départemental, cependant les acteurs locaux ne se saisissent pas du sujet comme ils font face à l'opposition des habitants craignant la pollution et la concurrence avec les équipements pour stimuler le secteur de l'aquaculture sur leur territoire.

Le faible niveau d'engagement des acteurs locaux tels que les collectivités locales et leurs représentants élus dans ces processus peut s'expliquer par différents facteurs : ils se sentent moins concernés par ce processus de planification en mer mené au niveau de la façade, ils manquent de temps et de ressources pour participer aux ateliers d'élaboration du DSF, ils manquent de connaissances et de personnes travaillant sur les activités maritimes, etc. Il pourrait donc être utile de renforcer la sensibilisation et la transmission d'information vers ces collectivités locales. Il apparaît que le SCoT peut jouer un rôle important dans la planification des activités côtières tout en préservant les écosystèmes côtiers. Jusqu'à présent, seuls deux SCoT sur onze ont intégré un schéma de mise en valeur de la mer sur une base volontaire. La modernisation du SCoT pourrait être une opportunité pour les autres collectivités locales pour approfondir le contenu du volet mer et littoral de leur SCoT et élaborer un projet pour

leur territoire maritime en conformité avec le DSF. Des lignes directrices plus claires pour la définition de ce volet mer et le littoral pourraient les aider à tirer parti de cet outil au maximum. En outre, des lignes directrices pourraient également être élaborées sur la manière d'établir l'équilibre entre le développement économique et la protection de l'environnement et notamment sur le niveau de détail de la représentation spatiale du SCoT, le niveau de prescription, les lignes directrices pour l'inventaire de la biodiversité et l'évaluation des incidences afin que le SCoT ait un impact sur les PLU concernés.

Concernant la préservation de la biodiversité, des approches « descendantes » et « ascendantes » existent et sont complémentaires. Une représentation de l'articulation des chartes d'AMP, des SAGE, des contrats de baie, du STERE, des documents d'urbanisme et sectoriels serait pertinente pour mieux s'appuyer sur ces documents existants pour l'adaptation locale des objectifs de conservation des écosystèmes marins. Les eaux côtières de PACA sont couvertes par plusieurs stratégies descendantes visant à améliorer la connaissance et la protection de leur biodiversité : stratégies transversales élaborées par la DIRM pour mieux surveiller les impacts des activités de loisirs sur la biodiversité côtière, actions spécifiques du DSF qui peuvent conduire à la révision de ces stratégies ou à l'élaboration de nouvelles stratégies, chartes volontaires pour une croisière durable, etc. Ces stratégies doivent être mises en œuvre localement au moyen d'outils existants tels que les AMP, les contrats de baie ou le STERE. Par ailleurs, une analyse de la cohérence du réseau d'AMP est en cours au niveau de la façade pour la révision du DSF afin de définir des zones strictement protégées qui seront principalement incluses dans les AMP existantes, pour répondre à l'objectif de 10 % de zones strictement protégées défini par la stratégie sur la biodiversité de l'Union européenne. Concernant les initiatives locales « ascendantes », les territoires maritimes gérés localement tels que les AMP servent de laboratoire pour expérimenter des nouvelles approches de gouvernance pour l'organiser les usages maritimes et la conservation de la nature et peuvent se propager en inspirant d'autres collectivités ou en les intégrant dans cette gouvernance. Par exemple, une des missions initiales du parc marin de la Côte Bleue est de "valoriser les ressources halieutiques et d'assurer les conditions d'une pêche côtière durable" en expérimentant des projets de restauration des écosystèmes côtiers et de lutte contre le chalutage de fond côtier ou en réfléchissant à de nouvelles mesures pour un secteur de la pêche côtière professionnelle durable.

Bien que le DSF comprenne certaines orientations et actions relatives à la transition écologique des ports, l'élaboration et la mise en œuvre de la stratégie du Grand port maritime de Marseille, menée par l'autorité portuaire dépendant du Ministère de la transition écologique, est un processus indépendant mené en parallèle du DSF. Cette

stratégie est également peu intégrée avec les documents de planification locale (par exemple, le SCoT) sur des questions pourtant pertinentes pour ces collectivités voisines comme la pollution. La stratégie portuaire nationale est trop large pour être appliquée aux petits ports et ces derniers ne disposent pas de lignes directrices ou de stratégies pour anticiper les défis à venir (érosion côtière et relocalisation des activités, dragage écologique, etc.). De plus, ces ports sont gérés par différents types d'acteurs et ne sont pas nécessairement liés aux processus d'élaboration des documents d'urbanisme des territoires voisins.

Le développement des câbles sous-marins alimentant les datacentres n'a pas été intégré dans le DSF même si les demandes d'autorisation auprès des DDTM ont augmenté ces dernières années notamment sur le littoral marseillais.

Concernant la planification du tourisme littoral, le DSF comprend des orientations et des actions sur ce sujet afin d'encourager les collectivités locales à mettre en œuvre des mesures visant à limiter l'impact des activités touristiques et récréatives sur leurs écosystèmes côtiers (par exemple, des équipements d'ancrage légers). Le SCoT semble être à une échelle adéquate pour planifier et organiser ces activités. Il pourrait également être intéressant d'étudier le rôle de la Région sur ce sujet, bien que le schéma du tourisme de la Région et le SRADDET ne comportent pas de volet dédié au tourisme littoral pour le moment.

Bien que la Région soit bien impliquée dans le processus d'élaboration et de mise en œuvre du DSF, la mer est toujours considérée comme étant de la compétence de l'État par les autorités régionales et locales. A ce jour, le DSF au niveau de la façade a pour le moment peu impacté les plans régionaux et locaux qui se concentrent surtout sur les défis terrestres.

Région Pays-de-Loire

Les articles L 219-1 et suivants du code de l'environnement posent les principes d'une gestion intégrée de la mer et du littoral. L'Etat définit la stratégie nationale pour la mer et le littoral en concertation avec le Conseil national de la mer et des littoraux. Celle-ci se décline par façade maritime par les documents stratégiques de façade, élaborés en concertation avec le Conseil maritime de façade. L'objectif est de parvenir à une utilisation optimale de la mer et du littoral dans une perspective de développement durable et d'améliorer la prise en compte intégrée de l'ensemble des enjeux.



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Figure 1. Région Pays de la Loire, comprenant deux départements littoraux et 15 intercommunalités littorales (Source: *Ambition maritime des Pays de la Loire - version 2018*).

En mer, le domaine public maritime³¹ (DPM) est principalement dédié à l'usage du public ou à l'accueil de services publics liés à l'exploitation des ressources marines. Le DPM est inaliénable et imprescriptible. Le DPM naturel doit être occupé conformément à sa destination d'utilité publique : tout projet de construction ou d'installation étant édifié sur cet espace doit préalablement obtenir une autorisation de l'Etat, qui est temporaire, précaire et révocable et qui donne lieu au paiement d'une redevance. Le domaine public maritime artificiel est composé des installations portuaires et des ouvrages de sécurité pour la navigation. Les conditions d'utilisation du DPM sont fixées dans le Code général de la propriété des personnes publiques.

A terre, le Code de l'urbanisme est le corpus réglementaire relatif à l'utilisation et à l'aménagement du territoire et fixe les exigences relatives à l'élaboration des plans d'urbanisme aux différents niveaux. Il comprend la Loi littoral sur l'aménagement, la protection et la mise en valeur du littoral dont l'objectif est de préserver les espaces naturels et l'équilibre écologique sur le littoral, de développer les activités économiques proches de la mer, de mettre en place une protection différenciée en fonction de la proximité du rivage.

Au niveau de la façade³², quatre Directions Interrégionales de la Mer (DIRM) dépendant du Secrétariat d'État à la mer sont chargées d'adapter la stratégie nationale pour la mer et le littoral aux spécificités de la façade par l'élaboration d'une stratégie de façade. Les documents stratégiques de façade (DSF) comportent une dimension spatiale traduisant l'application de la directive cadre européenne de 2014 pour la planification de l'espace maritime. Ils intègrent également les éléments d'application de la DCSMM. Tous les plans, programmes, schémas et projets en mer et sur l'interface terre-mer doivent être compatibles avec le DSF. À terre, s'ils ont une influence sur la mer, ces documents doivent tenir compte des orientations et des dispositions du DSF. De plus, le schéma directeur d'aménagement et de gestion des eaux (SDAGE) et les objectifs environnementaux du DSF doivent être réciproquement compatibles. La compatibilité ou la prise en compte se fait au moment de la révision des documents concernés ou à minima dans un délai de trois ans.

Le préfet maritime est compétent pour la délivrance des autorisation d'occupation du domaine public maritime et détient les pouvoirs de police au-delà de la limite des 12 milles nautiques.

³¹ Le Domaine Public Maritime naturel (DPMn) est constitué du rivage de la mer, du sol et du sous-sol de la mer jusqu'à la limite des eaux territoriales, du sol et du sous-sol des étangs salés en communication directe, naturelle et permanente avec la mer, ainsi que des lais et relais de mer, jusqu'à 12 milles nautiques.

³² La France est divisée en 4 façades maritimes (Manche Est-Mer du Nord, Nord Atlantique Manche Ouest, Atlantique Sud et Méditerranée).

Au niveau régional, le Conseil Régional est responsable du schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) qui s'impose aux plans locaux d'urbanisme. La réforme territoriale engagée au niveau national, à travers les lois MAPTAM (2014) et NOTRe (2015), renforce les compétences des Régions en matière de développement économique et d'aménagement du territoire, et leur confère le rôle de chef de file en matière de climat, d'air, d'énergie, de préservation de la biodiversité et d'aménagement du territoire. Elle transfère également la gestion des fonds européens de l'État aux Régions.

Le service déconcentré de l'Etat en charge de l'environnement, de l'aménagement et du logement (DREAL) est responsable, entre autres compétences, de l'animation de la politique de l'eau, du réseau des sites Natura 2000 et des trames vertes et bleues.

Au niveau du département³³, le Conseil Départemental est responsable de l'amélioration de l'accessibilité des services au public, des routes départementales et de certains ports. Les services de l'État intervenant au niveau départemental (DDTM) sont chargés de la gestion du domaine public maritime naturel et des autorisations d'occupation et d'environnement des ouvrages en mer jusqu'à la limite des 12 milles nautiques.

Au niveau intercommunal, les élus des établissements publics de coopération intercommunale (EPCIs) sont responsables de la définition du Schéma de Cohérence Territoriale (SCoT), qui peut s'appliquer jusqu'à la limite des 12 milles nautiques, mais qui en général ne s'applique qu'à la limite de la côte ou à la limite des 3 milles nautiques (voire 1 mn). Les municipalités sont responsables de l'élaboration du plan local d'urbanisme (PLU) sur leur territoire, qui doit être compatible avec le SCoT ou le code de l'urbanisme s'il n'y a pas de SCoT sur le territoire. La commune est responsable de la sécurité des plages et de la police des activités nautiques et des sites de baignade jusqu'à la ligne des 300 mètres du littoral. Les municipalités sont invitées à planifier les équipements légers et les zones de mouillage et ont généralement la possibilité d'agir en tant qu'animateur de sites Natura 2000. Les ports peuvent être gérés par différents acteurs à différents niveaux : des services de l'État pour les grands ports maritimes (comme Marseille et Saint-Nazaire) à la métropole (Métropole des ports de Nice) en passant par le département ou le syndicat mixte (ports de Toulon). La gestion du domaine public maritime artificiel est déléguée à l'autorité responsable du port. Les ports de plaisance sont gérés par des

³³ Le département est une **division administrative du territoire français placée sous l'autorité d'un préfet et administrée par un Conseil général**. Il existe 2 départements côtiers en Pays de la Loire : La Vendée et la Loire Atlantique.

communes ou des départements dans certains cas. La Figure 2 fournit une représentation schématique des compétences en mer et sur le littoral en France.

		Limites	Principaux textes juridiques	Autorisations, gestion, pouvoir de police	Planification
Mer	Zone Economique Exclusive	12 - 200 milles	Code de l'environnement; Code des transports; EMR* : Code de l'énergie; Pêche : Code rural et de la pêche maritime	Préfet maritime : concessions (pour EMR: autorisation environnementale unique), pouvoir de police (incl. la mise en place du plan ministériel de contrôle des pêches)	Direction Interrégionale de la Mer (DIRM) responsable du Document Stratégique de Façade (DSF) sous la co-responsabilité du Préfet maritime et du Préfet de région DSF opposable Établissement public responsable du Projet stratégique du Grand port maritime Autres ports : autorités locales Conseil régional : responsable du Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) Groupement intercommunal responsable du Schéma de cohérence territoriale (SCoT) Commune responsable du Plan local d'urbanisme (PLU)
	Interface terre-mer	0 - 12 milles	Code général de la propriété des personnes publique; Code de l'environnement; EMR : Code de l'énergie; Port : Codes des transports ; Code des ports maritimes ; Code général des collectivités territoriales; Pêche : Code rural et de la pêche maritime	Préfet de région : gestion des pêches et des risques Préfet de département : concessions (notamment pour EMR), autorisation d'occupation temporaire Services de l'environnement de l'Etat (DREAL) : Projets soumis à autorisation environnementale	
	Terre	Territoire côtier	Trait de côte	Code de l'urbanisme (incluant la Loi littoral); Code de l'environnement; Code général des collectivités territoriales	

*EMR : Energies marines renouvelables

**constitué, pour l'essentiel, des terrains historiquement recouverts par la mer mais dont elle s'est retirée, ainsi que ceux encore immergés compris entre le rivage de la mer et la limite des eaux territoriales.

Figure 2. Représentation schématique des compétences en mer et sur le littoral en France (Source : élaboration propre; CEREMA)

Stratégies et plans analysés

Plusieurs stratégies ou plans liés à la mer sont élaborés par les services de l'État. Le document stratégique de façade (DSF) pour la façade française Nord Atlantique Manche Ouest est un document intégré qui met en œuvre la stratégie nationale pour la mer et le littoral. Le DSF doit être pris en compte par les plans d'urbanisme de niveau géographique inférieur et comprend un volet environnemental qui inclut notamment la mise en œuvre de la DCSMM au niveau de la façade. Les deux départements côtiers de la région Pays de la Loire, la Loire-Atlantique et la Vendée, sont également couverts par des stratégies de gestion du domaine public maritime élaborées par les services de l'État.

Concernant la collectivité régionale, le Conseil régional des Pays de la Loire s'apprête à adopter une nouvelle ambition maritime régionale (la première a été adoptée en 2018). Celle-ci a été élaborée en concertation avec l'Assemblée régionale de la mer et du littoral, instance coprésidée par la Région et l'État (représenté par la Direction interrégionale de la mer). Cette stratégie volontaire est un document intégré qui alimente les autres stratégies et plans de la Région concernant directement ou indirectement les zones côtières et les secteurs maritimes. C'est le cas du Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET) qui comprend des orientations générales et des règles prescriptives concernant le développement d'activités nécessitant la proximité immédiate de la mer, en tenant compte également des impacts du changement climatique et des corridors écologiques.

Concernant les autorités départementales, les conseils départementaux de Loire-Atlantique et de Vendée ont tous deux adoptés des documents stratégiques volontaires : la stratégie "Vendée ambition maritime" (qui s'achève en 2023) et le plan d'action du département en faveur de la mer et du littoral "Loire Atlantique terre maritime". Au niveau local, les documents étudiés sont les schémas de cohérence territoriale (SCoT). Les 8 SCOT en place prennent en compte quelques thématiques marines et littorales, notamment les submersions marines et le tourisme. Cependant, leurs mesures ne concernent que les installations terrestres pour les activités maritimes et ne couvrent pas l'espace marin. Par ailleurs, la métropole Nantes Saint-Nazaire a élaboré en 2020 une stratégie transversale dédiée aux questions maritimes et littorales, l'"ambition maritime et littorale". Elle définit une vision pour les enjeux maritimes du territoire et des objectifs pour renforcer leur intégration dans le développement local. En raison de l'élévation du niveau de la mer et du changement climatique, l'adaptation aux risques d'érosion côtière et de submersion marine est un défi majeur pour les territoires côtiers des Pays de la Loire. Ces enjeux font l'objet de la "Convention régionale de gestion durable du littoral", un accord spécifique entre l'État, la Région et les Départements de Vendée et de Loire Atlantique. 11 plans de prévention des risques littoraux (PPRL) ont été élaborés par les services de l'Etat au

niveau local en coopération avec les communes. Plusieurs intercommunalités élaborent actuellement des stratégies spécifiques pour la gestion du trait de côte.

Le schéma directeur d'aménagement et de gestion des eaux (SDAGE) (issu de la mise en œuvre de la DCE) et de son adaptation au niveau local des bassins versants (SAGE) vise à stopper la dégradation de l'état des masses d'eau et à atteindre le bon état des habitats aquatiques et des eaux marines côtières. Il existe 7 SAGE côtiers en région Pays de la Loire, dont le périmètre est défini selon des unités hydrographiques cohérentes.

Concernant les plans et stratégies axés sur la protection et la conservation, la région a adopté une stratégie régionale pour la biodiversité pour la période 2018-2023 (une nouvelle stratégie pour 2024-2029 est en cours d'élaboration), qui couvre également les zones côtières. Les services de l'État ont élaboré le plan d'action territorial pour les aires protégées des Pays de la Loire (2022-2030), qui est étroitement lié au DSF. La zone marine et côtière du territoire des Pays de la Loire présente plusieurs aires protégées, qui sont concernées par des plans de gestion spécifiques. La quasi-totalité de la façade maritime du territoire des Pays de la Loire est couverte par des zones Natura 2000 (7 ZPS et 5 ZSC) qui sont entièrement marines ou à la fois marines et terrestre. De nombreux autres espaces protégés littoraux du territoire des Pays de la Loire sont situés à terre, dont notamment 35 sites protégés par le Conservatoire du littoral. Bien qu'ils ne couvrent pas le Domaine Public Maritime, ils sont fortement liés à la mer du fait des interactions terre-mer. Enfin, le parc naturel marin "estuaire de la Gironde et mer des Pertuis" est principalement situé sur les eaux de la région voisine de Nouvelle Aquitaine mais inclut une partie du sud du département de la Vendée.

Concernant les schémas des filières économiques et des autres usages de la mer, les régions françaises sont responsables du développement économique de leur territoire. La Région des Pays de la Loire est ainsi en charge de l'élaboration du Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII). Ce document est élaboré en cohérence avec le SRADDET et prend en compte les orientations de la stratégie Ambition Maritime régionale. La Région élabore d'autres stratégies spécifiques à certains secteurs de l'économie régionale, comme l'agroalimentaire et le tourisme (respectivement la stratégie "Terre mer, agir pour une alimentation durable" et le "Schéma régional de développement du tourisme et des loisirs"), qui identifient les activités maritimes et fixent des objectifs spécifiques en cohérence avec la stratégie Ambition Maritime Régionale. D'autres stratégies spécifiques axées sur des secteurs clés de l'économie des Pays de la Loire sont élaborées par les autorités régionales, les services de l'État et les parties prenantes, y compris celles qui sont pertinentes pour :

- La filière nautique (Plan d'action régional pour l'avenir du nautisme)

- Pêche et aquaculture (document de mise en œuvre du Fonds européen pour les affaires maritimes, la pêche et l'aquaculture (FEAMPAA), schémas départementaux des structures des exploitations de cultures marines)
- Les activités portuaires (stratégie de développement du port de Nantes - Saint-Nazaire)
- Les énergies marines renouvelables (feuille de route pour la recherche et l'innovation dans le domaine des énergies marines renouvelables), et
- L'extraction de granulats marins (document d'orientation et de gestion des granulats marins (DOGGM)).

Les principales caractéristiques et les secteurs concernés par ces stratégies et plans analysés sont résumés respectivement dans le premier et le deuxième tableau ci-dessous.

Titre abrégé	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationales	OUI	NON	Stratégique	Réglementation	Les deux	
Catégorie 1 : plans et stratégies transversaux									
Document stratégique de façade (DSF) pour la façade Nord Atlantique Manche Ouest			X (façade)	X				X	X
Stratégie Ambition maritime régionale (2018, nouvelle version en cours d'élaboration)		X			X	X			
Plan Vendée Ambition maritime (2018 - 2023)	X				X	X			
Plan "Loire Atlantique terre maritime"	X				X	X			
Stratégie de gestion du domaine public maritime (Vendée (2017-2027) et Loire Atlantique (2014-2024))	X			X				X	X
Ambition maritime et littorale de Nantes Saint-Nazaire	X				X	X			
Schéma directeur d'aménagement et de gestion des eaux (SDAGE) (2022-2027)			X (bassin de la Loire)	X				X	X
Schémas locaux d'aménagement et de gestion des eaux (SAGE)	X			X				X	X
Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET)		X		X				X	X
Schémas de cohérence territoriale (SCoT)	X			X				X	X

Titre abrégé	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationales	OUI	NON	Stratégique	Réglementation	Les deux	
Plan local d'urbanisme (PLU)	X			X				X	X
Convention régionale pour la gestion durable du littoral (2019-2022)		X			X	X			
Stratégies locales de gestion du trait de côte	X				X			X	X
Plans de prévention des risques d'inondation (PPRI)	X			X				X	X
Plans d'action de prévention des inondations (PAPI)	X			X				X	X
Plan de prévention des risques littoraux (PPRL)	X			X				X	X
Catégorie 2 : plans et stratégies axés sur la protection et la conservation									
Plan d'action territorial pour les espaces protégés des Pays de la Loire (2022-2030)		X			X	X			X
Stratégie régionale pour la biodiversité (2018-2023)		X			X	X			
Stratégie d'intervention du Conservatoire du littoral dans l'Atlantique central		X			X	X			X
Plan de gestion du parc naturel marin de la Gironde mer des Pertuis	X			X		X			X
Documents d'objectifs Natura 2000	X			X		X			X
Catégorie 3 : Plans pour les secteurs économiques et les activités marines									

Titre abrégé	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationales	OUI	NON	Stratégique	Réglementation	Les deux	
Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII) (2022-2028)		X		X		X			
Schéma régional de développement du tourisme et des loisirs (2022-2028)		X		X		X			
Plan d'action pour l'avenir du nautisme (2018)		X			X	X			
Plan départemental des espaces, sites et itinéraires relatifs aux sports de nature de Loire-Atlantique	X			X		X			X
Stratégie "Terre mer, agir pour une alimentation durable" (2023-2028)		X			X	X			
Document de mise en œuvre du Fonds européen pour les affaires maritimes, la pêche et l'aquaculture (FEAMPA) en Pays de la Loire (2021-2027)		X				X		X	
Schéma régional de développement de l'aquaculture marine		X		X		X			X
Schémas départementaux des structures des exploitations de culture marine	X			X				X	X
Stratégie de développement du port de Nantes - Saint-Nazaire (2021-2026)	X			X		X			X
Feuille de route régionale pour la transition énergétique (2017-2021)		X				X			

Titre abrégé	Échelle			Légalement contraignant		Typologie			Mesures spatiales incluses
	Local	Régionale	Nationales	OUI	NON	Stratégique	Réglementation	Les deux	
feuille de route pour la recherche et l'innovation en matière d'énergies marines renouvelables (2023)		X				X			
Document d'orientation et de gestion des granulats marins (DOGGM) (2019)			X (Bassin maritime)	X		X			

T	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Catégorie 1 : plans et stratégies transversaux																		
Document stratégique de façade (DSF) pour la façade Nord Atlantique Manche Ouest	X	X	X	X	X	X	X		X		X		X	X	X	X	X	
Stratégie Ambition maritime régionale (2018, nouvelle version en cours d'élaboration)	X	X	X	X	X	X	X		X					X	X	X	X	
Plan Vendée Ambition maritime (2018 - 2023)	<i>Les détails du plan ne sont pas rendus publics</i>																	
Plan "Loire Atlantique terre maritime"	X	X	X															
Stratégie de gestion du domaine public maritime (Vendée (2017-2027) et Loire Atlantique (2014-2024))	X	X	X			X									X	X		

T	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Ambition maritime et littorale de Nantes Saint-Nazaire	X	X	X	X	X	X	X							X	X	X	X	
Schéma directeur d'aménagement et de gestion des eaux (SDAGE) (2022-2027)		X	X	X		X			X				X	X	X	X	X	
Schémas locaux d'aménagement et de gestion des eaux (SAGE)		X	X	X		X									X	X	X	
Schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET)	X	X	X	X		X								X	X	X	X	
Schémas de cohérence territoriale (SCoT)	X	X	X	X		X									X	X	X	
Plan local d'urbanisme (PLU)	X	X	X	X		X									X	X	X	
Convention régionale pour la gestion durable du littoral (2019-2022)														X	X	X		
Stratégies locales de gestion du trait de côte			X												X	X		
Plans de prévention des risques d'inondation (PPRI)			X												X			
Plans d'action de prévention des inondations (PAPI)			X												X			
Plan de prévention des risques littoraux (PPRL)			X												X			
Catégorie 2 : plans et stratégies axés sur la protection et la conservation																		
Plan d'action territorial pour les espaces protégés des Pays de la Loire (2022-2030)						X									X	X	X	
Stratégie régionale pour la biodiversité (2018-2023)			X												X	X	X	

T	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Stratégie d'intervention du Conservatoire du littoral dans l'Atlantique central															X	X	X	
Plan de gestion du parc naturel marin de la Gironde mer des Pertuis	X	X	X	X	X	X	X		X				X	X	X	X	X	X
Documents d'objectifs Natura 2000	X	X	X	X	X	X	X		X	X			?	X	X	X	X	X
Catégorie 3 : Plans pour les secteurs économiques et les autres utilisations et activités marines																		
Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII) (2022-2028)	X	X	X	X	X	X	X							X				
Schéma régional de développement du tourisme et des loisirs (2022-2028)			X	X		X										X		
Plan d'action pour l'avenir du nautisme (2018)				X		X												
Plan départemental des espaces, sites et itinéraires relatifs aux sports de nature de Loire-Atlantique				X												X		
Stratégie "Terre mer, agir pour une alimentation durable" (2023-2028)	X	X																
Document de mise en œuvre du Fonds européen pour les affaires maritimes, la pêche et l'aquaculture (FEAMPA) en Pays de la Loire (2021-2027)	X	X														X		
Schéma régional de développement de l'aquaculture marine		X																
Schémas départementaux des structures des exploitations de culture marine		X																

Deliverable 3.1. Reginal analysis report



T	FI	AQ	TO	RA	MT	PA	MR	OG	MA	DM	PC	MD	DA	RI	CP	NP	LP	UC
Stratégie de développement du port de Nantes - Saint-Nazaire (2021-2026)					X	X	X											
Feuille de route régionale pour la transition énergétique (2017-2021)							X											
feuille de route pour la recherche et l'innovation en matière d'énergies marines renouvelables (2023)							X											
Document d'orientation et de gestion des granulats marins (DOGGM) (2019)									X	X								

FI = Pêche, AQ = Aquaculture, TO = Tourisme côtier et maritime, RA = Activités récréatives et de loisirs, MT = Transport maritime, PA = Activités portuaires, MR = Énergies marines renouvelables, OG = Exploration et exploitation du pétrole et du gaz, MA = Agrégats marins (extraction de sable pour le remblayage des plages et la construction), DM = Infrastructures d'exploitation minière en eaux profondes et robotique, PC = Pipelines et câbles, MD = Défense maritime, DA = Zones d'immersion (par exemple pour les sédiments ou les munitions), RI = Recherche et innovation, CP = Protection côtière, NP = Protection de la nature, LP = Protection du paysage, UC = Patrimoine culturel subaquatique.

Stratégies et plans transversaux

Le principal document pertinent concernant la façade maritime Nord Atlantique Manche Est est le DSF qui comprend une partie stratégique, adoptée en 2019, et une partie opérationnelle (programme de surveillance et plan d'action), adoptée en 2022. Il traite de tous les secteurs maritimes, à l'exception de ceux liés aux pipelines et câbles et à la défense maritime. Le volet stratégique intègre deux grandes catégories d'objectifs :

- Objectifs environnementaux ; la restauration du bon état écologique du milieu marin est l'un des piliers de la partie stratégique du document, qui énonce des objectifs spécifiques pour chacun des 11 descripteurs du bon état écologique donnés par la directive DCSMM. Une annexe cartographique identifie les enjeux pour 16 zones, dont les enjeux écologiques majeurs. Le plan d'action identifie également des actions pertinentes pour les 11 descripteurs du bon état écologique, ainsi que des actions transversales, et intègre le programme de surveillance de la DCSMM.
- Des objectifs socio-économiques, qui visent à répondre à 3 objectifs de la stratégie nationale mer et littoral : Développer une économie bleue durable, Transition écologique pour la mer et le littoral, Promouvoir l'influence de la France au niveau international.

Les objectifs stratégiques sont suivis par la DIRM au moyen d'indicateurs et de cibles. Le DSF comprend également une "carte des vocations" (Figure 3) qui identifie 14 zones et définit les activités prioritaires ou les exigences environnementales pour chacune de ces zones. L'objectif n'est pas d'exclure mais de favoriser la coexistence des usages conformément aux objectifs stratégiques, tout en donnant la priorité à certaines activités ou questions au sein de la zone en cas de litige. Le plan d'action intègre un ensemble de 114 actions et détaille pour chacune d'entre elles les opérateurs clés pour leur mise en œuvre. Il peut s'agir des services de l'État, des collectivités territoriales et des établissements publics tels que les organismes de recherche, l'agence de l'eau, etc. Le DSF doit être révisé tous les 6 ans. La partie stratégique du document est actuellement en cours de révision pour une adoption prévue en 2025.

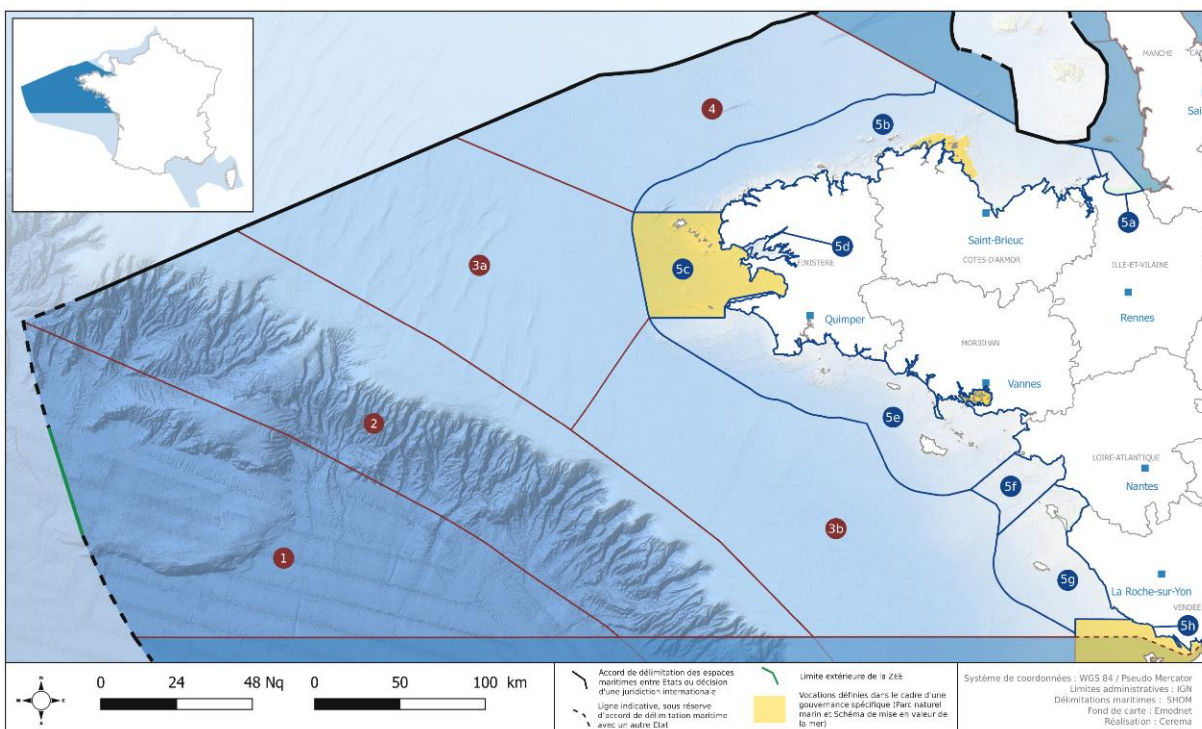


Figure 3. La carte des vocations du DSF et de ses 14 zones (Source : DSF Nord Atlantique Manche Ouest).

Au niveau régional, il n'existe pas de plans portant spécifiquement sur l'espace maritime élaboré par le conseil régional. Cependant, la Région des Pays de la Loire a adopté en 2018 une stratégie transversale volontariste, l'Ambition Maritime régionale. Elle comprend des objectifs et des mesures construits sur 3 piliers : promouvoir l'identité maritime de la Région, répondre aux défis de la croissance bleue et protéger et valoriser la mer et le littoral. Actuellement, la stratégie est en cours de révision pour mieux intégrer les stratégies régionales adoptées par la Région qui ont émergé depuis 2018 et pour renforcer les objectifs de transitions énergétique et environnementale ; la nouvelle version devrait être adoptée d'ici fin 2023. Cette stratégie volontaire vise également à coordonner les différentes compétences de la Région : elle alimente ainsi les autres stratégies et plans de la Région qui traitent directement ou indirectement des zones côtières et des secteurs maritimes.

Le schéma régional d'aménagement, de développement durable et d'égalité des territoires (SRADDET), qui est l'autre principal document régional pertinent pour l'aménagement de l'espace côtier et marin, porte essentiellement sur des enjeux littoraux terrestres. Il comprend des orientations et des règles prescriptives. Un chapitre spécifique des orientations est consacré à la conciliation de la protection des espaces naturels et du développement économique des territoires côtiers. Il donne des objectifs généraux et des lignes directrices pour mettre en œuvre une vision de la gestion intégrée des zones côtières. L'une des règles prescriptives est consacrée aux risques

côtiers et impose que les plans locaux d'aménagement du territoire (SCOT et PLU) intègrent la gestion des risques littoraux.

Certains plans transversaux sur la gestion de l'eau abordent également les questions marines. Le schéma directeur d'aménagement et de gestion des eaux (SDAGE) du territoire Loire-Bretagne est élaboré par l'agence de l'eau Loire-Bretagne et met en œuvre la DCE. Des chapitres spécifiques de l'orientation stratégique et du plan d'action sont consacrés à la gestion des eaux côtières et mettent l'accent sur la qualité de l'eau et la préservation des écosystèmes. Le SDAGE a été modifié en 2022 pour mieux s'articuler avec le DSF, après son adoption.

L'érosion côtière et la submersion marine sont des défis majeurs pour les territoires côtiers des Pays de la Loire, exacerbés par le changement climatique. La région a été profondément touchée par la tempête Xynthia en février 2010, qui a causé d'importants dégâts sur les populations et les territoires côtiers, en particulier dans le sud de la Vendée. Cette catastrophe a marqué un tournant dans la prise de conscience nationale et régionale des risques côtiers et marins. Les risques littoraux font l'objet d'une stratégie spécifique cosignée par l'Etat, la Région et les Départements de Vendée et de Loire Atlantique, appelée "Convention régionale de gestion durable du littoral". Celle-ci identifie deux objectifs principaux (l'amélioration des connaissances et le soutien à la mise en œuvre des stratégies locales) et détaille les règles de financement des projets liés à la gestion du trait de côte mis en œuvre par les autorités locales. Une nouvelle version de cette convention est en cours de rédaction.

Au niveau départemental, les services de l'État (DDTM) sont chargés d'élaborer des stratégies pour la gestion du domaine public maritime. Le seul document accessible au public est celui de la Vendée, qui a été analysé. Ce document divise le domaine public maritime en secteurs et définit pour chaque secteur des enjeux et des orientations de gestion. Ces dernières ne sont pas contraignantes mais fixent des lignes directrices pour la délivrance des autorisations en mer à l'échelle du département. Les conseils départementaux n'ont aucune compétence en matière de gestion de l'espace maritime, mais les départements de Loire-Atlantique et de Vendée ont élaboré des documents stratégiques volontaires concernant les sujets maritimes. Le plan "Vendée ambition maritime" établit un ensemble d'actions pour la période 2018-2023 reposant sur trois piliers : l'innovation, le développement et la gestion des territoires, l'identité maritime. Le plan a pris fin en 2023 et il semble que le département ne publiera pas de second plan d'action. En 2019, les départements ont adopté le plan d'action "Territoire maritime de Loire-Atlantique". Ce plan fixe 4 objectifs sur la transition environnementale et climatique, le développement durable, l'identité maritime et l'accès de tous les citoyens au littoral ; Il détermine également les actions à mener sur la période 2019-2029. Cependant, ce plan est actuellement en suspens et devrait être repris prochainement.

Enfin, plusieurs plans et stratégies transversaux sont en place au niveau local. Les huit schémas de cohérence territoriale (SCOT) abordent les questions marines et côtières. Concernant les enjeux marins, les risques de submersion marine, le développement du tourisme et la protection des écosystèmes côtiers sont abordés dans tous les SCOT. D'autres activités maritimes sont souvent mentionnées, telles que la pêche, l'aquaculture et les activités portuaires. Elles font parfois l'objet de prescriptions spécifiques visant à assurer le soutien de ces activités, notamment en termes d'équipements nécessaires à terre, de développement économique et d'aménagement du territoire. Les SCOT ne traitent pas directement des zones marines. Au niveau local, le PLU peut également prendre des prescriptions en matière d'aménagement du territoire et doit mettre en œuvre les objectifs et les prescriptions du SCOT. Une analyse complémentaire plus détaillée serait nécessaire pour identifier la manière dont les PLU traitent les questions côtières et marines.

Toujours au niveau local, la métropole Nantes Saint-Nazaire a élaboré en 2020 une stratégie transversale dédiée aux questions maritimes et côtières, l'"ambition maritime et littorale". Cette stratégie met principalement l'accent sur la valorisation des paysages et la nécessité d'assurer l'accès à la mer à tous les citoyens. Elle donne également des objectifs pour une meilleure intégration du port de Nantes-St Nazaire dans la ville et le développement d'un "projet alimentaire littoral" pour le territoire prenant en compte la production locale de produits de la mer. Elle a donc des implications sur l'espace marin et ses activités.

Concernant la gestion de la politique de l'eau, 7 schémas d'aménagement et de gestion des eaux (SAGE) couvrant l'ensemble du littoral des Pays de la Loire mettent en œuvre le SDAGE à l'échelle du bassin versant. Ces SAGE intègrent des enjeux spécifiques concernant la qualité des eaux côtières et certains impacts des activités maritimes (telles que les activités nautiques ou portuaires). Concernant la gestion des risques naturels, 11 plans particuliers de prévention des risques littoraux (PPRL) ont été élaborés par les services de l'État au niveau local (directions départementales des territoires et de la mer) en coopération avec les communes. Ces documents définissent des règles stratégiques et préventives pour prévenir les dommages causés par les submersions marines. 3 intercommunalités élaborent actuellement des stratégies spécifiques pour la gestion du littoral. Plusieurs intercommunalités ont également adapté leurs plans d'action de prévention des inondations (PAPI) pour inclure ces risques.

Stratégies et plans de protection et de conservation

Les principaux documents de référence sur la protection et la conservation du milieu marin sont le DSF (qui comprend un volet environnemental traduisant la DCSMM au niveau de la façade NAMO), le SRADDET et la stratégie Ambition Maritime régionale (dont l'un des piliers est la protection et la valorisation de la mer et du littoral), déjà mentionnée dans la section précédente. Le conseil régional a adopté une stratégie

régionale pour la biodiversité pour la période 2018-2023 (une nouvelle stratégie pour 2024-2029 est en cours d'élaboration) qui donne des orientations pour mieux connaître et préserver la biodiversité régionale. Cependant, mis à part le DSF, ces stratégies se concentrent essentiellement sur la partie terrestre des zones côtières et des écosystèmes.

Plus spécifiquement sur la protection de l'environnement, la Direction régionale en charge de l'environnement, de l'aménagement et du logement (DREAL) a élaboré le plan d'action territorial pour les aires protégées des Pays de la Loire (2022-2030), qui traduit au niveau régional les orientations de la stratégie nationale pour les aires protégées adoptée en 2021 (notamment l'extension des aires protégées terrestres et marines à 30 % du territoire français, dont 10 % en protection forte, d'ici 2030). Le contenu de ce plan d'action sur les aires marines est commun avec celui du volet environnemental du plan d'action du DSF. Pour la façade NAMO, 30 % des eaux marines sont déjà couvertes par des aires protégées. Le processus de révision du DSF prévu en 2025 permettra d'identifier des aires strictement protégées à l'échelle de la façade afin d'atteindre l'objectif de 10%.

Le territoire maritime régional est couvert par des zones avec différents niveaux de protection et concernées par des plans de gestion locaux spécifiques. La quasi-totalité de la façade maritime des Pays de la Loire est couverte par des sites Natura 2000 (Figure 4) qui sont entièrement marins ou à la fois marins et terrestres. Cinq sites Natura 2000 sont exclusivement situés en mer et couvrent largement les eaux côtières marines. Deux autres sites sont à la fois marins et terrestres mais couvrent une zone marine importante.

Plusieurs autres zones côtières protégées dans la région des Pays de la Loire sont situées à terre ; elles ne couvrent pas le domaine public maritime. Cependant, le fonctionnement de ces écosystèmes est fortement liés à la mer par l'interaction terre-mer (par exemple pour les zones humides, les étangs, les estuaires). Ces sites sont couverts par différents statuts de protection et une même zone peut être concernée par différents statuts : Sites Natura 2000, zones humides d'importance internationale (RAMSAR), sites protégés par le Conservatoire du littoral et une réserve naturelle nationale (la réserve naturelle nationale de la "Casse de la Belle Henriette"). En particulier, les 35 sites protégés par le Conservatoire du littoral sont concernés par la stratégie d'opération Centre Atlantique élaborée par le Conservatoire du littoral. Cette stratégie adapte la politique nationale d'acquisition foncière du Conservatoire à la sauvegarde des espaces littoraux régionaux en définissant des orientations stratégiques et en cartographiant les zones à protéger dans le futur. L'action du Conservatoire est rendue possible grâce à un partenariat fort avec les Départements de Vendée et de Loire Atlantique et avec la Région des Pays de la Loire.

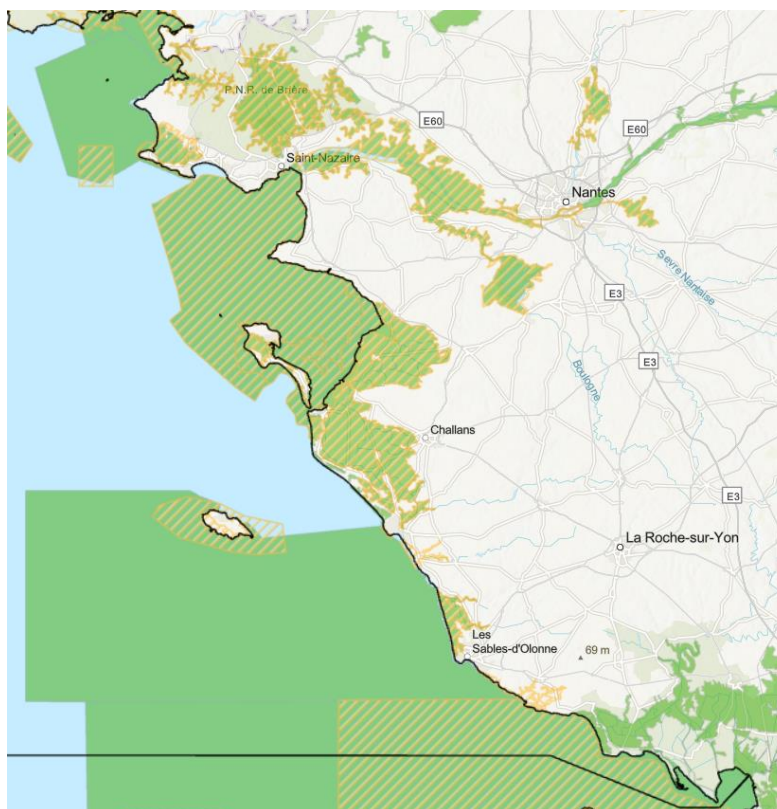


Figure 4. Sites Natura 2000 en Pays de la Loire (jaune : zones spéciales de conservation, vert : zones spéciales de protection) (source : Géoportail Géolittoral).

Enfin, le territoire de l'étude de cas inclut des aires marines protégées situées principalement dans les régions voisines. Le parc naturel marin "Gironde mer des Pertuis" est principalement situé dans les eaux de la région Nouvelle Aquitaine mais couvre une partie du sud du département de la Vendée. Le parc est géré par l'Office français pour la biodiversité, établissement public placé sous la tutelle des ministères chargés de l'écologie et de l'agriculture et de l'alimentation. La réserve naturelle nationale de la baie de l'Aiguillon couvre une superficie de 50 km², située au sud de la région Pays de la Loire et en partie dans la région Nouvelle Aquitaine. Elle est cogérée par l'Office français pour la biodiversité et la Ligue pour la protection des oiseaux, la principale ONG française de protection des oiseaux. Ces aires marines protégées étant principalement situées en mer, leurs plans de gestion se concentrent sur la biodiversité marine et les questions de conservation liées aux activités maritimes

Stratégies et plans pour les secteurs économiques et les activités maritimes

Le conseil régional est responsable de l'élaboration du Schéma régional de développement économique, d'innovation et d'internationalisation (SRDEII) qui fixe le

cadre du soutien financier des entreprises de la région et donne des orientations générales concernant son développement économique. La SRDEII concerne tous les secteurs économiques régionaux, et donne des orientations particulières pour certains secteurs maritimes : énergies marines renouvelables, la pêche, l'aquaculture, la navigation de plaisance et le grand port maritime de Nantes Saint-Nazaire. Le SRDEII est élaboré en cohérence avec les objectifs du SRADDET et facilite sa mise en œuvre en intégrant les orientations du SRADDET dans l'aménagement du territoire. Le SRDEII prend également en compte les éléments d'orientation issus de la stratégie Ambition Maritime régionale de 2018, dont le deuxième pilier aborde les enjeux liés à l'économie bleue des Pays de la Loire.

En relation avec la SRDEII et l'Ambition Maritime régionale, la région des Pays de la Loire a adopté des stratégies et des plans économiques qui ciblent directement des secteurs maritimes spécifiques. Ces stratégies et feuilles de route permettent à la Région de donner un cadre aux instruments de financement et d'animation. D'autres acteurs, tels que les services de l'Etat à l'échelle régionale ou les départements, peuvent également adopter des stratégies particulières pour des secteurs clés.

En matière de tourisme, la Région est responsable de l'établissement du Schéma régional de développement du tourisme et des loisirs pour la période 2022-2028. Il précise les objectifs ciblant les sports nautiques et la navigation de plaisance et visant à concilier attractivité touristique, protection de la biodiversité et accès au logement des populations locales sur le littoral. Dans ce cadre, la Région a adopté en 2018 un plan d'action spécifique intitulé " l'avenir des activités nautiques ". Par ailleurs, les départements sont chargés d'élaborer les plans relatifs aux espaces, sites et itinéraires de sports de nature. Le Département de Loire Atlantique a adopté son plan et identifie 19 sites d'importance pour les activités nautiques (notamment la voile) situés sur le littoral. Les gestionnaires de ces sites doivent garantir l'accès aux usagers, dans le respect du milieu naturel, et peuvent bénéficier de financements publics spécifiques.

Concernant la pêche et l'aquaculture, le conseil régional a mis en place une stratégie intitulée " Terre mer, agir pour une alimentation durable " (2023-2028), qui identifie des objectifs et des actions transversales pour la production et l'approvisionnement alimentaire en produits de la mer et agricoles. Comme toutes les régions littorales françaises, la Région des Pays de la Loire est également l'organisme intermédiaire pour la gestion du Fonds européen pour les affaires maritimes, la pêche et l'aquaculture (FEAMPA) et a élaboré une stratégie régionale de financement pour le programme 2022-2027. Toujours dans le domaine de l'aquaculture, le Schéma régional de développement de l'aquaculture marine (SRDAM) doit être élaboré par la DIRM. Ce document vise à identifier les sites existants et les sites propices au développement d'une aquaculture marine durable, ainsi que les possibilités d'implantation de fermes aquacoles en milieu fermé. Ce document n'a pas encore été finalisé pour les Pays de

la Loire. Dans le cadre de la future révision du DSF, les services de l'Etat élaboreront un SRDAM qui sera intégré au prochain DSF.

Élaboré par les services de l'État au niveau départemental (direction départementale des territoires et de la mer - DDTM), le schéma départemental des structures des exploitations de cultures marines est un document réglementaire qui encadre les activités aquacoles sur le domaine public maritime du département, et organise la valorisation et la préservation de l'espace affecté à ces cultures, à travers un ensemble de règles techniques qui s'imposent aux exploitants en termes d'occupation et d'exploitation. Le département de la Vendée a révisé ce document en 2022 et celui de la Loire-Atlantique en 2018.

En matière de transport maritime et d'activités portuaires, le port de Nantes Saint-Nazaire est le quatrième port français et le premier sur l'Atlantique et dispose d'une stratégie de développement propre. Elle repose sur trois piliers : l'accomplissement des transitions énergétique, écologique et numérique, le renforcement de sa position de leader et le soutien au développement économique et social de l'estuaire de la Loire. La stratégie détaille les orientations en matière d'utilisation des sols pour des zones spécifiques du domaine portuaire à terre, y compris les zones industrielles et naturelles.

Concernant les énergies marines renouvelables, la région des Pays de la Loire est bien positionnée puisqu'elle bénéficie de la construction du premier parc éolien offshore français, du dynamisme de la zone Nantes Saint-Nazaire, du grand nombre d'entreprises sur la chaîne de valeur et de start-ups innovantes. La Région prévoit d'élaborer une stratégie spécifique pour les énergies marines renouvelables en s'appuyant sur la feuille de route régionale pour la transition énergétique (2017-2021). La région, ainsi que la métropole nantaise, l'intercommunalité de la région nazairienne et de l'estuaire (CARENE) et les fonds FEDER de l'UE ont financé le réseau WEAMEC (West Atlantic Marine Energy Community). Ce réseau rassemble les acteurs et les entreprises impliqués dans le domaine des énergies marines renouvelables et se concentre sur la recherche, l'innovation et la formation. WEAMEC a produit en 2023 une feuille de route pour la recherche et l'innovation dans le domaine des énergies marines renouvelables.

Concernant les granulats marins, quatre sites sont exploités au large des Pays de la Loire. L'activité fait l'objet d'un document spécifique, le Document d'orientation et de gestion des granulats marins (DOGGM), élaboré en 2019 qui est annexé au DSF. Ce document découle de la Stratégie nationale de gestion durable des granulats terrestres et marins et des matériaux et substances issus des carrières.

Contribution au "Green Deal" de l'UE et aux stratégies de bassins maritimes

Plusieurs plans analysés ont été élaborés avant la publication du Pacte vert européen (EGD) et ne le mentionnent donc pas expressément. Toutefois, certains d'entre eux partagent la vision du EGD et contribuent, directement ou indirectement, à certains de ses éléments et objectifs.

La stratégie Ambition Maritime régionale a fixé, par exemple, des objectifs spécifiques pour développer les énergies marines renouvelables - contribuant ainsi également à l'atténuation du changement climatique - et pour apporter un financement spécifique pour l'économie circulaire bleue. La stratégie alimente d'autres stratégies et plans d'action régionaux, tels que le plan d'action pour l'économie circulaire, la feuille de route régionale pour la transition écologique ou la stratégie pour un système alimentaire durable. Un pilier de la stratégie "Ambition maritime régionale" est axé sur la protection de l'environnement. Cependant, elle s'appuie principalement sur des objectifs d'amélioration des connaissances et de protection des zones côtières terrestres. Ceci s'explique par la répartition des compétences entre l'Etat et la Région. La nouvelle version de la stratégie Ambition Maritime régionale, prévue pour fin 2023, pourrait renforcer les objectifs en matière de transition énergétique et écologique. Plusieurs stratégies régionales arrivent également à échéance au cours de la période 2021-2023. Elles sont susceptibles d'être révisées dans un futur proche, avec l'opportunité de mieux intégrer les objectifs du RDE.

Bien que la contribution à la réduction des émissions de gaz à effet de serre soit un objectif de plusieurs stratégies et plans analysés, l'objectif d'"aucune émission nette de gaz à effet de serre en 2050" fixé par le EGD n'est pas spécifiquement mentionné. La neutralité carbone est intégrée dans la proposition de nouvelle stratégie nationale pour la mer et le littoral et dans la loi de programmation sur l'énergie et le climat (adoption des deux documents prévus d'ici la fin de 2023). Cet objectif sera également intégré dans les nouvelles versions du DSF, avec des objectifs quantifiés concernant la puissance des énergies marines renouvelables déployée au sein de chaque façade française et la localisation de la poursuite du développement de l'éolien en mer. La révision du DSF devrait également inclure des objectifs quantifiés en termes de protection stricte avec la localisation des futures zones strictement protégées. Plus de 30% du bassin Nord Atlantique Manche Ouest bénéficient déjà d'un statut de protection (incluant différents niveaux de protection) ; les zones pour lesquelles le statut de protection doit être renforcé afin d'atteindre l'objectif de 10% de protection stricte ont été identifiées dans l'actuel DSF.

Seule la stratégie Ambition Maritime régionale mentionne la stratégie maritime de l'UE pour le bassin Atlantique. L'ambition maritime régionale identifie la stratégie Atlantique comme un cadre offrant des opportunités de financement pour la mise en œuvre

d'objectifs régionaux communs. La Région des Pays de la Loire a participé à des projets qui ont directement contribué à la mise en œuvre de la stratégie Atlantique, comme le projet Interreg CLIPPER (Creating a leadership for maritime industries - New opportunities in Europe ; 2017-2021). Parmi les initiatives listées dans la stratégie maritime Atlantique, 32 initiatives impliquant des acteurs des Pays de la Loire sont mentionnées.

De façon globale, les cinq objectifs principaux³⁴ de la stratégie maritime Atlantique et les quatre piliers³⁵ du plan d'action 2019-2024 sont globalement abordés directement ou indirectement par les stratégies analysées en Pays de la Loire. L'approche écosystémique est à la base du DSF (en termes de zones de la carte des vocations, d'objectifs et d'actions) ainsi que des stratégies de la politique de l'eau (SDAGE et SAGE). D'autres stratégies (SRADDET, Ambition maritime régionale, etc.) reconnaissent la diversité des écosystèmes marins et leurs bénéfices pour le territoire. La réduction de l'empreinte carbone par le développement des énergies marines renouvelables et la décarbonation des navires est une priorité pour plusieurs stratégies ou plans (par exemple, la future stratégie Ambition maritime régionale, le DSF, la SRDEII, etc.) Les risques naturels, notamment les risques d'inondation et d'érosion côtière, font l'objet de plans locaux spécifiques (stratégies de gestion du trait de côte, plans de prévention des risques côtiers (PPRI), plans d'action de prévention des inondations (PAPI)) et d'un accord spécifique entre l'État, la région et les deux départements. La croissance bleue inclusive et sociale est également un enjeu majeur de la stratégie Ambition Maritime Régionale et du DSF, avec des objectifs spécifiques en matière de formation et de développement des compétences et de collaboration entre la recherche et les entreprises. L'éducation à l'océan et la sensibilisation des citoyens font également l'objet d'objectifs spécifiques du DSF et constituent l'un des trois piliers de la stratégie Ambition Maritime Régionale.

Certains secteurs maritimes sont spécifiquement mentionnés par la stratégie Atlantique. C'est par exemple le cas du grand port de Nantes Saint-Nazaire qui est identifié comme un port clé pour la façade Atlantique européenne : son développement et sa transition environnementale sont identifiés comme prioritaire dans plusieurs documents (DSF, stratégie Ambition Maritime Régionale, contrats spécifiques entre l'Etat et la Région). Enfin, la stratégie de bassin maritime Atlantique de l'UE identifie un besoin de développement du tourisme côtier et des activités nautiques. Ces activités sont des secteurs clés pour l'économie du littoral des Pays de la Loire et leur développement est mentionné dans plusieurs stratégies aux niveaux régional, départemental et local (plan d'action régional pour l'avenir du nautisme, schéma

³⁴ Mise en œuvre de l'approche écosystémique, réduction de l'empreinte carbone de l'Europe, exploitation durable des ressources naturelles des fonds marins de l'Atlantique, réponse aux menaces et aux urgences, croissance socialement inclusive.

³⁵ Les ports en tant que portes d'entrée et plaques tournantes de l'économie bleue, les compétences bleues de l'avenir et la connaissance des océans, les énergies marines renouvelables, l'océan sain et les côtes résilientes.

régional de développement du tourisme et des loisirs, plan départemental des espaces, sites et itinéraires relatifs aux sports de nature en Loire Atlantique, etc.).

L'analyse réalisée donne quelques indications sur l'inclusion des principaux objectifs du EGD et de la stratégie du bassin maritime Atlantique dans les plans et stratégies étudiés. Toutefois, une analyse plus approfondie serait nécessaire pour confirmer que les objectifs des documents régionaux et locaux sont pleinement conformes à ces stratégies de l'UE. De plus, il serait pertinent d'étudier si ces objectifs sont traduits en actions associées à des indicateurs de suivi et accompagnées de mécanismes de financement. À l'exception du DSF, les stratégies n'incluent pas d'indicateurs ou d'objectifs quantifiés, ce qui rend difficile l'évaluation de la réalisation ou non des objectifs.

Concertation et participation des parties prenantes

Concernant l'élaboration du DSF, tous les acteurs concernés sont impliqués à un niveau macroéconomique par le biais du conseil maritime de façade Nord Atlantique Manche Ouest, l'un des principaux organes de gouvernance traitant des questions marines et côtières. Le conseil se réunit au moins une fois par an et est composé de 80 membres issus de 5 collèges (l'État et ses institutions publiques, y compris un représentant des parcs nationaux, les autorités locales et leurs groupements, les activités professionnelles et les entreprises, les représentants des employés des entreprises, les ONG environnementales et les associations d'utilisateurs de la mer). Pour élaborer les objectifs stratégiques, des ateliers ont été organisés avec les parties prenantes au sein du conseil maritime de façade afin d'identifier les objectifs socio-économiques du bassin et les défis qui y sont liés. Un groupe plus restreint, appelé "commission permanente" du conseil maritime de façade, a été nommé pour mener des sessions de travail plus fréquentes. La commission permanente réunit des représentants élus des cinq collèges. Les résultats de ses travaux sont ensuite présentés et discutés au sein du conseil maritime de façade. La prochaine révision du DSF (qui se déroulera sur la période 2023-2025) suivra les mêmes processus. Comme pour la première rédaction du DSF, le deuxième cycle comprendra une consultation du grand public mais ce cycle fera appel à une consultation plus inclusive (plateforme web, ateliers, débat dans les universités et écoles, conférences interactives et simultanées au sein des façades, etc.). Cette démarche sera entreprise sous la responsabilité de la Commission nationale du débat public.

L'assemblée régionale de la mer et du littoral, autre organe de gouvernance principal, coprésidé par le président de la région et les préfets de région et maritime, a été créée en 2017 et se réunit au moins deux fois par an. Elle comprend tous les acteurs concernés par l'économie bleue, y compris des représentants des autorités locales, des institutions publiques, des secteurs économiques, des syndicats, des experts, des ONG environnementales et des activités de loisirs. L'assemblée a été créée à l'origine pour

élaborer la stratégie Ambition Maritime Régionale, avec l'objectif de développer une vision partagée avec les représentants du gouvernement, les deux départements de Vendée et de Loire-Atlantique, et tous les acteurs maritimes régionaux. Après l'adoption de l'ambition en 2018, l'assemblée a continué à se réunir afin de rendre compte de l'avancement de sa mise en œuvre. Elle constitue également un lieu d'échanges entre les parties prenantes sur les stratégies ou les actions menées par les collectivités régionales et départementales. Le plan de travail pour la révision du DSF a par exemple été présenté par les services de l'État lors d'une réunion de l'assemblée régionale. L'assemblée est actuellement impliquée dans la révision de la stratégie Ambition Maritime régionale. Des ateliers ont été organisés en 2022 et 2023 pour redéfinir les priorités de l'ambition et adapter ses objectifs.

La stratégie du département de Loire Atlantique a été élaborée grâce à une approche participative forte et innovante. A travers le "défi maritime et côtier", le département a impliqué les parties prenantes, les experts et les citoyens dans la rédaction d'une charte commune d'engagement moral volontaire. Afin de rédiger cette charte, une étude prospective sur l'avenir du territoire à l'horizon 2040 impliquant des experts et des parties prenantes à une enquête menée auprès de plus de 1 000 citoyens de Loire Atlantique ont été réalisés. Des ateliers ont été organisés pour identifier neuf enjeux et engagements pouvant être pris par tous les types d'acteurs. Les parties prenantes peuvent signer la charte et s'engager volontairement à relever ces défis. Plus de 100 acteurs clés ont signé la charte, dont le département lui-même, des intercommunalités, des instituts de recherche et des universités, des ONG, des représentants de la pêche et de l'aquaculture, le port de Nantes Saint-Nazaire, etc.

Concernant les documents d'urbanisme (SRADDET, SCOT, PLU), l'engagement des parties prenantes est réglementé et les instances de concertation prévues pourraient être utilisées pour discuter des orientations relatives à la mer et au littoral. Dans le cas des plans d'urbanisme (PLU), les personnes publiques associées doivent être consultées (préfet, région et département, représentants d'organismes publics, chambres consulaires).

Le port de Nantes Saint-Nazaire est géré par un établissement public (le Grand port maritime de Nantes Saint-Nazaire). Les parties prenantes (État, collectivités territoriales, personnalités qualifiées, entreprises et usagers, ONG) sont associées à la définition de la stratégie et au contrôle budgétaire à travers des organes de gouvernance : le conseil de surveillance et le conseil de développement.

En outre, des mécanismes spécifiques sont en place aux niveaux régional et local pour assurer l'engagement des parties prenantes sur certains thèmes. De nombreuses assemblées et commissions non spécifiques aux sujets maritimes rassemblent les acteurs terrestres et maritimes : comité régional du tourisme, commission littorale du comité de bassin du SDAGE, commissions départementales de l'aquaculture, etc.

Défis de la gestion intégrée de l'espace maritime

La cohérence des orientations des stratégies et plans régionaux et départementaux transversaux, élaborés par l'État (DSF, stratégies départementales de gestion du domaine public maritime) et les collectivités régionales et départementales (stratégie Ambition Maritime Régionale et stratégies départementales) montre qu'une vision stratégique commune est partagée par les différentes collectivités au niveau régional et départemental. Les larges processus de concertation menés via le conseil maritime de façade et l'assemblée régionale de la mer et du littoral ont permis de partager cette vision avec les acteurs régionaux.

En termes d'opérationnalisation de cette vision stratégique commune, la région fait preuve de proactivité. L'Ambition Maritime alimente les autres stratégies régionales, et la Région a développé des feuilles de route spécifiques pour certains enjeux maritimes et côtiers, tels que la gestion du trait de côte et les activités nautiques. Tous ces documents orientent les financements apportés par la Région et les processus de concertation, qui sont les deux principaux leviers de mise en oeuvre actionnés par le Conseil régional. En termes d'instruments de financement, la Convention régionale pour la gestion durable du littoral permet de soutenir des projets de gestion du trait de côte, le FEAMPA apporte une aide à la pêche et à l'aquaculture. Concernant la coordination des réseaux d'acteurs régionaux, l'émergence du réseau WEAMEC sur les énergies marines renouvelables, ou encore la structuration des acteurs de la filière nautique peuvent être cités comme des mécanismes importants. Dans la logique de cette dynamique, le SRADDET comprend des objectifs dédiés aux zones côtières, cependant seules quelques règles prescriptives opposables aux plans locaux d'urbanisme portent sur ces thématiques.

Pour certains enjeux et usages maritimes, on observe cependant un décalage entre les dynamiques locales et les orientations régionales. Ainsi, les équipements locaux dédiés à l'aquaculture et à la pêche sont concurrencés par ceux du tourisme, malgré les orientations conjointes et les leviers financiers déployés par la Région et l'État pour pérenniser, voire développer ces activités. Les orientations régionales et départementales encouragent l'élaboration de stratégies locales de gestion intégrée de l'érosion et des risques côtiers. Elles se heurtent cependant à une approche des risques littoraux portée en priorité sur la prévention des conséquences d'événements extrêmes (comme la tempête Xynthia qui a fortement marqué les esprits en 2010) plutôt qu'une approche intégrée de l'adaptation des littoraux. Ces exemples montrent la nécessité de renforcer l'opérationnalisation des orientations régionales en s'appuyant sur les outils existants qui cadrent l'action locale. On peut s'interroger sur la capacité des documents de planification locaux (SCOT et stratégie des DPM) à décliner efficacement les orientations stratégiques régionales, sur la bonne articulation entre ces documents, et sur le rôle des autres outils de l'action publique (réglementation, aides financières, contrats, etc.) dans l'amélioration de la mise en oeuvre de ces

documents de planification. Elle pose également la question de la coordination entre les autorités publiques agissant aux différentes échelles géographiques et de leur coopération avec les parties prenantes.

L'implication des collectivités locales dans la préservation des écosystèmes marins et les leviers dont elles disposent pour contribuer directement à leur bon état est également à interroger. Les stratégies de la Région et les collectivités locales des Pays-de-Loire ingèrent peu la préservation ou de restauration des écosystèmes marins. L'Ambition maritime de la Région et ses autres stratégies traitant des enjeux de biodiversité (notamment le SRADDET et la Stratégie régionale pour la biodiversité) mentionnent les écosystèmes marins comme une richesse de la région, mais les mesures ne portent que sur la biodiversité terrestre côtière. C'est également le cas des documents locaux analysés (les SCOT examinés dans le cadre de cette étude ne mentionnent pas la biodiversité marine). Bien que ce ne soit pas une obligation réglementaire, les collectivités locales et la Région gagneraient à s'impliquer davantage dans la protection des écosystèmes marins. Or la pérennité des activités maritimes qui contribuent à l'économie régionale est liée à la qualité des écosystèmes marins. Cette interdépendance a incité les collectivités locales de certaines régions françaises (notamment en Méditerranée) à définir des mesures portant directement sur la biodiversité marine.

L'opérationnalisation de la PSM pose également la question de la coordination entre les autorités publiques agissant aux différentes échelles géographiques et de leur coopération avec les parties prenantes. La multiplicité des instances de concertation interroge la complémentarité et la coordination de ces instances ainsi que la capacité des acteurs du littoral et de la mer à être effectivement représentés dans toutes ces instances, qui ne sont pas toujours centrées sur les questions maritimes ou littorales. Cependant, il faut noter que l'assemblée régionale de la mer et du littoral animée par la Région est reconnue par les acteurs comme un cadre d'échange transversal sur les questions de mer et de littoral. Elle constitue un levier important pour faciliter la coopération entre les acteurs et partager les travaux menés par les différentes instances de gouvernance thématiques qui peuvent traiter des enjeux maritimes.

Des marges de manœuvre subsistent pour améliorer l'opérationnalisation du DSF et des objectifs stratégiques régionaux. En effet, les orientations stratégiques du DSF restent larges et définies à une échelle macro, laissant ainsi place à l'interprétation par la Région, et par les autorités publiques locales. Le SRADDET fixe des objectifs mais pas de règles précises s'imposant aux collectivités locales. Cette approche nécessite que les collectivités locales s'approprient ces enjeux et soient soutenues par un ensemble d'acteurs pour développer l'action publique locale sur les questions littorales et maritimes (agences d'urbanisme, syndicats mixtes de gestion de l'eau, etc.) Le DSF est également perçu comme complexe par les pouvoirs publics, ce qui peut constituer un frein à sa mise en œuvre et à son appropriation. Les services de l'Etat sont

conscients de cette difficulté et souhaitent développer des outils permettant une approche plus communicative du document (à travers par exemple une cartographie interactive et des vidéos) et promouvoir les initiatives menées par les collectivités locales qui contribuent au DSF. La révision du DSF à l'horizon 2025 appelle à un changement d'approche, notamment Concernant la désignation des zones liées aux énergies marines renouvelables et la protection stricte de la biodiversité. Si la Région reste attentive à ce sujet, notamment à travers sa participation à la commission permanente du conseil maritime de façade, il sera essentiel que les pouvoirs publics locaux s'approprient ces enjeux et prennent part aux débats.

L'efficacité des stratégies de planification reste à prouver. Le suivi et l'évaluation des stratégies et des actions associées sont essentiels pour garantir que les actions des autorités contribuent effectivement à la réalisation des objectifs et servent la vision commune. Concernant les documents accessibles au public, quelques stratégies présentent des indicateurs et des objectifs. Un état des actions entreprises est parfois disponible, mais il ne permet pas d'évaluer leur efficacité. Le DSF comprend une partie suivie qui est bien détaillée. Cependant, la mise en œuvre de cette partie suivie est perçue comme complexe et manquant d'opérationnalité. L'efficacité de l'action publique repose sur l'évaluation de la mise en œuvre des objectifs et de leur opérationnalisation à travers la collecte et l'analyse de données pertinentes.

Περιφέρεια Κρήτης

Στην Ελλάδα, η κύρια ευθύνη για τον Χωρικό Σχεδιασμό (χερσαίο και θαλάσσιο) σε εθνικό και περιφερειακό επίπεδο ανήκει στην αρμοδιότητα του Υπουργείου Περιβάλλοντος και Ενέργειας. Το σύστημα χωρικού σχεδιασμού ορίζεται από τον Ν. 4447/2016, τον Ν. 4546/2018 (που μετέφερε την Οδηγία ΘΧΣ 2014/89/ΕΕ) όπως τροποποιήθηκε με τον Ν. 4759/2020, ο οποίος θέσπισε το πλέον πρόσφατο νομικό πλαίσιο για τον χωροταξικό σχεδιασμό στην Ελλάδα και όρισε δύο επίπεδα χωροταξικού σχεδιασμού, συμπεριλαμβανομένων των χωρικών σχεδίων (πλαισίων) εθνικής και περιφερειακής κλίμακας.

Το εθνικό επίπεδο χωροταξικού σχεδιασμού αποτελείται από:

- (α) την «Εθνική Χωρική Στρατηγική» (ΕΧΣ) και
- (β) μια σειρά τομεακών χωροταξικών πλαισίων «Ειδικά Πλαίσια Χωροταξικού Σχεδιασμού» (ΕΠΧΣ), τα οποία περιλαμβάνουν κατά κύριο λόγο στρατηγικές κατευθυντήριες επιλογές και εξειδικευμένες κανονιστικές διατάξεις.

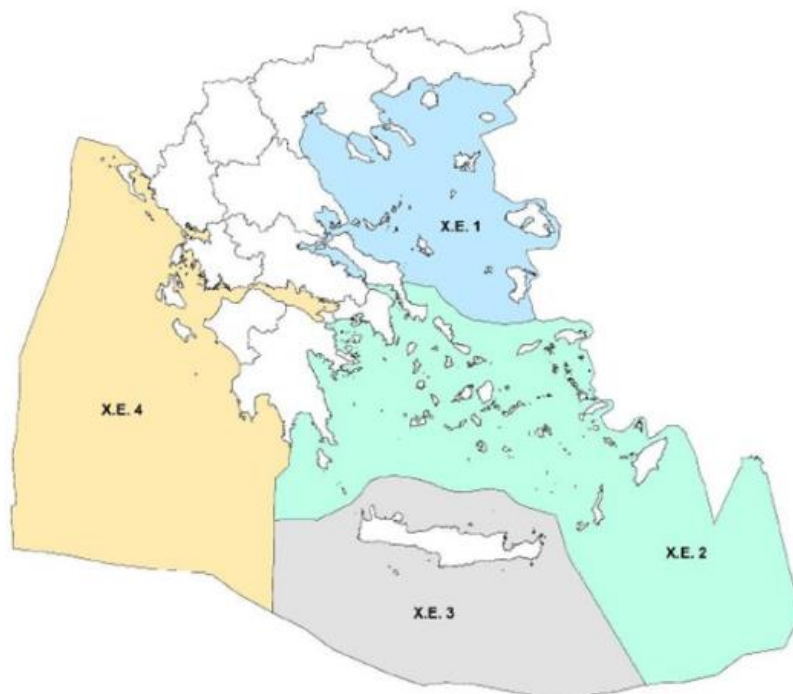
Η «Εθνική Χωρική Στρατηγική για τον Θαλάσσιο Χώρο» (ΕΧΣ_ΘΧ), ένα έγγραφο πολιτικής που αποτελεί μέρος της ΕΧΣ που προαναφέρθηκε, καθορίζει τις στρατηγικές κατευθύνσεις ως προς τη βιώσιμη ανάπτυξη του ελληνικού θαλάσσιου χώρου και αναφέρεται στις προτεραιότητες για την εκπόνηση του Θαλάσσιων Χωροταξικών Πλαισίων (ΘΧΠ). Τα θαλάσσια χωροταξικά πλαίσια (όπως ονομάζονται τα θαλάσσια χωροταξικά σχέδια) δεν έχουν ακόμα οριστικοποιηθεί και εγκριθεί. Έχοντας υπόψη τα αποτελέσματα της διαδικασίας δημόσιας διαβούλευσης και τη γνώμη του Εθνικού Συμβουλίου Χωροταξίας, προβλέπεται ότι εντός του πρώτου εξαμήνου του 2024, ο Υπουργός Περιβάλλοντος και Ενέργειας θα υποβάλει την τελική έκδοση της ΕΧΣ_ΘΧ στο Υπουργικό Συμβούλιο προς έγκριση και στη συνέχεια θα γίνει η σχετική ανακοίνωση στη Βουλή των Ελλήνων.

Αν και δεν υπάρχει ακόμη νομικά δεσμευτικό Εθνικό Θαλάσσιο Χωροταξικό Πλαίσιο στην Ελλάδα, ζητήματα που σχετίζονται με τον ΘΧΣ αντιμετωπίζονται στα «Ειδικά Πλαίσια Χωροταξικού Σχεδιασμού» που καλύπτουν συγκεκριμένους οικονομικούς τομείς. Μέχρι στιγμής έχουν εκπονηθεί τέτοια τομεακά πλαίσια για τις υδατοκαλλιέργειες (2011, επί του παρόντος υπό αναθεώρηση), τον τουρισμό (υπό επεξεργασία και οριστικοποίηση) και τη βιομηχανία (2009, υπό αναθεώρηση), τα οποία περιλαμβάνουν κατευθυντήριες γραμμές χωροταξικού σχεδιασμού για τα χερσαία, παράκτια και θαλάσσια τμήματα κάθε τομέα. Επιπλέον, το Ειδικό Πλαίσιο για τις Ανανεώσιμες Πηγές Ενέργειας (2008, νέα μελέτη/νέο σχέδιο υπό οριστικοποίηση) θέτει τις στρατηγικές κατευθυντήριες γραμμές για τα υπεράκτια αιολικά πάρκα.

Επίσης, βρίσκεται σε εξέλιξη ο σχεδιασμός της ανάπτυξης των υπεράκτιων αιολικών πάρκων, μέσω της αναθεώρησης του Ειδικού Χωροταξικού Πλαισίου για τις Ανανεώσιμες Πηγές Ενέργειας (ΑΠΕ) και σύμφωνα με όσα ορίζει ο Νόμος 4951/2022 (για την ανάπτυξη

υπεράκτιων ΑΠΕ) και ο Νόμος 4964/2022 (για την ανάπτυξη υπεράκτιων αιολικών πάρκων). Ο τομέας καθοδηγείται επίσης από το Εθνικό Πρόγραμμα Ανάπτυξης Υπεράκτιων Αιολικών Πάρκων (άρθρο 67 Ν. 4964/2022), το οποίο σκιαγραφεί τις εν δυνάμει Περιοχές Οργανωμένης Ανάπτυξης Υπεράκτιων Αιολικών Πάρκων (ΠΟΑΥΑΠ), σε μεσοπρόθεσμο και μακροπρόθεσμο χρονικό ορίζοντα ανάπτυξης. Για τον εντοπισμό αυτών των θαλάσσιων περιοχών λαμβάνονται υπόψη διάφοροι κανόνες και κριτήρια, περιβαλλοντικά, κοινωνικά και τεχνοοικονομικά, απαιτήσεις φορέων, συμβατότητα και συνυπαρξη με άλλες θαλάσσιες δραστηριότητες, προσβασιμότητα σε υποδομές διασύνδεσης ηλεκτρικής ενέργειας και ικανότητα μεταφοράς της υπερακτίας ενέργειας στην αγορά. Η οριοθέτηση των Περιοχών Οργανωμένης Ανάπτυξης Υπεράκτιων Αιολικών Πάρκων (ΠΟΑΥΑΠ) γίνεται σε απόσταση πέραν του ενός ναυτικού μιλίου (1.852 m) από τις ακτογραμμές έως τα όρια των ελληνικών χωρικών υδάτων 6 και 12 ναυτικών μιλίων για το Αιγαίο και το Ιόνιο αντίστοιχα, σε συμφωνία με την Οδηγία Πλαίσιο 2000/60/ΕΚ για την διαχείριση των υδατικών πόρων. Μέχρι στιγμής, η Περιφέρεια Κρήτης έχει εκφράσει άποψη επί της Στρατηγικής Μελέτης Περιβαλλοντικών Επιπτώσεων (ΣΜΠΕ) του Εθνικού Προγράμματος Ανάπτυξης Υπεράκτιων Αιολικών Πάρκων (ΕΠΑΥΑΠ) με την υπ' αριθ. 59/8-12-2023 απόφαση της Επιτροπής Περιβαλλοντος και Χωροταξίας της Περιφέρειας.

Το περιφερειακό επίπεδο αποτελείται από: (α) τα Περιφερειακά Χωροταξικά Πλαίσια (ΠΧΠ), και (β) τα Πλαίσια Θαλάσσιου Χωροταξικού Σχεδιασμού (ΘΧΠ), τα οποία αντιστοιχούν στα Ελληνικά Θαλάσσια Χωροταξικά Σχέδια. Αυτά μπορεί να είναι περιφερειακά, διαπεριφερειακά ή υποπεριφερειακά.



Εικόνα 1. Θαλάσσιες Χωρικές Ενότητες, όπως ορίζονται στο πλαίσιο του έργου ΘΑΛ-ΧΩΠ II και περιλαμβάνονται στο προσχέδιο της ΕΧΣ_ΘΧ (Πηγή: Σχέδιο Εθνικής Χωρικής Στρατηγικής για τον Θαλάσσιο Χώρο).

Εντός του 2024 αναμένεται να εκδοθεί Υπουργική Απόφαση για τη θεσμοθέτηση οριοθέτησης των τεσσάρων θαλάσσιων χωρικών ενοτήτων (ΘΧΕ):

- Θαλάσσια Χωρική Ενότητα 1 (MSU1) Βορείου Αιγαίου (βλ. περίπτωση μελέτης της Περιφέρειας Κεντρικής Μακεδονίας στο κεφάλαιο 9), μια γεωγραφικά σημαντική ζώνη, ιδιαίτερα λόγω της διασυννοριακής της θέσης. Η περιοχή αυτή διαθέτει σημαντικές δυνατότητες για την επέκταση διαφόρων παραγωγικών δραστηριοτήτων, π.χ. αλιεία, υδατοκαλλιέργεια, συμπεριλαμβανομένης της υδατοκαλλιέργειας οστρακοειδών, και εξόρυξη πετρελαίου και φυσικού αερίου. Επιπλέον, είναι μια πολλά υποσχόμενη περιοχή για την εγκατάσταση υπεράκτιων αιολικών πάρκων. Επιπλέον, είναι αξιοσημείωτη η δυναμική της για την τόνωση των τουριστικών δραστηριοτήτων.
- Η Θαλάσσια Χωρική Ενότητα 2 (MSU2), περικλείει το νότιο τμήμα του Αιγαίου πελάγους, ένα σημαντικό τουριστικό προορισμό, γνωστό για τα όμορφα νησιά του, όπως η Σαντορίνη, η Μύκονος και η Ρόδος, αλλά και το σύμπλεγμα των Μικρών Κυκλάδων. Ταυτόχρονα η περιοχή έχει μια εξαιρετικά πλούσια πολιτιστική και ιστορική κληρονομιά, με πολλούς υποθαλάσσιους αρχαιολογικούς χώρους.
- Η Θαλάσσια Χωρική Ενότητα 3 (MSU3) σχετίζεται με την περιοχή στην οποία επικεντρώνεται αυτή η μελέτη περίπτωσης, δηλαδή την Κρήτη, ένα σημαντικό τμήμα

της χώρας με γεωπολιτική σημασία και ένα σημαντικό τουριστικό προορισμό με διεθνή εμβέλεια. Η θαλάσσια περιοχή της Κρήτης αντιμετωπίζει σημαντικές προκλήσεις, οι οποίες συνδέονται, μεταξύ άλλων, με το ενδιαφέρον για έρευνα και εξόρυξη υδρογονανθράκων στο νοτιοδυτικό και δυτικό τμήμα του θαλάσσιου χώρου της Κρήτης.

- Θαλάσσια Χωρική Ενότητα 4 (MSU4). Περιλαμβάνει τα Επτάνησα στο δυτικό μέτωπο της χώρας. Πέντε από αυτά (δηλαδή η Ζάκυνθος, η Ιθάκη, η Κέρκυρα, η Κεφαλονιά και η Λευκάδα) αποτελούν είτε σημαντικούς είτε εξαιρετικούς σημαντικά τουριστικούς προορισμούς σε παγκόσμιο επίπεδο.

Σε κάθε περίπτωση, οι παραπάνω Θαλάσσιες Χωρικές Ενότητες προτάθηκαν από το προσχέδιο Εθνικής Χωρικής Στρατηγικής για το Θαλάσσιο Χώρο (παραδοτέο του έργου INTERREG THAL-CHOR II), ενώ στην ισχύουσα νομοθεσία (ν. 4546/2018), είναι σαφές ότι τα Θαλάσσια χωροταξικά πλαίσια μπορεί να είναι υποπεριφερειακής, περιφερειακής ή διαπεριφερειακής κλίμακας. Παρακάτω, συνοψίζεται η τρέχουσα κατάσταση του ΘΧΣ :

- Εκκρεμεί η επεξεργασία και έγκριση των θαλάσσιων χωροταξικών σχεδίων (θαλάσσιων χωροταξικών πλαισίων, σύμφωνα με τους ορισμούς των σχεδίων ως πλαίσια).
- Εντός του 2024 αναμένεται να εκδοθεί Υπουργική Απόφαση που θα προδιορίζει τεχνικές προδιαγραφές για την εκπόνηση, αξιολόγηση και τροποποίηση/αναθεώρηση των Περιφερειακών Θαλάσσιων Χωροταξικών Πλαισίων (ΠΘΧΠ), καθώς και κάθε άλλο θέμα σχετικό με την εφαρμογή τους.
- Ολοκληρώθηκε η μελέτη του πρώτου ΘΧΠ, ως πιλοτικού πλαισίου, για τη θαλάσσια χωρική ενότητα Βορείου Αιγαίου(ΘΧΕ1), στο πλαίσιο του έργου INTERREG «THAL-CHOR II». Επί του παρόντος, η μελέτη αυτή βρίσκεται σε διαδικασία περαιτέρω επεξεργασίας.
- Το Υπουργείο Περιβάλλοντος & Ενέργειας, ως αρμόδια αρχή για τη σύσταση και την εφαρμογή του ΘΧΣ (αρμόδια αρχή ΘΧΣ), βρίσκεται σε συνεχή συνεργασία με τα συναρμόδια υπουργεία και φορείς και την επιστημονική κοινότητα για την ολοκλήρωση των σχετικών διαδικασιών. Προβλέπεται η βέλτιστη εφαρμογή του, ώστε να διασφαλιστεί η βιώσιμη ανάπτυξη του θαλάσσιου χώρου του και η προστασία του περιβάλλοντος στο πλαίσιο των ιδιαίτερων χαρακτηριστικών της χώρας, και των ενεργειακών και γεωπολιτικών προκλήσεων.

Η ΕΧΣ_ΘΧ δεν έχει δεσμευτικό χαρακτήρα, καθώς χρησιμεύει ως ενδεικτική στρατηγική για έναν μακροπρόθεσμο ΘΧΣ. Από την άλλη πλευρά, ως πλαίσιο πολιτικής, η ΕΧΣ_ΘΧ πρέπει να λαμβάνει υπόψη τις κατευθύνσεις των υφιστάμενων αναπτυξιακών και τομεακών χωροταξικών σχεδίων που αναφέρονται παραπάνω (δηλ. τα Εθνικά και Περιφερειακά Σχέδια Ανάπτυξης της Χώρας, την Στρατηγική Έξυπνης Εξειδίκευσης 2021-2027, το Πολυετές Σχέδιο Ανάπτυξης Υδατοκαλλιεργειών στην Ελλάδα, Εθνικές και Περιφερειακές Στρατηγικές Προσαρμογής στην Κλιματική Αλλαγή, τα Εθνικά Σχέδια

Ενέργειας και Κλίματος και ειδικότερα τα σχέδια και στρατηγικές του Υπουργείου Ναυτιλίας και Νησιωτικής Πολιτικής).

Το Υπουργείο Περιβάλλοντος και Ενέργειας συνεργάζεται με το Υπουργείο Ναυτιλίας & Νησιωτικής Πολιτικής για την εφαρμογή του ΘΧΣ. Ο Νόμος 4770 του Υπουργείου Ναυτιλίας και Νησιωτικής Πολιτικής, που εκδόθηκε το 2021, επικεντρώνεται στην Ολοκληρωμένη Θαλάσσια Πολιτική (ΟΘΠ) για τη νησιωτική επικράτεια και πολλές διατάξεις της σχετικής Στρατηγικής θα πρέπει να έχουν εκπληρωθεί έως το τέλος του 2027. Μετά το Επιχειρησιακό Σχέδιο του 2023, οργανώθηκαν «Περιφερειακοί Διάλογοι» για την ιεράρχηση των σχετικών προτάσεων και έργων που θα λειτουργήσουν τα επόμενα χρόνια (Υπουργείο Ναυτιλίας και Νησιωτικής Πολιτικής: 2022).

Στις επόμενες ενότητες παρουσιάζονται και συζητούνται τα σχέδια και οι στρατηγικές που είναι πλέον σε ισχύ και αφορούν τις παράκτιες και θαλάσσιες περιοχές της Περιφέρειας Κρήτης. Στο πλαίσιο αυτό, πρέπει να ληφθούν υπόψη τα ακόλουθα:

- Η Περιφέρεια είναι ένα χωρικά αυτοτελές σύστημα με σχετική ενδοχώρα και πληθυσμό. Αναπτύχθηκε ραγδαία, πάνω από τον εθνικό μέσο όρο, για μεγάλο χρονικό διάστημα και βελτίωσε τη θέση της στην ελληνική οικονομία μέχρι το 2009. Η οικονομική δραστηριότητα και η απασχόληση κορυφώθηκαν το 2008, με την ενίσχυση του τουρισμού, του εμπορίου και του τομέα ακινήτων, ενώ ο πρωτογενής τομέας υποχώρησε σημαντικά (κυρίως σε επίπεδο απασχόλησης), παραμένοντας ωστόσο σημαντικός στο νησί (Περιφέρεια Κρήτης (2020), Στρατηγικός Σχεδιασμός 2020-2023).
- Η Κρήτη, με το σπάνιο φυσικό περιβάλλον της και μερικά από τα πιο αναγνωρίσιμα σημεία πολιτιστικού ενδιαφέροντος, είναι ένας από τους πιο δημοφιλείς τουριστικούς προορισμούς παγκοσμίως, με εντυπωσιακή ανάκαμψη μετά την πανδημία.
- Τα στοιχεία σχετικά με το ποσοστό απασχόλησης και το πλήρες δημογραφικό προφίλ της Περιφέρειας Κρήτης είναι διαθέσιμα μέσω του συνδέσμου στην υποσημείωση³⁶.
- Η Κρήτη διαθέτει σημαντικό αριθμό ακαδημαϊκών και ερευνητικών ιδρυμάτων, με υψηλό βαθμό συμμετοχής σε διεθνή και ευρωπαϊκά δίκτυα. Έχει επίσης αναπτύξει δομές έρευνας και καινοτομίας σε πολύ υψηλότερο επίπεδο, σε σύγκριση με άλλες περιφέρειες της χώρας.
- Αυτή την περίοδο αναβαθμίζονται οι θαλάσσιες πύλες της Κρήτης, με την επέκταση των λιμενικών εγκαταστάσεων, νέο επιβατικό σταθμό και το τμήμα κρουαζιέρας στο λιμάνι της Σούδας. Η ανάπτυξη αυτή περιλαμβάνει επίσης την αναβάθμιση του σταθμού εμπορευματοκιβωτίων στο λιμάνι του Ηρακλείου και τη βελτίωση του

³⁶ <https://www.iz.sk/en/projects/eu-regions/EL43>

παλαιού τμήματος του λιμένα Σητείας και των λιμενικών εγκαταστάσεων Παλαιοχώρας.

- Η Κρήτη τροφοδοτείται με ενέργεια από την ηπειρωτική χώρα μέσω της ηλεκτρικής διασύνδεσης με την περιοχή της Πελοποννήσου. Σε εξέλιξη βρίσκεται η δεύτερη φάση ανάπτυξης αυτής της διασύνδεσης, η οποία θα συμβάλει στον τερματισμό της χρήσης των ρυπογόνων ατμοηλεκτρικών σταθμών στην Κρήτη.

Εξεταζόμενα σχέδια και στρατηγικές

Στην Ελλάδα, ένα ενιαίο και συγκεντρωτικό διοικητικό σύστημα, οι εθνικές στρατηγικές και τα εθνικά σχέδια στοχεύουν να εξασφαλίσουν ότι οι περιφερειακές πολιτικές είναι επαρκώς συντονισμένες και ενσωματωμένες στην ευρύτερη εθνική ατζέντα. Αυτό είναι ιδιαίτερα σημαντικό σε τομείς όπως ο χωροταξικός σχεδιασμός, η προστασία του περιβάλλοντος, η οικονομική ανάπτυξη και ο σχεδιασμός υποδομών, όπου οι ενέργειες μιας περιφέρειας μπορούν να έχουν επιπτώσεις σε άλλες. Κατόπιν αυτού, ο ελληνικός ΘΧΣ υιοθετεί αυτήν την προσέγγιση εκ των άνω προς τα κάτω. Επιπλέον, σε περιφερειακό επίπεδο, ο χωροταξικός σχεδιασμός, τόσο χερσαίος όσο και θαλάσσιος, θα πρέπει να ευθυγραμμίζεται και να αντικατοπτρίζει τους στόχους και τις προτεραιότητες που περιγράφονται όχι μόνο σε ολοκληρωμένα εθνικά και περιφερειακά χωροταξικά σχέδια και στρατηγικές αλλά και σε τομεακά πλαίσια και άλλα σχέδια προσανατολισμένα στη διατήρηση και προστασία του περιβάλλοντος.

Επί του παρόντος, δεν υπάρχει θαλάσσιο χωροταξικό σχέδιο, ούτε σε εθνική ούτε σε περιφερειακή ή υποπεριφερειακή κλίμακα. Ο σχεδιασμός και τα σχετικά μέτρα για τον θαλάσσιο χώρο στην επικράτεια προέρχονται επίσης από τομεακή νομοθεσία που αφορά την προστασία του περιβάλλοντος και βασικούς οικονομικούς τομείς όπως ο τουρισμός, η υδατοκαλλιέργεια, η βιομηχανία, οι ΑΠΕ ή η χρήση ορυκτών πόρων (όπως περιγράφεται παρακάτω).

Τα βασικά υφιστάμενα ολοκληρωμένα χωρικά σχέδια ή στρατηγικές, που σχετίζονται με την Περιφέρεια, περιγράφονται συνοπτικά στην επόμενη παράγραφο. Το πρώτο είναι το Περιφερειακό Χωροταξικό Πλαίσιο Κρήτης (ΠΧΠΚ) το οποίο αποτελεί ένα ολοκληρωμένο σχέδιο (στρατηγικό και ρυθμιστικό) που προβλέπει ρυθμίσεις τόσο για το χερσαίο όσο και για το θαλάσσιο τμήμα της Περιφέρειας. Το σχέδιο αυτό αναθεωρήθηκε το 2017 και εγκρίθηκε από την Περιφέρεια Κρήτης το ίδιο έτος με την υπ' αριθμ. 42284/13.10.2017 απόφαση (ΦΕΚ 260/ΑΑΠ/2017). Το δεύτερο θεσμικό κείμενο είναι ο πρόσφατος νόμος 4770/2021 για την ολοκληρωμένη θαλάσσια πολιτική για τον ελληνικό νησιωτικό χώρο, που εισήχθη από το συναρμόδιο (με την εθνική αρχή του ΘΧΣ), Υπουργείο Ναυτιλίας και Νησιωτικής Πολιτικής. Ο νόμος αυτός προβλέπει την «Ολοκληρωμένη Εθνική Θαλάσσια Στρατηγική» η οποία έχει σαφή χωρική, οικονομική, κοινωνική και περιβαλλοντική διάσταση και διασφαλίζει τη διασύνδεση και τη συμπληρωματικότητα με άλλες κρίσιμες Εθνικές Στρατηγικές που σχετίζονται με τον θαλάσσιο/νησιωτικό χώρο αλλά και με τον Θαλάσσιο Χωροταξικό Σχεδιασμό.

Στην Περιφέρεια Κρήτης, μπορούν να εντοπιστούν τρεις τύποι σχεδίων προστασίας και διατήρησης:

- Ο πρώτος αναφέρεται στους κηρυγμένους χώρους προστασίας Θαλάσσιας/Υποθαλάσσιας Πολιτιστικής Κληρονομιάς (ΘΥΠΚ) που περιλαμβάνονται στη Διαδικτυακή Πύλη του Αρχαιολογικού Κτηματολογίου³⁷. Αυτό καταγράφει και τεκμηριώνει τα μνημεία, τους αρχαιολογικούς χώρους, τους ιστορικούς τόπους και τις ζώνες προστασίας της Ελλάδας. Σήμερα, η Διαδικτυακή Πύλη του Αρχαιολογικού Κτηματολογίου περιλαμβάνει περιγραφικά και γεωχωρικά δεδομένα για περισσότερα από 17.000 Ακίνητα Μνημεία, περίπου 3.400 Αρχαιολογικούς Χώρους και Ιστορικούς Τόπους, 844 Ζώνες Προστασίας και 220 Μουσεία.
- Το δεύτερο αναφέρεται σε ένα πλήθος τοποθεσιών Natura 2000 που υπάρχουν στο νησί της Κρήτης, οι οποίες χαρακτηρίζονται είτε ως «Ζώνες Ειδικής Προστασίας(ΖΕΠ)» για την Ορνιθοπανίδα, όπως ορίζονται στην Οδηγία 79/409/ΕΚ «για τη διατήρηση των άγριων πτηνών» ή ως «Ειδικές Ζώνες Διατήρησης (ΕΖΔ)» βάσει της Οδηγίας για τους Οικοτόπους. Μόνο η νησίδα Δία (βορειοανατολικό τμήμα του Κρητικού Πελάγους) χαρακτηρίζεται ως προστατευόμενη περιοχή και υπό τις δύο Οδηγίες. Αξιοσημείωτο είναι ότι δεν υπάρχουν Θαλάσσιες Προστατευόμενες Περιοχές στην Κρήτη, δηλαδή περιοχές με ειδικά μέτρα προστασίας, που ορίζονται με Προεδρικό Διάταγμα.
- Το τρίτο αναφέρεται στην προστασία και διατήρηση του τοπίου κατ' εφαρμογή των απαιτήσεων της Ευρωπαϊκής Σύμβασης Τοπίου, που κυρώθηκε από την ελληνική κυβέρνηση το 2010. Στην Κρήτη εντοπίζονται εννέα χωρικές ενότητες – τα λεγόμενα «τοπία ιδιαίτερης σημασίας», ως μέρος ενός ενιαίου δικτύου «περιοχών με φέρουσα ικανότητα φυσικού και πολιτιστικού κεφαλαίου». Αυτές οι εννέα περιοχές είναι στη μεγάλη τους πλειοψηφία παράκτιες (κυρίως βρίσκονται κατά μήκος των ανατολικών, δυτικών και νότιων ακτών της Κρήτης)³⁸.

Η τρίτη κατηγορία αναφέρεται σε τομεακά σχέδια. Αυτά τα σχέδια είναι είτε σχέδια εθνικής εμβέλειας που περιλαμβάνουν ειδικές διατάξεις που αφορούν την Περιφέρεια είτε εθνικά/περιφερειακά μη χωροταξικά σχέδια που ισχύουν επίσης για τον θαλάσσιο/νησιωτικό χώρο και τη διάδραση γης-θάλασσας. Τα εξεταζόμενα σχέδια και στρατηγικές καλύπτουν τους τομείς της υδατοκαλλιέργειας, του τουρισμού, της βιομηχανίας και των ΑΠΕ καθώς και της αλιείας και των καταδύσεων (μόνο οριζόντιες διατάξεις σε σχετικούς νόμους ή στρατηγικές).

Επί παραδείγματι, το Ειδικό Πλαίσιο Χωροταξικού Σχεδιασμού για την υδατοκαλλιέργεια που εκδόθηκε το 2011 (επί του παρόντος υπό αναθεώρηση), περιλαμβάνει οδηγίες για ένα

³⁷ <http://www.arxaiologikoktimatologio.gov.gr/>

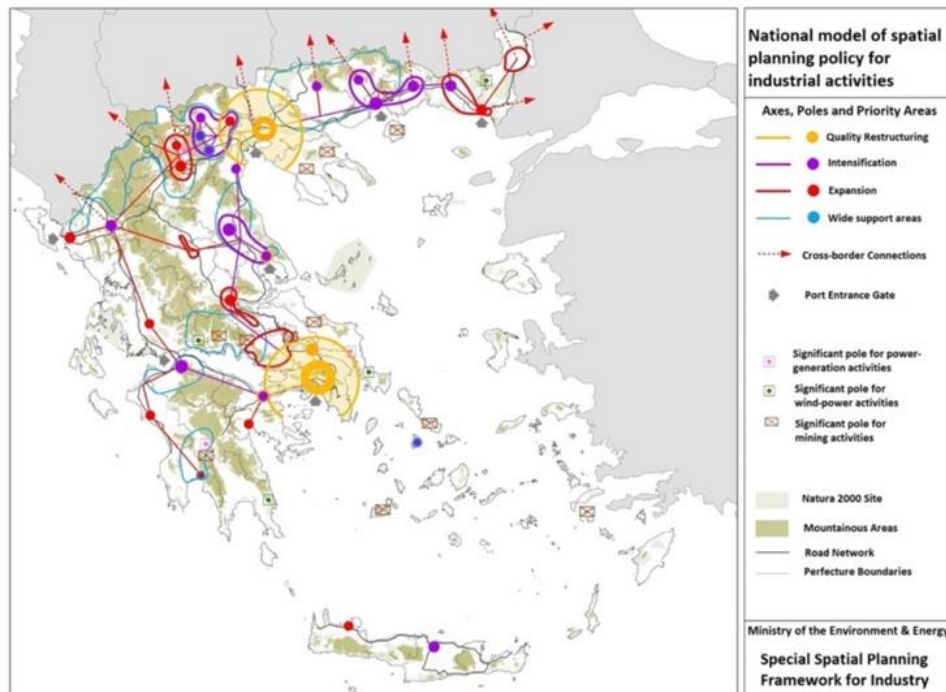
³⁸ https://thalchor-2.upen.gov.gr/layers/geonode:topia_idiaterhs_shmasias/metadata_detail

εθνικό πρότυπο χωρικής οργάνωσης για δραστηριότητες υδατοκαλλιέργειας, αναλυτικά για κάθε είδος καλλιέργειας (θαλάσσια είδη πχ. ιχθύων, καρκινοειδών, κεφαλόποδων, φυκιών, οστρακοκαλλιέργεια, είδη γλυκέων υδάτων και καλλιέργειες υδρόβιων οργανισμών σε φυσικά υφάλμυρα οικοσυστήματα). Παράλληλα, το μη χωρικό σχέδιο, δηλαδή το «Πολυετές Εθνικό Στρατηγικό Σχέδιο για την Ανάπτυξη της Υδατοκαλλιέργειας 2021-2027» προβλέπει μέτρα για την οργάνωση Περιοχών Οργανωμένης Ανάπτυξης Υδατοκαλλιέργειας (ΑΖΑ ή ΠΟΑΥ στα ελληνικά) έως το 2027³⁹.

Ένα Ειδικό πλαίσιο Χωροταξικού Σχεδιασμού, εξαιρετικά επίκαιρο για την περιοχή της Κρήτης, είναι το Ειδικό Χωροταξικό Πλαίσιο Ανανεώσιμων Πηγών Ενέργειας (ΑΠΕ) που εκδόθηκε το 2008, λόγω τόσο της συνεχιζόμενης έρευνας για υδρογονάνθρακες σε δύο «γαλάζια οικόπεδα» στο Κρητικό Πέλαγος όσο και την προβλεπόμενη ανάπτυξη της υπεράκτιας αιολικής ενέργειας στην περιοχή. Η Ελλάδα στοχεύει να δημιουργήσει αιολικά πάρκα στο Αιγαίο, το Ιόνιο και τη θάλασσα της Λεβαντίνης ως μια προσπάθεια να μειώσει την εξάρτησή της από τα ορυκτά καύσιμα και να ενισχύσει την ικανότητα παραγωγής ανανεώσιμης ενέργειας. Η Ελληνική Εταιρεία Διαχείρισης Υδρογονανθράκων και Ενεργειακών Πόρων (ΕΔΕΥΕΠ), υπεύθυνη για τη σχετική μη χωρική στρατηγική και το αντίστοιχο πρόγραμμα, έχει εντοπίσει δέκα περιοχές επιλέξιμες για ανάπτυξη έως το 2030-2032, με στόχο την επίτευξη συνολικής ισχύος περίπου 4,9 GigaWatt, κυρίως για πλωτά έργα, μερικά από τα οποία χωροθετούνται στην Κρήτη.

Τέλος, σημαντικό για την Περιφέρεια είναι και το Ειδικό Χωροταξικό Πλαίσιο για τη Βιομηχανία (ΕΧΠΒ) που εκδόθηκε το 2009. Στο πλαίσιο αυτό η Περιφέρεια Κρήτης θεωρείται στην ίδια εδαφική ενότητα με το Νότιο και το Βόρειο Αιγαίο. Η βιομηχανία δεν έχει γενικό κεντρικό ρόλο σε αυτή την εδαφική ενότητα, αλλά σε ορισμένες περιοχές η παρουσία της μπορεί να γίνει πιο σημαντική. Η διατήρηση κάποιας βιομηχανικής δραστηριότητας στην υπόλοιπη περιφέρεια μπορεί να συμβάλει στη μείωση των κινδύνων υπερβολικής μονοτομεακής εξάρτησης όπως πχ. από τον τουρισμό. Για την Κρήτη προτείνεται εντατικοποίηση και επέκταση των βιομηχανικών δραστηριοτήτων (Εικόνα 2), λαμβάνοντας υπόψη τις περιβαλλοντικές επιπτώσεις ιδιαίτερα στην παράκτια ζώνη.

³⁹ <https://alieia.gr/wp-content/uploads/2022/12/%CE%A0%CE%91%CE%9B%CE%A5%CE%98-2021-2027.pdf>



Εικόνα 2. Ειδικό Χωροταξικό Πλαίσιο Βιομηχανίας (ΕΧΠΒ), Ελλάδα (Πηγή: ΦΕΚ 151/ΑΑΠ/2009).

Συγκεκριμένα, το ΕΧΠΒ προβλέπει την ανάπτυξη βιομηχανικών ή βιοτεχνικών πάρκων (ΒΙΠΕ, ΒΙΟΠΑ) που χωροθετούνται στην ώριμη βιομηχανική περιοχή Ηρακλείου-Γουβών και στην υπό ανάπτυξη βιομηχανική περιοχή των Χανίων. Και οι δύο εντάσσονται κατά μήκος του εθνικού αναπτυξιακού άξονα της χώρας όπως περιγράφεται στο ΕΧΠΒ, και με το άφθονο κοινωνικό και φυσικό τους κεφάλαιο, είναι κατάλληλες για να συμβάλλουν στις σύγχρονες διαδικασίες βιομηχανικής ανάπτυξης της χώρας. Ενώ στο ΕΧΠΒ, υπάρχει ένα σαφές μέτρο για την προστασία των παράκτιων ζωνών στις οποίες απαγορεύεται (ειδικά σε τουριστικά νησιά) η ανάπτυξη βιομηχανικών περιοχών, αυτή η ρήτρα δεν ισχύει για την Κρήτη και την Εύβοια. Επί του παρόντος, η χωροταξική και πολεοδομική νομοθεσία του 2020 (Ν. 4759/2020) περιορίζει τις άτυπες βιομηχανικές συγκεντρώσεις⁴⁰ (σε περιοχές με σχέδια χρήσης γης) και προωθεί —μέσω χωρικών κινήτρων— την ελκυστικότητα των επιχειρηματικών πάρκων, των βιομηχανικών πάρκων ή των Οργανωμένων Υποδοχέων Μεταποιητικών και Επιχειρηματικών Δραστηριοτήτων (ΟΥΜΕΔ).

Από την άλλη, μετά την απόσυρση του τελευταίου Ειδικού Χωροταξικού Πλαισίου Τουρισμού (ΕΧΠΤ) το 2013, η κατανομή των τουριστικών εγκαταστάσεων εξαρτήθηκε από τα υφιστάμενα Περιφερειακά Χωροταξικά Πλαίσια, τα οποία ωστόσο δεν περιλαμβάνουν σύγχρονα μοντέλα τουριστικής ανάπτυξης. Σχετική με την απουσία τουριστικού χωροταξικού σχεδίου είναι η ψήφιση του νόμου 4688/2020 που ορίζει τις διαδικασίες για την χωροθέτηση καταδυτικών πάρκων. Σύμφωνα με αυτό το θεσμικό πλαίσιο η χωροθέτηση των καταδυτικών πάρκων πρέπει να προστατεύουν τα θαλάσσια

⁴⁰ https://www.ggb.gr/sites/default/files/basic-page-files/ΑΒΣ-13_03_ΗΡΑΚΛΕΙΟΥ.pdf

οικοσυστήματα παρέχοντας παράλληλα ελεγχόμενη πρόσβαση για καταδύσεις αναψυχής, συμβάλλοντας έτσι στη βιώσιμη χρήση των θαλάσσιων πόρων και στην τουριστική ανάπτυξη.

Τέλος, το Περιφερειακό Σχέδιο Προσαρμογής στην Κλιματική Αλλαγή (ΠεΣΠΚΑ) για την Κρήτη, αντιμετωπίζει τις βασικές κλιματικές προκλήσεις και τις αναμενόμενες επιπτώσεις τους σε όλη την περιφέρεια, με ιδιαίτερη έμφαση στις παράκτιες περιοχές. Αυτό το σχέδιο αποτελεί μέρος των ευρύτερων στρατηγικών προσαρμογής της Ελλάδας στην κλιματική αλλαγή και περιλαμβάνει την ανάπτυξη και εφαρμογή Περιφερειακών Σχεδίων Δράσης Προσαρμογής (ΠΣΔΠ) από τις Ελληνικές Περιφερειακές Αρχές, σύμφωνα με την Εθνική Στρατηγική Προσαρμογής στην Κλιματική Αλλαγή, η οποία εγκρίθηκε από το Ελληνικό Κοινοβούλιο και θεσπίστηκε βάσει του Εθνικού Νόμου για το Κλίμα.

Τα κύρια χαρακτηριστικά και οι εξεταζόμενοι τομείς των αναλυόμενων στρατηγικών και σχεδίων συνοψίζονται αντίστοιχα στον πρώτο και δεύτερο πίνακα παρακάτω.

Σύντομος τίτλος	Κλίμακα			Νομικά δευσμευτικό		Τυπολογία			Περιλαμβάνονται μέτρα
	Τοπικός	Περιφερειακό	Εθνικός	ΝΑΙ	ΟΧΙ	Στρατηγικά	Ρυθμιστικά	Και τα δύο	
Κατηγορία 1: οριζόντια σχέδια και στρατηγικές									
Περιφερειακό Χωροταξικό Πλαίσιο Περιφέρειας Κρήτης (ΠΧΠΧΣ)		X		X				X	X
Νόμος 4770/2021 για την Ολοκληρωμένη Θαλάσσια Πολιτική			X	X				X	X
Κατηγορία 2: σχέδια και στρατηγικές προστασίας και διατήρησης									
Τοποθεσίες προστασίας θαλάσσιας/υποθαλάσσιας πολιτιστικής κληρονομιάς	X		X	X			X		X
Περιοχές Natura 2000	X			X			X		X
Χωρικές ενότητες για την προστασία και διατήρηση του τοπίου		X			X	X			X
Κατηγορία 3: Σχέδια για οικονομικούς τομείς και άλλες θαλάσσιες χρήσεις και δραστηριότητες									
Ειδικό Χωροταξικό Πλαίσιο υδατοκαλλιέργειας	X		X	X				X	X
Πολυετής Στρατηγική Ανάπτυξης Υδατοκαλλιέργειας 2021-2030: Τομείς Οργανωμένης Ανάπτυξης Υδατοκαλλιέργειας	X		X	X				X	X
Ειδικό Χωροταξικό Πλαίσιο Ανανεώσιμων Πηγών Ενέργειας	X		X	X				X	X

Σύντομος τίτλος	Κλίμακα			Νομικά δευσμευτικό		Τυπολογία			Περιλαμβάνονται μέτρα
	Τοπικός	Περιφερειακό	Εθνικός	ΝΑΙ	ΟΧΙ	Στρατηγικά	Ρυθμιστικά	Και τα δύο	
Ειδικό Χωροταξικό Πλαίσιο Τουρισμού	X		X	X				X	X
Ειδικό Χωροταξικό Πλαίσιο Βιομηχανίας	X		X	X				X	X
Κανονισμοί σχετικά με την αλιεία	X			X			X		X
Χωροθέτηση καταδυτικών πάρκων	X			X			X		X
Περιφερειακό Σχέδιο Προσαρμογής στην Κλιματική Αλλαγή (ΠεΣΠΚΑ)		X		X		X			X

Σύντομος τίτλος	ΑΛ	ΥΚ	ΠΘΤ	ΔΑ	ΘΜ	ΛΙΜ	ΘΑΠΕ	ΕΞΠΦΑ	ΘΑ	ΥΠ	Η/Υ	ΝΑ	ΠΑΠ	Ε&Κ	ΠΑ	ΦΥΣ	ΤΟΠ	ΘΥΠΚ
Κατηγορία 1: οριζόντια σχέδια και στρατηγικές																		
Περιφερειακό Χωροταξικό Πλαίσιο Κρήτης (ΠΧΠΚ)	X	X	X		X	X	X	X			X			X	X	X	X	X
Νόμος 4770/2021 για την Ολοκληρωμένη Θαλάσσια Πολιτική	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Κατηγορία 2: σχέδια και στρατηγικές προστασίας και διατήρησης																		
Τόποι Προστασίας Θαλάσσιας/Υποθαλάσσιας Πολιτιστικής Κληρονομιάς																	X	X
Περιοχές Natura 2000			X	X											X	X		

Σύντομος τίτλος	ΑΛ	Υ Κ	ΠΘ Τ	ΔΑ	ΘΜ	ΛΙΜ	Θ ΑΠΕ	ΕΞΠ ΦΑ	ΘΑ	ΥΠ	Η/ Υ	ΝΑ	ΠΑΠ	Ε&Κ	ΠΑ	ΦΥΣ	ΤΟΠ	ΘΥΠΚ
Χωρικές ενότητες για την προστασία και διατήρηση του τοπίου			X	X											X	X	X	X
Κατηγορία 3: Σχέδια για οικονομικούς τομείς και άλλες θαλάσσιες χρήσεις και δραστηριότητες																		
Ειδικό Χωροταξικό Πλαίσιο Υδατοκαλλιεργειών	X	X																
Πολυετές Εθνικό Στρατηγικό Σχέδιο για την Ανάπτυξη των Υδατοκαλλιεργειών για τη νέα προγραμματική περίοδο 2021-2030 : Περιοχές Οργανωμένης Ανάπτυξης Υδατοκαλλιέργειας	X	X																
Ειδικό Χωροταξικό Πλαίσιο Ανανεώσιμων Πηγών Ενέργειας	X													X				
Ειδικό Χωροταξικό Πλαίσιο Τουρισμού		X	X	X												X	X	X
Ειδικό Χωροταξικό Πλαίσιο Βιομηχανίας						X								X	X			
Κανονισμοί σχετικά με την αλιεία						X												
Χωροθέτηση καταδυτικών πάρκων	X																	X
Περιφερειακό Σχέδιο Προσαρμογής στην Κλιματική Αλλαγή (ΠεΣΠΚΑ)	X	X	X												X	X	X	X

ΑΛ = Αλιεία, ΥΚ = Υδατοκαλλιέργεια, ΠΘΤ = Παράκτιος και θαλάσσιος τουρισμός, ΔΑ = δραστηριότητες αναψυχής, ΘΜ = Θαλάσσιες μεταφορές, ΛΙΜ = Λιμενικές δραστηριότητες, ΘΑΠΕ = Θαλάσσιες ανανεώσιμες πηγές ενέργειας, ΕΞΠΦΑ = Εξερεύνηση και εκμετάλλευση πετρελαίου και φυσικού αερίου, ΘΑ = Θαλάσσια αδρανή (εξόρυξη άμμου και κατασκευές παραλίας), ΥΠ = Υποδομές και ρομποτική εξόρυξη βαθέων υδάτων, Α&Κ = Αγωγοί και καλώδια, ΝΑ = Ναυτική άμυνα, ΠΑΠ = περιοχές απόρριψης (π.χ. για ιζήματα ή πυρομαχικά), Ε&Κ = Έρευνα και καινοτομία, ΠΑ = Προστασία ακτών, ΦΥΣ = Προστασία της φύσης, ΤΟΠ = Προστασία τοπίου, ΘΥΠΚ = Θαλάσσια/Υποθαλάσσια πολιτιστική κληρονομιά.

Οριζόντια σχέδια και στρατηγικές

Τα σχέδια και οι στρατηγικές που αναλύονται σε αυτήν την κατηγορία περιλαμβάνουν δύο στρατηγικά κείμενα πολιτικής που αποτελούν μέρος του Ελληνικού συστήματος χωρικού σχεδιασμού. Όπως αναφέρθηκε παραπάνω, δεν έχει εγκριθεί ακόμη θαλάσσιο χωροταξικό σχέδιο (πλαίσιο) στην Ελλάδα. Ως εκ τούτου, οι στρατηγικές και τα μέτρα που εφαρμόζονται στα ελληνικά ύδατα και στην παράκτια ζώνη προέρχονται προς το παρόν από χωροταξικά πλαίσια που αφορούν το χερσαίο τμήμα των Περιφερειών (συμπεριλαμβανομένης της Κρήτης) και πλαίσια που έχουν αναπτυχθεί για την προστασία του περιβάλλοντος και τους συγκεκριμένους οικονομικούς τομείς (όπως περιγράφονται στις ακόλουθες ενότητες).

Το Περιφερειακό Πλαίσιο Χωροταξικού Σχεδιασμού για την Περιφέρεια Κρήτης (ΠΠΧΣΠΚ) καθορίζει κατευθυντήριες γραμμές και στόχους για την ανάπτυξη της Περιφέρειας Κρήτης σε διάφορους τομείς. Οι κύριοι στόχοι για τη θάλασσα και την διάδραση γης-θάλασσας στην Περιφέρεια εστιάζονται στις κατευθυντήριες γραμμές για βιώσιμη υδατοκαλλιέργεια και αλιεία, προστασία του περιβάλλοντος των ακτών και του τοπίου τους καθώς και στην προώθηση της θαλάσσιας συνδεσιμότητας και της τουριστικής ανάπτυξης, λαμβάνοντας υπόψη τις περιβαλλοντικές επιπτώσεις. Μέσα σε αυτό το πλαίσιο τίθενται αρκετοί στρατηγικοί αναπτυξιακοί στόχοι, με τους πιο σχετικούς για τις αλληλεπιδράσεις γης-θάλασσας να συνοψίζονται παρακάτω:

- Το Σχέδιο στοχεύει στην αρμονική συνύπαρξη της ανάπτυξης των θαλάσσιων μεταφορών και των λιμενικών υποδομών με την προστασία του περιβάλλοντος και την ορθολογική διαχείριση του θαλάσσιου και παράκτιου χώρου.
- Θέτει μια σειρά από αυστηρές προϋποθέσεις για την προστασία της βιοποικιλότητας, των φυσικών οικοτόπων και της άγριας χλωρίδας και πανίδας και την αποκατάσταση οικοσυστημάτων και τοπίων (συμπεριλαμβανομένων των θαλάσσιων τοπίων). Ειδικότερα, σε όλα τα αναθεωρημένα Περιφερειακά Χωροταξικά Πλαίσια, οριοθετούνται οι ακόλουθες ζώνες τοπίου: (i) ζώνες τοπίου διεθνούς αξίας, (ii) ζώνες τοπίου εθνικής αξίας, (iii) ζώνες τοπίου περιφερειακής αξίας, και iv) ιδιαίτερα υποβαθμισμένες ζώνες τοπίου.
- Στοχεύει στην ανάπτυξη -που σήμερα είναι περιορισμένη- των παραδοσιακών αλιευτικών δραστηριοτήτων (μέσω της ένταξής τους στο τουριστικό προϊόν), καθώς και της υδατοκαλλιέργειας με περιβαλλοντικά συμβατές μεθόδους (μέσω παραγωγής ποιοτικών προϊόντων), διασφαλίζοντας χωρική συμβατότητα με άλλες χρήσεις και ενίσχυση διασυνδέσεων στην αλυσίδα αξίας.
- Υποστηρίζει τη λειτουργία της πιλοτικής μονάδας θαλάσσιας υδατοκαλλιέργειας του Ελληνικού Κέντρου Θαλάσσιων Ερευνών (ΕΛΚΕΘΕ) στη Σούδα, με στόχο την έναρξη παραγωγής νέων ειδών καθώς και την ανάπτυξη νέων τεχνολογιών ιχθυοκαλλιέργειας, όχι μόνο σε κλειστούς κόλπους, αλλά και στην ανοιχτή θάλασσα.

- Υποστηρίζει την αλλαγή του προτύπου για την ανάπτυξη του τουρισμού, με στόχο την εκτόνωση των υψηλών πιέσεων και την αναβάθμιση του δομημένου χώρου στην υπεραναπτυγμένη βόρεια ακτή και τον περιορισμό της ανάπτυξης μορφών μαζικού και μονοθεματικού τουρισμού.

Το σχέδιο (Εικόνα 3) περιλαμβάνει διάφορα μέτρα που επηρεάζουν τις χρήσεις γης και θάλασσας. Ως παράδειγμα, μπορούμε να αναφερθούμε στην κατηγοριοποίηση των λιμανιών της Κρήτης (άρθρο 14), ή στην οριοθέτηση τριών βασικών ενεργειακών κόμβων σε συγκεκριμένες θαλάσσιες περιοχές, δηλαδή τον Αθερινόλακκο, την Κορακιά Ηρακλείου και την Ξυλοκαμάρα Χανίων (άρθρο 15). Η πρώτη θέση (Αθερινόλακκος), προβλέπεται να φιλοξενήσει εγκαταστάσεις υδροποιημένου φυσικού αερίου (LNG) στην παράκτια ζώνη της περιοχής (Εικόνα 4

Figure 30).

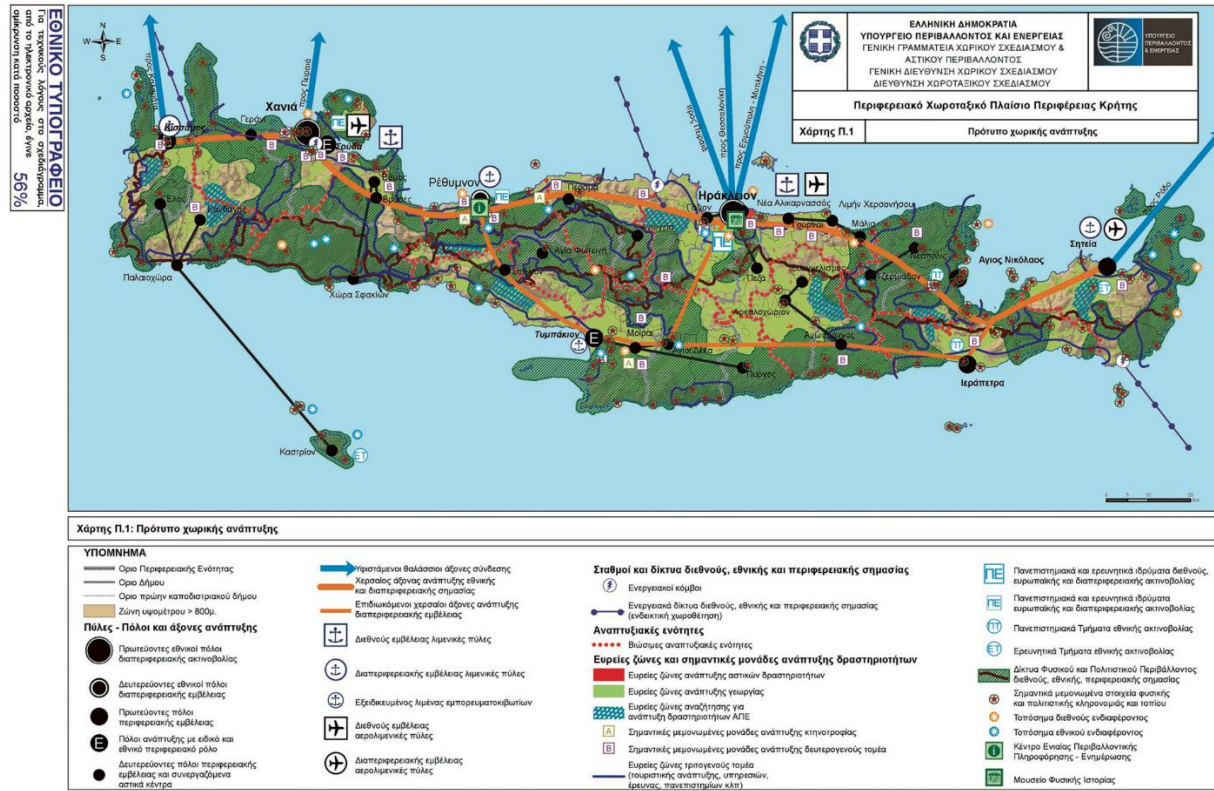
Επιπλέον, το άρθρο 12 τονίζει τη σημασία της ολοκληρωμένης διαχείρισης των ακτών, ιδίως για οικιστικούς και τουριστικούς σκοπούς. Αυτή η προσέγγιση περιλαμβάνει προσεκτικό πολεοδομικό και χωροταξικό σχεδιασμό για να διασφαλιστεί ότι οι χρήσεις γης είναι κατάλληλες, ενώ παράλληλα προστατεύεται το φυσικό και πολιτιστικό περιβάλλον. Επιπλέον, όπως περιγράφεται στο άρθρο 12, η αρχή της «συμπαγούς πόλης» έχει προτεραιότητα σε αυτές τις παράκτιες περιοχές. Τέλος, η Κρήτη, όντας το μεγαλύτερο νησί της Ελλάδας και το πέμπτο μεγαλύτερο στη Μεσόγειο Θάλασσα, διαθέτει αρκετά σημαντικά λιμάνια που εξυπηρετούν εμπορικούς και επιβατικούς σκοπούς. Η κατηγοριοποίησή τους σύμφωνα με την Κοινή Υπουργική Απόφαση 8315.2/02/07 (ΦΕΚ Β' 202/16-2-2007) ή το Περιφερειακό Χωροταξικό Πλαίσιο Περιφέρειας Κρήτης, αναφέρεται στον Πίνακα 1.

Πίνακα 1. Κατηγοριοποίηση των μεγάλων λιμανιών της Κρήτης (Πηγή: ΦΕΚ Β, 202/16-2-2007 ή Περιφερειακό Χωροταξικό Πλαίσιο Περιφ. Κρήτης)

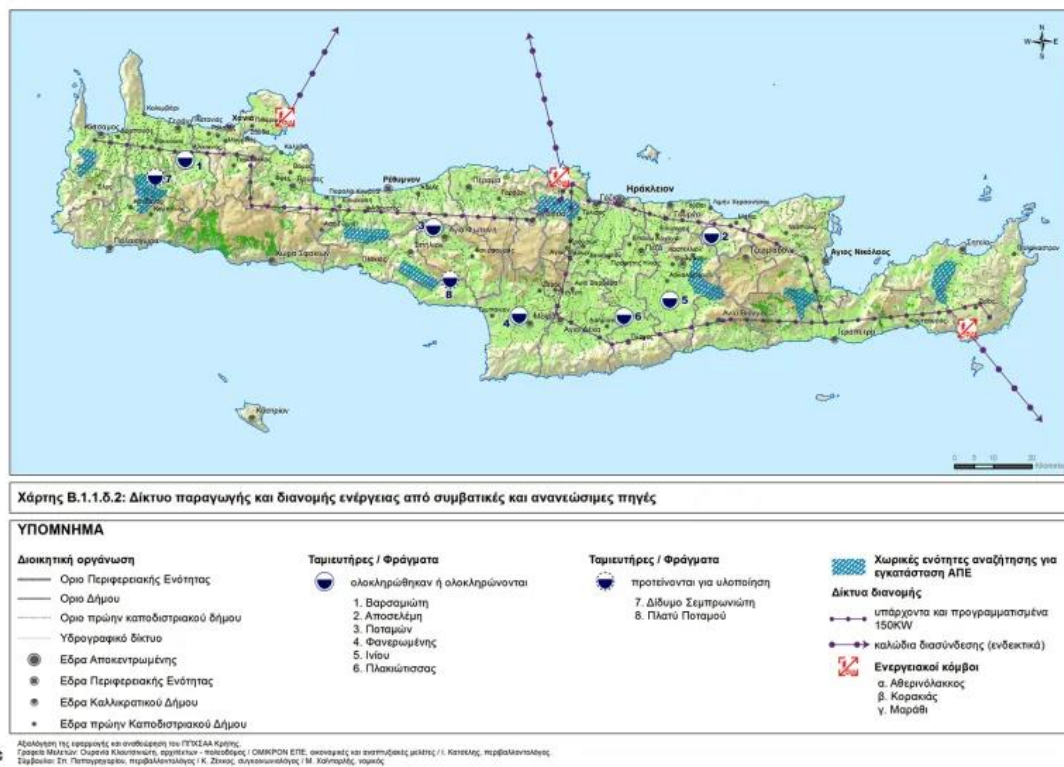
ΚΑΤΗΓΟΡΙΕΣ	Επιβατική Λειτουργία	Εμπορευματική Λειτουργία	Κρουαζιέρα
Διεθνούς ενδιαφέροντος	Ηράκλειο, Σούδα Χανίων	Ηράκλειο, Σούδα Χανίων, Τυμπάκι	Ηράκλειο (αρχικό λιμάνι), Σούδα Χανίων
Εθνικής σημασίας (Διαπεριφερειακής εμβέλειας)	Ρέθυμνο, Καστέλι, Κίσαμος, Σητεία	Ρέθυμνο, Καστέλι, Κίσαμος, Σητεία	Ρέθυμνο, Σητεία (μικρό)
Μείζονος ενδιαφέροντος (περιφερειακής εμβέλειας)	Άγιος Νικόλαος, Ιεράπετρα, Παχιά Άμμος	Άγιος Νικόλαος (μικρό)	Άγιος Νικόλαος

Ο Νόμος 4770/2021 για την Ολοκληρωμένη Θαλάσσια Πολιτική και η σχετική αναπτυξιακή στρατηγική του ενστερνίζονται «την προσέγγιση ολοκληρωμένου στρατηγικού σχεδιασμού των θαλάσσιων οικονομικών δραστηριοτήτων» όπως η ναυτιλία, η αλιεία και ο θαλάσσιος τουρισμός, η ασφάλεια, η ελαχιστοποίηση κινδύνων και η πρόληψη ατυχημάτων στη θάλασσα. Αυτή η στρατηγική μόλις άρχισε να αναπτύσσεται με τη διοργάνωση «Περιφερειακών διαλόγων» με διαφορετικούς ενδιαφερόμενους φορείς στα νησιά. Πράγματι, προβλέπει συγκεκριμένες στρατηγικές προτεραιότητες για τα παρακάτω:

- Λιμενική πολιτική – θαλάσσια λιμάνια.
- Διαχείριση κρίσιμων ενεργειακών υποδομών και υδατικών πόρων.
- Υπηρεσίες πορθμείων – θαλάσσιες μεταφορές.
- Ενίσχυση της ανταγωνιστικότητας και της επιχειρηματικότητας των νησιών με έμφαση στον τουρισμό – Παραγωγικά μοντέλα νησιών.
- Στρατηγική θαλάσσιας επιτήρησης και ασφάλειας στη θάλασσα.
- Γαλάζιες καριέρες – απασχόληση και επένδυση στη γαλάζια οικονομία.
- Θεσμική ενδυνάμωση (Εθνική λιμενική στρατηγική και διακυβέρνηση) – Ψηφιακή διακυβέρνηση.



Εικόνα 3. Χωρική οργάνωση της Περιφέρειας Κρήτης σύμφωνα με το Περιφερειακό Χωρικό Πλαίσιο Περιφέρειας Κρήτης (Πηγή: RSFP-CR, 2017)



Εικόνα 4. Δίκτυο παραγωγής και διανομής ενέργειας (συμπ. ανανεώσιμων πηγών ενέργειας) (Πηγή: αναθεωρημένο Περιφερειακό Χωροταξικό Πλαίσιο Περ.Κρήτης, 2017).

Σχέδια και στρατηγικές με προσανατολισμό την προστασία και τη διατήρηση

Τα σχέδια και οι στρατηγικές με προσανατολισμό την προστασία και τη διατήρηση που σχετίζονται με το σχεδιασμό και τη διαχείριση του θαλάσσιου χώρου της Περιφέρειας Κρήτης εμπίπτουν στην κατηγορία των σχεδίων διατήρησης της φύσης (περιοχές NATURA 2000), σχέδια προστασίας της θαλάσσιας και υποθαλάσσιας πολιτιστικής κληρονομιάς (ΘΥΠΚ) και σχέδια προστασίας τοπίου.

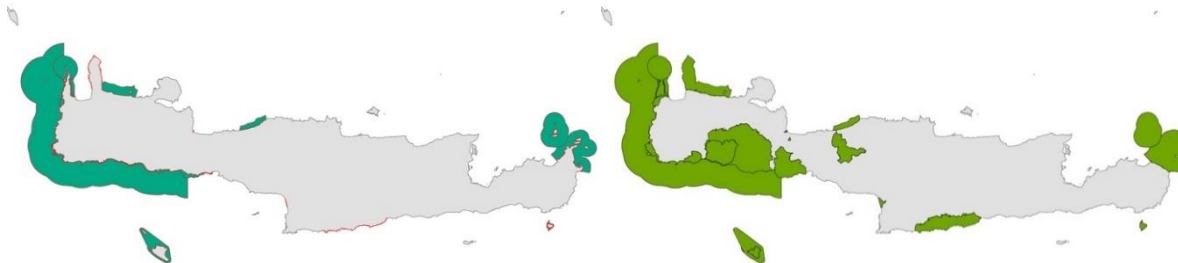
Η Περιφέρεια Κρήτης διαθέτει ένα πολύτιμο φυσικό οικοσύστημα που φαίνεται από τον μεγάλο αριθμό περιοχών Natura 2000 που έχουν χαρακτηριστεί στην περιοχή. Πολλές από αυτές τις τοποθεσίες επεκτείνονται στη θάλασσα ή βρίσκονται αποκλειστικά στη θάλασσα (συμπεριλαμβανομένων των νησίδων), αγκαλιάζοντας έτσι ευαίσθητα θαλάσσια οικοσυστήματα. Τα οικοσυστήματα και η διατήρηση της βιοποικιλότητας σε θαλάσσιες ή εν μέρει θαλάσσιες (χερσαίες και θαλάσσιες) περιοχές Natura 2000 στην Ελλάδα, ρυθμίζονται από το Ν. 937/2011. Αυτός ο νόμος είναι εθνικής εμβέλειας και ορίζει συγκεκριμένες κατευθυντήριες οδηγίες για την αδειοδότηση δραστηριοτήτων σε τοποθεσίες Natura 2000. Πιο συγκεκριμένα, ορίζει το είδος και την έκταση των ανθρώπινων δραστηριοτήτων που μπορούν να πραγματοποιηθούν στα όρια των περιοχών Natura 2000 και πώς μπορεί να διεξαχθεί σχετική έρευνα. Στην περιοχή της Κρήτης, σύμφωνα με τον Ν. 3937/2011, το δίκτυο Natura 2000 περιλαμβάνει 54 περιοχές (Εικόνα 5):

- Είκοσι οκτώ χαρακτηρίζονται ως «Ειδικές Περιοχές Διατήρησης» (SAC) ή «Προτεινόμενοι Τόποι Κοινοτικής Σημασίας» (pSCI),
- Είκοσι πέντε ορίζονται ως Ζώνες Ειδικής Προστασίας (ΖΕΠ) και
- Μόνο μία (1) χαρακτηρίζεται και ως «Ειδική Περιοχή Διατήρησης» και ως «Ζώνη Ειδικής Προστασίας» (νησίδα Δία).

Πέραν των ανωτέρω, και σύμφωνα με το Ν. 3937/2011 (ΦΕΚ 60/Α/31.03.2011), για τοπία που έχουν ήδη δηλωθεί ως «ιδιαίτερου φυσικού κάλλους» απαιτείται Απόφαση του Υπουργού Περιβάλλοντος και Ενέργειας για τη ρύθμιση των όρων ένταξής τους στην κατηγορία «Προστατευόμενων Τοπίων και Προστατευόμενων Φυσικών Σχηματισμών» του Εθνικού Συστήματος Προστατευόμενων Περιοχών. Μέχρι στιγμής, ορισμένες βασικές νησίδες της Κρήτης που αναφέρονται στα σχέδια δεν έχουν αναγνωριστεί επίσημα.

Σύμφωνα με το Προεδρικό Διάταγμα με τίτλο «Έγκριση καταλόγου μικρών νησιωτικών υγροτόπων και καθορισμός όρων και περιορισμών για την προστασία και ενίσχυση των μικρών παράκτιων υγροτόπων που περιλαμβάνονται σε αυτόν» (ΦΕΚ 229/ΑΑΠ/2012), η Κρήτη φιλοξενεί 69 μικρούς νησιωτικούς υγροτόπους. Το Διάταγμα καθορίζει ιδιαίτερα μέτρα προστασίας για αυτούς τους υγροτόπους, τα οποία περιλαμβάνουν την απαγόρευση δραστηριοτήτων όπως έργα αποστράγγισης και παρεμβάσεις που αλλοιώνουν το υδρολογικό καθεστώς, συμπεριλαμβανομένων γεωτρήσεων και άντλησης υδάτων (εκτός

εάν οι ενέργειες αυτές αποσκοπούν στη διατήρηση του υγροτόπου). Αυτά τα μέτρα έχουν σχεδιαστεί για να διαφυλάξουν την οικολογική ισορροπία και τα φυσικά χαρακτηριστικά αυτών των ευαίσθητων και σημαντικών οικοσυστημάτων-υγροτόπων.



Εικόνα 5. Αριστερά: θαλάσσιο τμήμα του δικτύου Natura 2000. Δεξιά: Τοποθεσίες Natura 2000 με παράκτια και θαλάσσια συνιστώσα (Πηγή: ίδια επεξεργασία, Πάντειο Πανεπιστήμιο, βάσει στοιχείων της Διαδικτυακής Πύλης της Αποκεντρωμένης Διοίκησης Κρήτης)

Η Κρήτη φιλοξενεί επίσης αρκετούς χώρους Θαλάσσιας και Υποθαλάσσιας Πολιτιστικής Κληρονομιάς (ΘΥΠΚ), που διέπονται από δύο Υπουργικές Αποφάσεις, με στόχο τη διασφάλιση της προστασίας των κηρυγμένων υποθαλάσσιων αρχαιολογικών χώρων. Τα μέτρα που αφορούν την προστασία των χώρων αυτών προέρχονται από τους Ν. 3028/2002 και 4858/2021. Σύμφωνα με τη νομοθεσία:

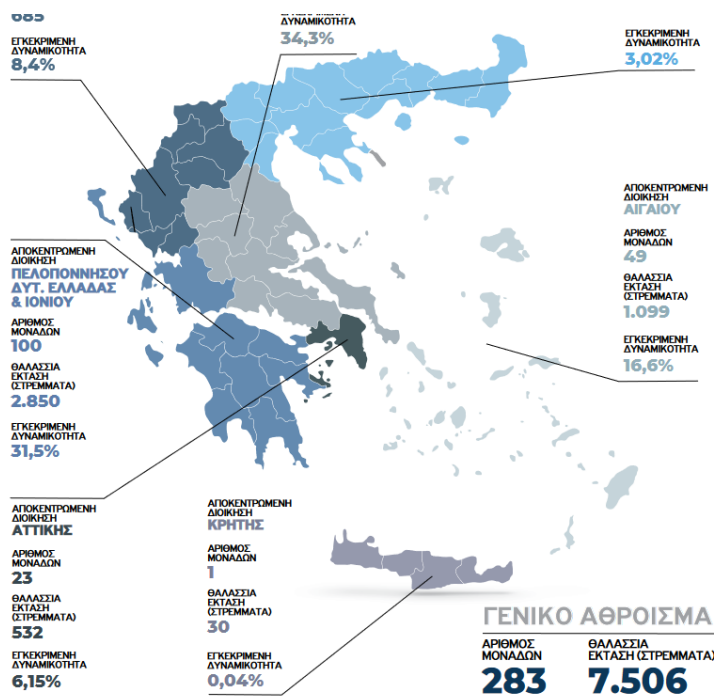
- Απαγορεύεται η αλιεία και τα αγκυροβόλια τόσο σε προσβάσιμους όσο και σε μη προσβάσιμους αρχαιολογικούς χώρους (υπάρχουν ωστόσο αποκλίσεις από την απαγόρευση, μετά από άδεια του Υπουργείου Πολιτισμού).
- Δραστηριότητες όπως η παρατήρηση μέσω υποβρύχιας κατάδυσης ή με βάρκες με γυάλινο πυθμένα επιτρέπονται μόνο σε προσβάσιμους υποθαλάσσιους χώρους πολιτιστικής κληρονομιάς (Accessible Underwater Heritage Sites, AUCHS).

Η σχετική νομοθεσία ορίζει επίσης άλλους κανονισμούς σχετικά με την πρόσβαση στους χώρους ενάλιων αρχαιοτήτων και δίνει τη δυνατότητα ορισμού ζώνης προστασίας όπου απαγορεύονται όλες οι δραστηριότητες γύρω από τον χώρο, για την περαιτέρω προστασία του.

Τομεακά σχέδια οικονομικών δραστηριοτήτων και σχέδια για άλλες θαλάσσιες χρήσεις και δραστηριότητες

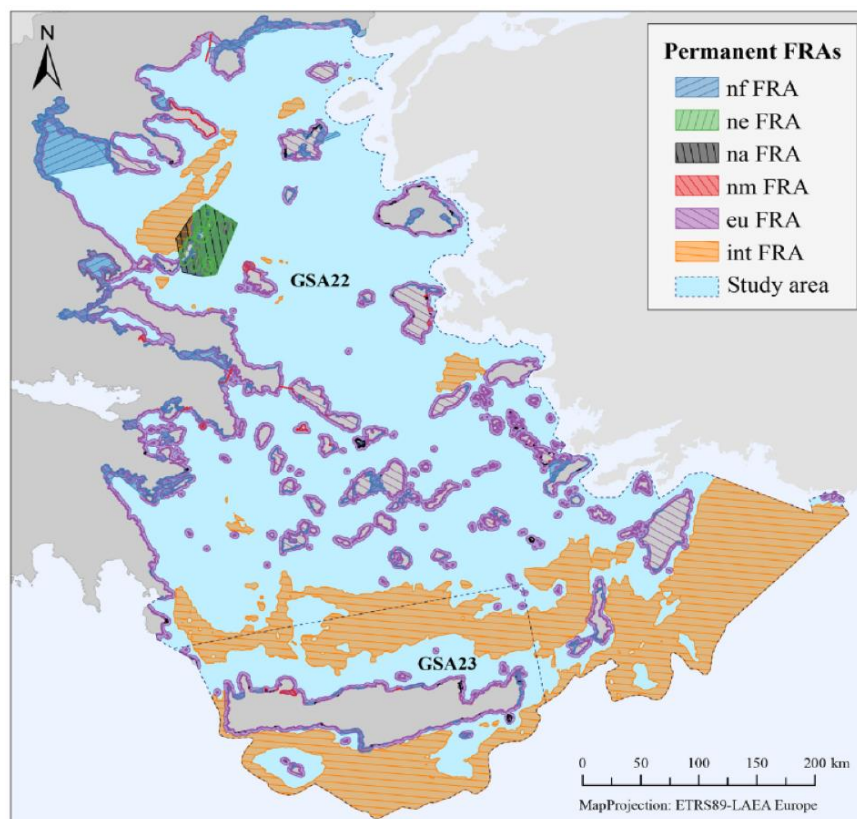
Τα περισσότερα σχέδια ή στρατηγικές για οικονομικούς τομείς και άλλες θαλάσσιες χρήσεις και δραστηριότητες στην Περιφέρεια Κρήτης αναφέρονται στους τομείς της υδατοκαλλιέργειας, της αλιείας, των ΑΠΕ, του τουρισμού και των λιμανιών. Το Ειδικό Χωροταξικό Πλαίσιο Υδατοκαλλιέργειας (ΕΧΠΥ) αναπτύχθηκε το 2011 σε εθνικό επίπεδο και θέτει διάφορους στρατηγικούς αναπτυξιακούς στόχους για την υδατοκαλλιέργεια στη χώρα, που συνδέονται με πιο συγκεκριμένους στόχους και διατάξεις για κάθε Ελληνική

Περιφέρεια. Για την Περιφέρεια Κρήτης, το ΕΧΠΥ παρέχει συστάσεις για την ανάπτυξη της υδατοκαλλιέργειας στην Κατηγορία Ε. Η κατηγορία αυτή αναφέρεται σε περιοχές με κατάλληλα χαρακτηριστικά, δηλαδή: γειτονικές περιοχές ζήτησης προϊόντων υδατοκαλλιέργειας (π.χ. αστικά κέντρα, τουριστικές περιοχές κ.λπ.) και διαθέτοντας υποδομές εξυπηρέτησης για την προώθηση των προϊόντων υδατοκαλλιέργειας. Ταυτόχρονα, στις περιοχές της Κατηγορίας Ε, η διάσπαρτη -και όχι οργανωμένη σε ΠΟΑΥ- ανάπτυξη θεωρείται προτιμότερη, για την ελαχιστοποίηση των συγκρούσεων με ανταγωνιστικές χρήσεις και των επιπτώσεων στο φυσικό περιβάλλον. Το ΕΧΠΥ καθορίζει περαιτέρω τους κανονισμούς σχετικά με την αδειοδότηση και τη λειτουργία των υδατοκαλλιεργητικών μονάδων, συμπεριλαμβανομένων των πτυχών προστασίας του περιβάλλοντος που πρέπει να ληφθούν υπόψη από τους σχετικούς φορείς διαχείρισης. Για παράδειγμα, υποστηρίζεται η λειτουργία πιλοτικής μονάδας θαλάσσιας υδατοκαλλιέργειας που δημιουργήθηκε από το ΕΛΚΕΘΕ στη Σούδα, όπου βρίσκεται σε εξέλιξη η παραγωγή νέων ειδών, καθώς και η ανάπτυξη νέων τεχνολογιών ιχθυοκαλλιέργειας, όχι μόνο σε κλειστούς κόλπους αλλά και ανοιχτής θάλασσας. Είναι αξιοσημείωτο ότι αυτή τη στιγμή βρίσκεται σε εξέλιξη το αναθεωρημένο ΕΧΠΥ. Η αναθεώρηση του σχεδίου του 2011 κρίθηκε απαραίτητη για τη διευκόλυνση και τον συντονισμό της ανάπτυξης των Περιοχών Οργανωμένης Ανάπτυξης Υδατοκαλλιεργειών (ΠΟΑΥ) στο Αιγαίο, όπως αναφέρεται στο «Πολυετές Εθνικό Στρατηγικό Σχέδιο για την Ανάπτυξη της Υδατοκαλλιέργειας 2021-2027» (ΠΕΣΣΑΥ). Μέχρι στιγμής, μόνο μία περιοχή οργανωμένης ανάπτυξης υδατοκαλλιέργειας, με περιορισμένη δυναμικότητα (0,04 %) υπάρχει στην περιοχή της Κρήτης (Εικόνα 6).



Εικόνα 406. Κατανομή ΑΖΑ (στα ελληνικά ΠΟΑΥ) ως προς τον αριθμό των μονάδων, την επιφάνεια και τη χωρητικότητα τους κατά το 2022 (Πηγή: Ελληνικό Υπουργείο Γεωργίας και Τροφίμων).

Όσον αφορά την αλιευτική δραστηριότητα, οι κανονισμοί για την αλιεία με τράτα είναι εθνικής εμβέλειας και θεσπίστηκαν με Προεδρικό Διάταγμα το 1966. Το διάταγμα αυτό προβλέπει γενικές χωρικές και χρονικές ρυθμίσεις για την αλιεία με τράτα στα ελληνικά ύδατα, ειδικότερους όρους για ορισμένες γεωγραφικές περιοχές συμπεριλαμβανομένων περιοχών της Περιφέρειας Κρήτης και μέτρα περιορισμού της αλιείας σε ευαίσθητες θαλάσσιες ζώνες. Οι Απαγορευμένες Περιοχές Αλιείας (ΑΠΑ) περιλαμβάνουν διαφορετικούς τύπους περιορισμών, όπως μόνιμο ή εποχιακό περιορισμό της αλιευτικής δραστηριότητας και όρια σε συγκεκριμένα αλιευτικά εργαλεία, όπως συρόμενα ή κινητά εργαλεία. Ο σκοπός αυτών των περιορισμών ποικίλλει, συμπεριλαμβανομένης της προστασίας των ιχθυαποθεμάτων και της διατήρησης των φυσικών οικοτόπων. Οι ΑΠΑ στην Κρήτη αντιπροσωπεύουν περίπου το 14,8% του συνόλου, που εντοπίστηκε στο Αιγαίο και το Κρητικό πέλαγος (Εικόνα 7). Το νομικό πλαίσιο για αυτούς τους περιορισμούς στην Κρήτη είναι πολύπλοκο και περιλαμβάνει εθνική, ευρωπαϊκή και διεθνή νομοθεσία.



Εικόνα 7. Απαγορευμένες περιοχές αλιείας ανά τύπο περιορισμού, 2014 (Πηγή: Μελέτη Περιοχών Αλιείας (FRAs) στο Αιγαίο Πέλαγος, στο πλαίσιο των έργων Protomedea και Marisca).

Τόσο το αναθεωρημένο Περιφερειακό Χωροταξικό Πλαίσιο Κρήτης που περιγράφεται παραπάνω όσο και το Ειδικό Χωροταξικό Πλαίσιο για Ανανεώσιμες Πηγές Ενέργειας αναφέρονται σε τρεις (3) αποκλειστικούς ενεργειακούς κόμβους στην Κρήτη. Σημαντικό αναπτυξιακό έργο είναι η ενεργειακή σύνδεση της Κρήτης με την ηπειρωτική χώρα, που αναγνωρίζεται ως τεράστιας σημασίας σε όλα τα χωροταξικά σχέδια. Το έργο αυτό βρίσκεται υπό ανάπτυξη, μέσω του Έργου Διασύνδεσης Κρήτης-Αττικής (Φάση II). Πρόκειται για ένα σημαντικό αναπτυξιακό έργο στον ελληνικό ενεργειακό τομέα, με επίκεντρο τη σύνδεση της Κρήτης (από τη θέση Κορακιά) με την Αττική (θέση Πάχη, περιοχή Μέγαρο) μέσω γραμμής συνεχούς ρεύματος υψηλής τάσης (HVDC) ισχύος 2×500 MW. Το έργο αυτό, αντιπροσωπεύει μια μεγάλη επένδυση στην ηλεκτρική υποδομή της Ελλάδας και στοχεύει να μεταμορφώσει σημαντικά το ενεργειακό τοπίο της Κρήτης. Στο ίδιο πλαίσιο, οι θαλάσσιες περιοχές της Κρήτης είναι αυτές που θεωρούνται ως πλέον κατάλληλες μεσοπρόθεσμα για τη δημιουργία πλωτών εγκαταστάσεων αιολικής ενέργειας. Οι περιοχές στην Ανατολική και Νότια Κρήτη αναγνωρίζονται ως υψηλών ταχυτήτων ανέμου (10-11 m/sec), συνθήκες οι οποίες είναι εξαιρετικά αποδοτικές για έργα αιολικής ενέργειας (Εικόνα 8).

Σε αναθεώρηση βρίσκεται και το Εθνικό Χωροταξικό Σχέδιο του Τουρισμού. Το προϋπάρχον Σχέδιο δεν είναι πλέον έγκυρο. Ωστόσο, οι χωρικές κατευθύνσεις που περιλάμβανε αυτό το Σχέδιο ενσωματώθηκαν στο Περιφερειακό Χωροταξικό Πλαίσιο Κρήτης. Έτσι, εισήχθησαν τρεις τύποι περιοχών ανάπτυξης παράκτιου τουρισμού: (i) παράκτιες ζώνες τουριστικής ανάπτυξης, (ii) περιοχές ελεγχόμενης οικιστικής και τουριστικής ανάπτυξης και (iii) περιοχές με δυνατότητες ανάπτυξης νέων και εναλλακτικών μορφών τουρισμού (Πίνακας 2 Table 2). Στην παράκτια ζώνη της Περιφέρειας Κρήτης, η τουριστική δραστηριότητα είναι υπερβολικά αναπτυγμένη και σχετίζεται με το μοντέλο μαζικού τουρισμού, ιδιαίτερα στο βόρειο τμήμα του νησιού. Βασική χωροταξική κατευθυντήρια γραμμή που παρέχεται από το Περιφερειακό Σχέδιο είναι ότι σε αυτού του είδους τις περιοχές, η τουριστική ανάπτυξη θα πρέπει να τεθεί υπό έλεγχο και ο σχεδιασμός και η αδειοδότηση θα πρέπει να διασφαλίζουν ότι δεν γίνεται υπέρβαση της φέρουσας ικανότητας των οικοσυστημάτων. Αυτό τονίζει τη σημασία της ποιότητας του τουρισμού και της ποιότητας του περιβάλλοντος.

Το σχέδιο αρχικά δεν περιλάμβανε συγκεκριμένες προβλέψεις για τη χωροθέτηση καταδυτικών πάρκων. Ωστόσο, η θέσπιση του Ν. 4688/2020 διευκόλυνε την χωροθέτηση και λειτουργία καταδυτικών πάρκων. Αυτά τα πάρκα στοχεύουν στην προστασία των θαλάσσιων οικοσυστημάτων, ενώ παράλληλα επιτρέπουν ρυθμιζόμενες καταδύσεις αναψυχής. Επί του παρόντος, δέκα καταδυτικά πάρκα είτε λειτουργούν είτε βρίσκονται στο στάδιο της εκπλήρωσης των απαραίτητων κριτηρίων ανάπτυξης, π.χ. καταδυτικό πάρκο Αποκορώνου, Αγίου Νικολάου, Γουρνών, Σταλίδας, Μονοναύτη και Ιεράπετρας.

Πίνακας 7. Τύποι ζωνών ανάπτυξης παράκτιου τουρισμού που προσδιορίζονται από το Περιφερειακό Χωροταξικό Πλαίσιο Κρήτης.

Τύπος ζώνης	Τοποθεσία ζώνης	Λεπτομέρειες
Αστική/Τουριστική Ανάπτυξη και Ποιοτική/Περιβαλλοντική Αναβάθμιση	Από την Παχιά Άμμο στις Σέλλες κοντά στον Άγιο Νικόλαο. Ανώγεια Μιλάτου προς Φόδελε κοντά στο Ηράκλειο - Χερσόνησο; Μπαλί προς Σέλια κοντά στο Ρέθυμνο - Γεωργιούπολη; Αλμυρίδα έως Κολυμπάρι κοντά στα Χανιά	Προσδιορίστηκαν ως παράκτιες ζώνες για αστική/τουριστική ανάπτυξη και ποιοτική/περιβαλλοντική αναβάθμιση
Ελεγχόμενη Οικιστική/Τουριστική Ανάπτυξη και Ποιοτική/Περιβαλλοντική Αναβάθμιση	Από Καλυβιανή προς Ναυπηγεία κοντά στο Καστέλι. Ευρύτερη περιοχή Μόχλου Σητείας; Διόνυσος έως Παπαδόκαμπος κοντά στη Σητεία. Ασπρόλιθος Γούδουρας προς Βάτο Μύρτο κοντά στην Ιεράπετρα. Μάταλα προς Φραγκοκάστελλο, Νότια Ακτή Ηρακλείου, Ρέθυμνο, Χανιά. Αγία Κυριακής προς Ανύδρου, ανατολικά της Παλαιόχωρας.	Χαρακτηρίζονται ως παράκτιες ζώνες για ελεγχόμενη οικιστική/τουριστική ανάπτυξη και ποιοτική/περιβαλλοντική αναβάθμιση με έμφαση στον αιεφόρο τουρισμό υψηλών εγκαταστάσεων
Ήπια οικιστική/τουριστική ανάπτυξη, ποιοτική/περιβαλλοντική αναβάθμιση και προστασία/προώθηση πολιτιστικών και φυσικών πόρων	Ανατολικές και δυτικές ακτές του νησιού. Ευρύτερη περιοχή Σούγιας Χανίων.	Ζώνες με δυνατότητες ανάδειξης του τοπίου και πλούσιους φυσικούς και πολιτιστικούς πόρους που σχετίζονται με τον πολιτιστικό τουρισμό και τον αιεφόρο τουρισμό ευρύτερα.

Στοιχεία συμβολής στην Πράσινη Συμφωνία της ΕΕ και τις στρατηγικές για τη θαλάσσια λεκάνη

Το Περιφερειακό Χωροταξικό Πλαίσιο, όπως αναθεωρήθηκε το 2017, δεν περιλαμβάνει ούτε ενσωματώνει συγκεκριμένους στόχους που να συνάδουν με την Ευρωπαϊκή Πράσινη Συμφωνία (ΕΠΣ). Ακόμα κι έτσι, τα περισσότερα από τα σχέδια και οι στρατηγικές που αναλύθηκαν περιλαμβάνουν ορισμένα από τα βασικά στοιχεία της ΕΠΣ, με έμμεσο τρόπο. Για παράδειγμα, στα διατομεακά σχέδια υπάρχουν τμήματα αφιερωμένα στη βιοποικιλότητα και τη διατήρηση των οικοσυστημάτων ή τις πολιτικές μηδενικών εκπομπών άνθρακα, κάτι που θεωρείται πρωταρχικός στόχος σε όλες τις στρατηγικές κατευθυντήριες γραμμές. Επιπλέον, στο Περιφερειακό Χωροταξικό Πλαίσιο της

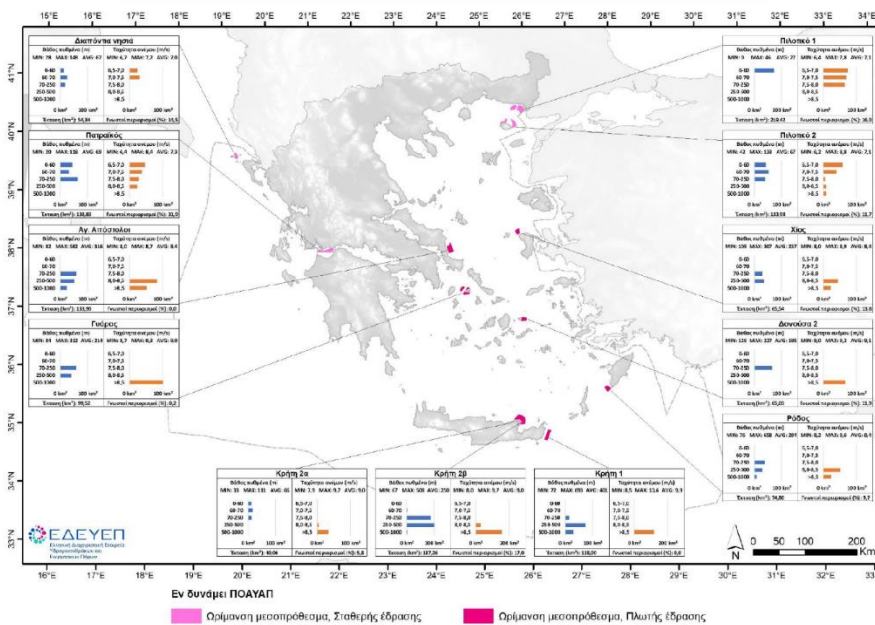
Περιφέρειας Κρήτης, οι κατευθυντήριες γραμμές για την ανάπτυξη των τομέων της υδατοκαλλιέργειας, της αλιείας, του τουρισμού και της ναυτιλίας εμπεριέχουν σαφώς στόχους για τη βιοποικιλότητα και τη διατήρηση του οικοσυστήματος.

Η δέσμευση της Κρήτης στις πτυχές της Ευρωπαϊκής Πράσινης Συμφωνίας που σχετίζονται με την κλιματική αλλαγή προβλέπεται στο «Περιφερειακό Σχέδιο Προσαρμογής στην Κλιματική Αλλαγή» (ΠεΣΠΚΑ) που εγκρίθηκε το 2022, βάσει του νέου κλιματικού νόμου και της αντίστοιχης εθνικής στρατηγικής. Το εθνικό σχέδιο στοχεύει φιλόδοξα στην μείωση των εκπομπών άνθρακα κατά 56% και άνω, έως το 2030 (σε σύγκριση με τα επίπεδα του 2005). Αυτή η μείωση σχεδιάζεται κυρίως μέσω της μετάβασης από την παραγωγή ηλεκτρικής ενέργειας με βάση τον λιγνίτη σε ανανεώσιμες πηγές όπως η ηλιακή και η αιολική ενέργεια. Το σχέδιο περιλαμβάνει την πλήρη κατάργηση του λιγνίτη έως το 2028 και την αύξηση των ανανεώσιμων πηγών ενέργειας από 18% σε τουλάχιστον 35% έως το 2030. Αυτή η μετάβαση υποστηρίζεται από εθνικούς νόμους, συμπεριλαμβανομένου του Εθνικού Νόμου για το Κλίμα (Νόμος 4936/2022) και της νομοθεσίας για τα υπεράκτια αιολικά πάρκα (Ν. 4964/2022). Αναλυτικότερα, το ΠεΣΠΚΑ της Κρήτης αντιμετωπίζει τις βασικές κλιματικές προκλήσεις και τις αναμενόμενες επιπτώσεις τους στην περιφέρεια. Η περιφέρεια της Κρήτης αναγνωρίζεται ως ιδιαίτερα ευάλωτη στην κλιματική αλλαγή και εγκρίνονται βασικά μέτρα για την αντιμετώπισή της. Μεταξύ των πιο ευάλωτων περιοχών είναι οι παράκτιες περιοχές του βόρειου τμήματος του νησιού. Για την αντιμετώπιση των σχετικών επιπτώσεων προτείνεται η σύνταξη της «Ολοκληρωμένης Διαχείρισης Παράκτιας Ζώνης της Περιφέρειας Κρήτης».

Επιπλέον, για την αντιμετώπιση της κλιματικής αλλαγής που σχετίζεται με θαλάσσιες δραστηριότητες, στο σχέδιο αυτό προβλέπεται ιεράρχηση περιοχών αλιείας, υδατοκαλλιέργειας και ενεργειακής υποδομής στην Περιφέρεια Κρήτης. Για παράδειγμα, σε σχέση με την υδατοκαλλιέργεια, το ΠεΣΠΚΑ δίνει προτεραιότητα στην επανενεργοποίηση της θαλάσσιας υδατοκαλλιέργειας στη Σητεία. Επιπλέον, δίδεται προτεραιότητα στις αλιευτικές ζώνες. Τρεις κατηγορίες περιοχών προσδιορίζονται ως προς αυτή την δραστηριότητα :

- 1η κατηγορία (Περιφερειακό Διαμέρισμα Ηρακλείου): το μεγαλύτερο μέρος των θαλάσσιων περιοχών που εκτείνεται 10 χιλιόμετρα από την ακτή στο Περιφερειακό διαμέρισμα Ηρακλείου, εκτός από τις θαλάσσιες περιοχές βόρεια της Χερσονήσου και των Μαλίων.
- 2η κατηγορία (Περιφερειακό Διαμέρισμα Λασιθίου): η πλειονότητα των θαλάσσιων περιοχών που είναι δυνητικά κατάλληλες για αλιεία εκτείνεται σε απόσταση 10 χιλιομέτρων από την ακτή στο περιφερειακό διαμέρισμα Λασιθίου, εκτός από τις περιοχές νότια της Ιεράπετρας, της Λεύκης και του Μακρύ Γιαλού.
- 3η κατηγορία (Περιφερειακό Τμήμα Ρεθύμνου): Το σύνολο των θαλάσσιων περιοχών που εκτείνονται σε απόσταση 10 χιλιομέτρων από την ακτή, στο περιφερειακό διαμέρισμα Ρεθύμνου.

Παράλληλα, πραγματοποιείται ιεράρχηση ενεργειακών υποδομών. Τέλος, βρίσκεται σε εξέλιξη ο σχεδιασμός σε ό,τι αφορά την ανάπτυξη των ΑΠΕ, δηλαδή η αναθεώρηση του Ειδικού Χωροταξικού Πλαισίου για τις Ανανεώσιμες Πηγές Ενέργειας (ΕΧΠ_ΑΠΕ), η ανάπτυξη υπεράκτιων ΑΠΕ που ρυθμίζεται από τον Ν. 4951/2022 και η ανάπτυξη των υπεράκτιων αιολικών πάρκων (ΥΑΠ) (Ν. 4964/2022). Σημειώνεται επίσης ότι με βάση το Εθνικό Πρόγραμμα Ανάπτυξης Υπεράκτιων Αιολικών Πάρκων (άρθρο 67 Ν. 4964/2022) – σκιαγραφείται σε ποιες θαλάσσιες περιοχές είναι δυνατή η χωροθέτηση Περιοχών Οργανωμένης Ανάπτυξης Αιολικών Πάρκων (ΠΟΑΥΑΠ) – το πρώτο στάδιο της σχετικής μελέτης έχει ήδη ολοκληρωθεί (Εικόνα 8).



Εικόνα 8. Περιοχές επιλέξιμες για δημιουργία πλωτών εγκαταστάσεων αιολικής ενέργειας μεσοπρόθεσμα και μακροπρόθεσμα (Πηγή: Εθνικό πρόγραμμα για την ανάπτυξη υπεράκτιων αιολικών πάρκων, 2023).

Στοιχεία σχετικά με τη συμμετοχή των ενδιαφερομένων φορέων

Δεδομένης της φύσης τους (τα περισσότερα από αυτά είναι νόμοι ή διατάγματα), όλες οι εξεταζόμενες στρατηγικές και σχέδια που αφορούν την Κρήτη έχουν αποτελέσει αντικείμενο δημόσιας διαβούλευσης είτε μέσω διαδικτύου είτε μέσω συμμετοχικών εργαστηρίων με φυσική παρουσία φορέων. Γενικά, τα οριζόντια σχέδια – δεδομένου του ολοκληρωμένου και του στρατηγικού τους χαρακτήρα– απαιτούν και την προηγούμενη γνώμη του Περιφερειακού Συμβουλίου, πέραν της προαναφερθείσας διαδικασίας δημόσιας διαβούλευσης. Τα Ειδικά Χωροταξικά Πλαίσια Υδατοκαλλιέργειας απαιτούν επίσης τη γνώμη του αρμόδιου φορέα χωροταξίας πριν από τη διεξαγωγή της ηλεκτρονικής δημόσιας διαβούλευσης. Τόσο για το Περιφερειακό Χωροταξικό Πλαίσιο όσο και για τα Ειδικά Πλαίσια Χωροταξικού Σχεδιασμού είναι υποχρεωτική η διαδικασία διαβούλευσης σχετικά με τη Στρατηγική Μελέτη Περιβαλλοντικών Επιπτώσεων (ΣΜΠΕ) και λαμβάνει χώρα

ταυτόχρονα παράλληλα με την ηλεκτρονική δημόσια διαβούλευση που αναφέρθηκε προηγουμένως.

Δεδομένου ότι οι στρατηγικές και τα σχέδια που αναλύθηκαν δημιουργήθηκαν πριν από μερικές δεκαετίες, δεν υπάρχει κατάλληλη τεκμηρίωση για τη διαδικασία δέσμευσης των ενδιαφερομένων. Ωστόσο, ορισμένα στοιχεία σχετικά με τη διαδικασία συμμετοχής των ενδιαφερομένων θα μπορούσαν να αποκαλυφθούν μέσω μίας περιορισμένης βιβλιογραφικής ανασκόπησης. Η διαδικασία διαβούλευσης για το αναθεωρημένο σχέδιο του Περιφερειακού Χωροταξικού Πλαισίου Κρήτης (ΠΧΠΚ) διήρκεσε περισσότερο από επτά μήνες, αντικατοπτρίζοντας μια προσπάθεια ενίσχυσης της συμμετοχής των ενδιαφερομένων φορέων. Αυτή η εκτεταμένη περίοδος επέτρεψε επίσης τη διοργάνωση ενημερωτικών συνεδριών στα διάφορα περιφερειακά διαμερίσματα του νησιού, με αντικείμενο διάφορα επί μέρους θέματα. Η διαδικασία κορυφώθηκε με συνεδρίαση του Περιφερειακού Συμβουλίου Κρήτης, που πραγματοποιήθηκε στο Δημοτικό Συμβούλιο Ηρακλείου και παρουσίασε μια σύνοψη θεμάτων και άλλων ζητημάτων που εξετάστηκαν κατά την παραπάνω συμμετοχική διαδικασία. Ωστόσο, δεδομένου ότι οι απόψεις των ενδιαφερομένων και των πολιτών μπορούσαν να υποβληθούν και ηλεκτρονικά, ο βαθμός στον οποίο αυτές οι γνώμες επηρέασαν τις τελικές συστάσεις και τη συνολική διαδικασία λήψης αποφάσεων παραμένει αντικείμενο έρευνας. Μετά από αξιολόγηση των διαθέσιμων στοιχείων, ετοιμάστηκαν οι τελικές εισηγήσεις για το Περιφερειακό Συμβούλιο και παρουσιάστηκαν στο αρμόδιο Υπουργείο όπου πραγματοποιήθηκε διεξοδική συζήτηση με βασικούς προσκεκλημένους ενδιαφερόμενους φορείς. Προφανώς, η αποτελεσματικότητα, συμπεριληπτικότητα και συνεκτικότητα αυτής της διαδικασίας στρατηγικής δέσμευσης απαιτούν μια κριτική εξέταση (για παράδειγμα, εάν όλοι οι ενδιαφερόμενοι έχουν ενημερωθεί και έχουν προσκληθεί να συμμετάσχουν).

Επίμονα κενά στον ολοκληρωμένο σχεδιασμό και τη διαχείριση του θαλάσσιου χώρου

Η Εθνική Χωρική Στρατηγική για τον Θαλάσσιο Χώρο αναμένει έγκριση από τον Υπουργό Περιβάλλοντος και Ενέργειας και το Υπουργικό Συμβούλιο, ενώ τα Θαλάσσια Χωροταξικά Πλαίσια δεν έχουν ακόμη αναπτυχθεί, όπως έχει ήδη επισημανθεί. Η μελέτη ΘΧΣ για την Περιφέρεια Βορείου Αιγαίου, ως μέρος του έργου THAL-CHOR II με στόχο την υποστήριξη του πρώτου Περιφερειακού Θαλάσσιου Χωροταξικού Πλαισίου βρίσκεται υπό περαιτέρω επεξεργασία. Εκτός από τον ΘΧΣ, τα ισχύοντα σήμερα στην Κρήτη σχέδια και στρατηγικές που ρυθμίζουν τον παράκτιο και θαλάσσιο χώρο, περιλαμβάνουν περιβαλλοντικούς νόμους και χωροταξικά σχέδια ανά τομέα. Αυτά έχουν κυρίως εμβέλεια σε εθνικό επίπεδο, αλλά περιλαμβάνουν ειδικότερους κανονισμούς που ισχύουν για το περιφερειακό και το τοπικό επίπεδο, λαμβάνοντας υπόψη τα ιδιαίτερα χαρακτηριστικά τους. Γενικά, δεν έχουν εντοπιστεί σημαντικές συγκρούσεις ή ασυνέπειες στο εθνικό σύστημα χωροταξικού σχεδιασμού. Ωστόσο, αρκετά τομεακά χωροταξικά σχέδια (τα λεγόμενα Ειδικά Χωροταξικά Πλαίσια) είναι εντελώς απαρχαιωμένα και ακόμη υπό αναθεώρηση. Η διαδικασία σχεδιασμού χαρακτηρίζεται από υψηλό βαθμό συγκέντρωσης και το τοπικό και

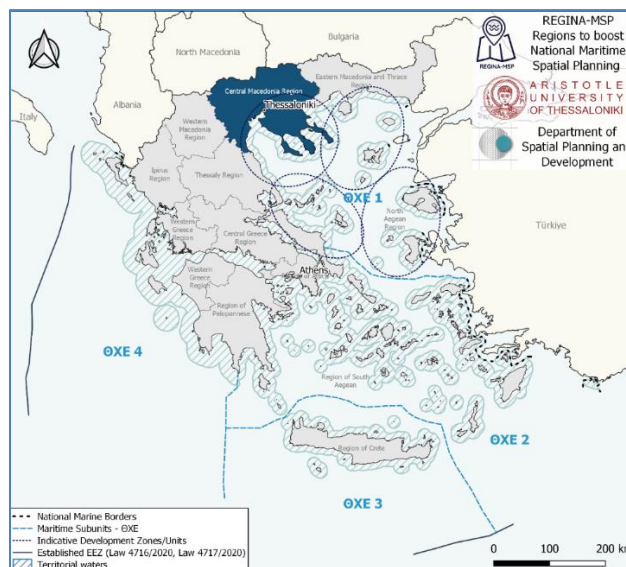
περιφερειακό επίπεδο (Δήμοι και Περιφέρειες) δεν επιτρέπεται να συμμετέχουν πλήρως στη λήψη των αποφάσεων σχετικά με την κατανομή των θαλάσσιων δραστηριοτήτων στην παράκτια ζώνη ή στα χωρικά ύδατα της χώρας. Η αλληλεπίδραση γης-θάλασσας δεν λαμβάνεται πλήρως υπόψη στα ισχύοντα σχέδια.

Η ανάγκη ανάπτυξης σχεδίων ΘΧΣ είναι πλέον επιτακτική για τη διαχείριση πλήθους συγκρούσεων μεταξύ παραδοσιακών και αναδυόμενων θαλάσσιων χρήσεων, για τη διασφάλιση της προστασίας του θαλάσσιου περιβάλλοντος και της βιοποικιλότητας και για την αντιμετώπιση της κλιματικής κρίσης και των επιπτώσεών της στις παράκτιες και θαλάσσιες περιοχές της χώρας. Ως βραχυπρόθεσμη πρόκληση, η Ελλάδα χρειάζεται να αναπτύξει έναν έξυπνο κλιματικά ΘΧΣ.

Ένα άλλο σοβαρό κενό είναι η έλλειψη οργανωμένων δεδομένων ΘΧΣ σε περιφερειακό επίπεδο και συγκεκριμένων περιφερειακών Διαδικτυακών Πυλών και εργαλείων γεωεπεξεργασίας που σχετίζονται με τον θαλάσσιο χώρο. Η εθνική Διαδικτυακή Πύλη THAL-CHOR παρέχει μια καλή ευκαιρία από αυτή την άποψη, αλλά δεν είναι ακόμη προσβάσιμη. Επιπλέον, δεν υπάρχουν περιφερειακές Διαδικτυακές Πύλες που να αφορούν ειδικά τον ΘΧΣ. Τα περιφερειακά δεδομένα μπορούν να εξαχθούν από διάφορες βάσεις δεδομένων και γεωδεδομένων κλαδικού χαρακτήρα, επομένως με υψηλό κατακερματισμό. Σημαντικό βήμα θα μπορούσε να είναι η ενσωμάτωση και επέκταση της Διαδικτυακής Πύλης της Αποκεντρωμένης Διοίκησης Κρήτης, η οποία περιλαμβάνει επί του παρόντος ορισμένα θαλάσσια χωρικά δεδομένα, π.χ. σχετικά με την ποιότητα των περιοχών κολύμβησης, τις κλιματικές καταστροφές, τη βιοποικιλότητα και τα στοιχεία πολιτιστικής κληρονομιάς. Υπάρχει ωστόσο η ανάγκη να συμπεριληφθούν σε αυτή τη Διαδικτυακή Πύλη περισσότερα δεδομένα για τις θαλάσσιες χρήσεις και τα περιβαλλοντικά στοιχεία, καθώς και για τη διαχείριση μέτρων ή περιορισμών.

Περιφέρεια Κεντρικής Μακεδονίας - ΠΚΜ

Σύμφωνα με την εθνική νομοθεσία (Ν.4546 του 2018, όπως τροποποιήθηκε το 2020 από τον Ν.4759), ο Θαλάσσιος Χωροταξικός Σχεδιασμός (ΘΧΣ) στην Ελλάδα πραγματοποιείται σε δύο επίπεδα: i) το εθνικό – για το οποίο συντάσσεται η Εθνική Χωρική Στρατηγική για τον Θαλάσσιο Χώρο (ΕΧΣΘΧ) και ii) το περιφερειακό – στο οποίο εκπονούνται τα Θαλάσσια Χωροταξικά Σχέδια/Πλαίσια (ΘΧΠ). Η Εθνική Χωρική Στρατηγική για τον Θαλάσσιο Χώρο (ΕΧΣΘΧ), αποτελεί ένα κείμενο πολιτικής, που θέτει το πλαίσιο και τις στρατηγικές κατευθύνσεις για το σύνολο των θαλάσσιων τμημάτων της χώρας. Η ΕΧΣΘΧ ολοκληρώθηκε πρόσφατα και εκκρεμεί η έγκρισή της. Σύμφωνα με την εν λόγω ΕΧΣΘΧ, ο θαλάσσιος χώρος της Ελλάδας διαιρείται σε τέσσερις (4) Θαλάσσιες Χωρικές Ενότητες (ΘΧΕ) για καθεμιά από τις οποίες υιοθετούνται Θαλάσσια Χωροταξικά Σχέδια/Πλαίσια (ΘΧΠ). Οι τέσσερις (4) ΘΧΕ διακρίνονται στο Χάρτη 1. Μέχρι στιγμής, έχει εκπονηθεί μόνον ένα Θαλάσσιο Χωροταξικό Σχέδιο (ΘΧΠ) και εκκρεμεί η έγκρισή του. Πρόκειται για το ΘΧΠ Βορείου Αιγαίου (ΘΧΕ1), μέρος του οποίου αφορά και την Περιφέρεια Κεντρικής Μακεδονίας.



Χάρτης 1. Οι Θαλάσσιες Χωρικές Ενότητες (ΘΧΕ) της Ελλάδας για τις οποίες υιοθετούνται ξεχωριστά Θαλάσσια Χωροταξικά Σχέδια (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από την Εθνική Χωρική Στρατηγική για τον Θαλάσσιο Χώρο).

Η Περιφέρεια Κεντρικής Μακεδονίας (ΠΚΜ) είναι η δεύτερη πολυπληθέστερη στην Ελλάδα μετά την Περιφέρεια Αττικής, με πληθυσμό σχεδόν 1,8 εκατ. κατοίκους. Η Θεσσαλονίκη - η πρωτεύουσα της ΠΚΜ - είναι η δεύτερη μεγαλύτερη πόλη της Ελλάδας και αποτελεί έναν πολύ ισχυρό οικονομικό, βιομηχανικό και μεταφορικό κόμβο διεθνούς εμβέλειας. Ο τουρισμός και η υδατοκαλλιέργειες είναι από τους σημαντικότερους τομείς όχι μόνο για τη μητροπολιτική περιοχή της Θεσσαλονίκης, αλλά και για την Περιφέρεια συνολικά. Η

Θεσσαλονίκη συνεισφέρει περίπου 10% στην Ακαθάριστη Προστιθέμενη Αξία της χώρας. Μαζί με την Αθήνα αντιπροσωπεύουν το 60% της παραγωγικής δραστηριότητας και το 50% του πληθυσμού της χώρας. Το 80% της μυδοκαλλιεργητικής δραστηριότητας της χώρας λαμβάνει χώρα στον Θερμαϊκό Κόλπο.

Ο θαλάσσιος χώρος ένθεν της ακτογραμμής της ΠΚΜ χαρακτηρίζεται από πλούσια θαλάσσια βιοποικιλότητα, λόγω του έντονου ανάγλυφου του βυθού, των ποικίλων παράκτιων σχηματισμών (όπως δέλτα, κλπ.) αλλά και της εκτενέστατης ακτογραμμής λόγω των πολυάριθμων ημίκλειστων κόλπων. Στο βυθό της ΠΚΜ έχουν ανακαλυφθεί ενάλιες αρχαιότητες, ενώ τα σπουδαιότερα από τα θαλάσσια φυσικά οικοσυστήματα εντάσσονται σε καθεστώς προστασίας και πιο συγκεκριμένα σε Προστατευόμενες Περιοχές μικτού χαρακτήρα (με θαλάσσιο και χερσαίο τμήμα). Σημαντική πίεση στο θαλάσσιο χώρο της Περιφέρειας ασκείται από την έντονη αστική ανάπτυξη κατά μήκος της ακτογραμμής, λόγω της άναρχης εξάπλωσης της μητροπολιτικής περιοχής της Θεσσαλονίκης καθώς και της έντονης τουριστικής δραστηριότητας που λαμβάνει χώρα κυρίως στις χερσονήσους της Χαλκιδικής.

Όσον αφορά τη χωρική οργάνωση των θαλάσσιων τμημάτων της Περιφέρειας Κεντρικής Μακεδονίας, αυτή επιτυγχάνεται μέσω μιας σειράς σχεδίων αλλά και κανονιστικών ρυθμίσεων που αναλύονται στις επόμενες ενότητες.

Σχέδια και στρατηγικές για το θαλάσσιο χώρο της ΠΚΜ

Ελλείψει θεσμοθετημένου Θαλάσσιου Χωροταξικού Σχεδίου/Πλαισίου για το Βόρειο Αιγαίο, στο θαλάσσιο χώρο της Περιφέρειας Κεντρικής Μακεδονίας ισχύει και εφαρμόζεται:

- η εθνική νομοθεσία για το περιβάλλον και την πολιτιστική κληρονομία (που αναφέρεται σε γενικούς περιορισμούς αλλά και ειδικότερα στις χρήσεις και δραστηριότητες που επιτρέπονται εντός Π.Π. φυσικής και πολιτιστικής κληρονομιάς),
- η εθνική νομοθεσία και ρυθμίσεις για την άσκηση της αλιευτικής δραστηριότητας,
- το ειδικό χωροταξικό σχέδιο για τον τομέα της υδατοκαλλιέργειας,
- το περιφερειακό χωροταξικό σχέδιο της Περιφέρειας Κεντρικής Μακεδονίας,
- τα διαχειριστικά σχέδια για τους λιμένες και τις μαρίνες

Από το σύνολο των παραπάνω, μόνον το Περιφερειακό Χωροταξικό Πλαίσιο της Περιφέρειας Κεντρικής Μακεδονίας αποτελεί οριζόντιο σχέδιο (με βάση την τοπο-κεντρική θεώρηση)· ωστόσο ασχολείται μόνον με κάποιες αλληλεπιδράσεις στεριάς-θάλασσας και όχι με το θαλάσσιο χώρο καθ' εαυτό. Αυτό σημαίνει ότι η χωρική οργάνωση του θαλάσσιου χώρου της Περιφέρειας Κεντρικής Μακεδονίας επιτυγχάνεται κυρίως μέσω τομεακού σχεδιασμού (αλιεία, υδατοκαλλιέργειες κλπ), αλλά και μέσω χωρικών κατευθύνσεων που διατυπώνονται για κρίσιμα εθνικά ζητήματα και τομείς (όπως το περιβάλλον, οι ενάλιες

αρχαιότητες κ.ο.κ.). Κι ενώ οι κατευθύνσεις αυτών των σχεδίων και νομοθεσίας αφορούν το σύνολο της χώρας, εντούτοις είναι αρκετά λεπτομερείς και κανονιστικού χαρακτήρα, καθώς υπεισέρχονται σε θέματα σχεδιασμού εντός ζωνών αλλά και οργανωμένων υποδοχέων που απαντώνται σε όλο το θαλάσσιο χώρο της Ελλάδας και κατ' επέκταση και της Περιφέρειας Κεντρικής Μακεδονίας. Στον αντίποδα, εξ αρχής τοπικά προσαρμοσμένο χωρικό σχεδιασμό στην ΠΚΜ, διαθέτουν οι προστατευόμενες περιοχές και οι ζώνες λιμένων που διαθέτουν σχέδιο διαχείρισης.

Στους παρακάτω πίνακες, παρουσιάζονται τα βασικά στοιχεία του σχεδιασμού και των ρυθμίσεων που ισχύουν στο θαλάσσιο χώρο της ΠΚΜ.

Σύντομος τίτλος	Κλίμακα			Δεσμευτικ ό-τητα		Τυπολογία			Μέτρα/ Ρυθμίσεις
	Τοπικ ό	Περιφε- ρειακό	Εθνικό	ΝΑΙ	ΟΧΙ	Στρατη- γικό	Ρυθμι- στικό	Και τα δύο	
Κατηγορία 1: οριζόντιος σχεδιασμός και στρατηγικές									
Περιφερειακό Χωροταξικό Πλαίσιο για την Περιφέρεια Κεντρικής Μακεδονίας		×		×				×	×
Κατηγορία 2: περιβαλλοντικός σχεδιασμός (για την προστασία και τη διατήρηση της φυσικής και πολιτιστικής κληρονομιάς)									
Ενάλιες αρχαιότητες - Θαλάσσια πολιτιστική κληρονομιά	×			×			×		×
Περιοχές «Φύση / Natura 2000»			×	×			×		×
Εθνικό Πάρκο Δέλτα Αξιού	×			×			×		×
Κατηγορία 3: τομεακός σχεδιασμός και στρατηγικές (για οικονομικούς τομείς και άλλες θαλάσσιες χρήσεις και δραστηριότητες)									
Ειδικό Χωροταξικό Πλαίσιο για τις Υδατοκαλλιέργειες			×	×				×	×
Θεσμικά κείμενα για την αλιεία με μηχανότρατα			×	×			×		×
Θεσμικά κείμενα για την αλιεία στον Κόλπο της Θεσσαλονίκης και του Θερμαϊκού	×			×			×		×
Περιοχές Οργανωμένης Ανάπτυξης Υδατοκαλλιεργειών	×			×			×		×
Στρατηγικό Σχέδιο Λιμένα Θεσσαλονίκης	×			×			×		×
Στρατηγικό Σχέδιο μαρίνας Καλαμαριάς (Αρετσού)	×			×			×		×

Σύντομος τίτλος	A	ΥΔ	ΠΘ	ΔΑ	ΘΜ	ΛΔ	ΘΑ	ΠΦ	ΑΥ	ΥΕ	ΑΚ	ΝΑ	ΧΑ	ΕΚ	ΠαΠ	ΠεΠ	ΠΤ	ΥΠ
Κατηγορία 1: οριζόντιος σχεδιασμός και στρατηγικές																		

Σύντομος τίτλος	A	ΥΔ	ΠΘ	ΔΑ	ΘΜ	ΛΔ	ΘΑ	ΠΦ	ΑΥ	ΥΕ	ΑΚ	ΝΑ	ΧΑ	ΕΚ	ΠαΠ	ΠεΠ	ΠΤ	ΥΠ
Περιφερειακό Χωροταξικό Πλαίσιο για την Περιφέρεια Κεντρικής Μακεδονίας	×	×	×		×										×	×		
Κατηγορία 2: σχεδιασμός και στρατηγικές προστασίας και διατήρησης της φυσικής και πολιτιστικής κληρονομιάς																		
Ενάλιες αρχαιότητες και Θαλάσσια πολιτιστική κληρονομιά																		×
Περιοχές «Φύση / Natura 2000»																×		
Εθνικό Πάρκο Δέλτα Αξιού																×		
Κατηγορία 3: τομεακός σχεδιασμός και στρατηγικές (για οικονομικούς τομείς και άλλες θαλάσσιες χρήσεις και δραστηριότητες)																		
Ειδικό Χωροταξικό Πλαίσιο για τις Υδατοκαλλιέργειες		×																
Θεσμικά κείμενα για την αλιεία με μηχανότρατα	×																	
Θεσμικά κείμενα για την αλιεία στον Κόλπο της Θεσσαλονίκης και του Θερμαϊκού	×																	
Περιοχές Οργανωμένης Ανάπτυξης Υδατοκαλλιεργειών		×																
Στρατηγικό Σχέδιο Λιμένα Θεσσαλονίκης						×												
Στρατηγικό Σχέδιο μαρίνας Καλαμαριάς (Αρετσού)						×												

A = Αλιεία, ΥΔ = Υδατοκαλλιέργεια, ΠΘ = Παράκτιος και θαλάσσιος τουρισμός, ΔΑ = Δραστηριότητες αναψυχής, ΘΜ = Θαλάσσιες μεταφορές, ΛΔ = Λιμενικές δραστηριότητες, ΘΑ = Θαλάσσιες Ανανεώσιμες Πηγές Ενέργειας, ΠΦ = Εξερεύνηση και εκμετάλλευση πετρελαίου και φυσικού αερίου, ΑΥ = Θαλάσσια αδρανή υλικά (εξαγωγή άμμου για αναπλήρωση παραλίας και κατασκευές), ΥΕ = Υποδομές εξόρυξης βαθέων υδάτων και ρομποτική, ΑΚ = Αγωγοί και καλώδια, ΝΑ = Ναυτική άμυνα, ΧΑ = Χώροι απόρριψης (π.χ. για ιζήματα ή πυρομαχικά), ΕΚ = Έρευνα και καινοτομία, ΠαΠ = Παράκτια προστασία, ΠεΠ = Περιβαλλοντική προστασία, ΠΤ = Προστασία Τοπίου, ΥΠ = Υποθαλάσσια πολιτιστική κληρονομιά

Οριζόντιος (τοπο-κεντρικός) σχεδιασμός και στρατηγικές

Στην Περιφέρεια Κεντρικής Μακεδονίας, οριζόντιος και τοπο-κεντρικός σχεδιασμός προωθείται μέσω του Περιφερειακού Χωροταξικού Πλαισίου (ΠΧΠ). Το σχέδιο αυτό, το οποίο επικαιροποιήθηκε το 2020, δεν εστιάζει στο θαλάσσιο χώρο. Αναφέρεται κυρίως στα χερσαία τμήματα της Περιφέρειας και θέτει κατευθυντήριες γραμμές και στόχους, όχι μόνο για την οικονομική ανάπτυξη της Περιφέρειας Κεντρικής Μακεδονίας σε διάφορους τομείς, αλλά και για τη διατήρηση της ροής των οικοσυστημικών υπηρεσιών και την ανάδειξη και προστασία των περιοχών φυσικής και πολιτιστικής κληρονομιάς. Το σχέδιο ωστόσο, αναφέρεται στις αλληλεπιδράσεις ξηράς-θάλασσας παρέχοντας κατευθυντήριες γραμμές για τη βιώσιμη υδατοκαλλιέργεια και αλιεία, την περιβαλλοντική προστασία των ακτών, την αναβάθμιση του παράκτιου τοπίου, τη βελτιστοποίηση των θαλάσσιων μεταφορών, καθώς και την ανάπτυξη του θαλάσσιου τουρισμού.

Η Περιφέρεια Κεντρικής Μακεδονίας βρίσκεται στο Βόρειο Αιγαίο, όπου έχει ήδη εκπονηθεί το πρώτο Θαλάσσιο Χωροταξικό Σχέδιο/Πλαίσιο της Ελλάδας. Σύμφωνα με το εθνικό σύστημα χωρικού σχεδιασμού, τα Θαλάσσια Χωροταξικά Σχέδια/Πλαίσια (ΘΧΠ) κατηγοριοποιούνται ως Περιφερειακά Χωροταξικά Σχέδια (ΠΧΠ). Ως τέτοια, παρέχουν στρατηγικές κατευθύνσεις, αλλά μπορούν επίσης να έχουν και ρυθμιστικό/κανονιστικό χαρακτήρα, ανάλογα με τη θαλάσσια περιοχή και την περίπτωση. Στην περίπτωση του Βορείου Αιγαίου (ΘΧΕ 1), το ολοκληρωθέν ΘΧΠ προχωρά στην περαιτέρω υποδιαίρεση της εν λόγω θαλάσσιας περιοχής σε 4 Ζώνες Ανάπτυξης, ακολουθώντας οικονομικά, οικοσυστημικά και άλλα κριτήρια (Χάρτης 1). Στο σύνολό της η Περιφέρεια Κεντρικής Μακεδονίας, αποτελεί τη μία από αυτές τις τέσσερις αυτές Ζώνες Ανάπτυξης της ΘΧΕ1.

Σύμφωνα με το ολοκληρωθέν ΘΧΠ για το Βόρειο Αιγαίο, προτεραιότητα δίνεται στις ήδη επικρατούσες δραστηριότητες, και συγκεκριμένα στις: θαλάσσιες μεταφορές, αλιεία, υδατοκαλλιέργειες, πλατφόρμες υγροποιημένου φυσικού αερίου, ενεργειακά δίκτυα και θαλάσσιες ΑΠΕ και τον παράκτιο (και θαλάσσιο) τουρισμό. Ειδικά για το θαλάσσιο χώρο ένθεν της Περιφέρειας Κεντρικής Μακεδονίας, οι στρατηγικές κατευθύνσεις που τίθενται, διατηρούν τόσο τις προτεραιότητες όσο και τους στόχους, όπως έχουν τεθεί από τον υφιστάμενο τομεακό σχεδιασμό, δίνοντας ιδιαίτερη έμφαση στην προστασία του περιβάλλοντος, υπό τη πρίσμα της οικοσυστημικής προσέγγισης.

Περιβαλλοντικός σχεδιασμός

Η Περιφέρεια Κεντρικής Μακεδονίας διαθέτει ιδιαίτερης αξίας παράκτια και θαλάσσια οικοσυστήματα, γεγονός που αντικατοπτρίζεται και στον σημαντικό αριθμό προστατευόμενων περιοχών και περιοχών Natura που εντοπίζονται στην εν λόγω ζώνη.

Το Εθνικό Πάρκο Δέλτα Αξιού είναι η πιο σημαντική προστατευόμενη περιοχή στο παράκτιο τμήμα της Περιφέρειας Κεντρικής Μακεδονίας. Θεσπίστηκε το 2009 με την ΚΥΑ 12966 (ΦΕΚ 220/ΑΑΠ/14-5-2009) και περιλαμβάνει χερσαία και θαλάσσια τμήματα, τα οποία περιλαμβάνουν τις εκβολές του Αξιού ποταμού καθώς και τις αλυκές και την εγγύς

λιμνοθάλασσα που είναι μεγάλης περιβαλλοντικής και οικονομικής αξίας. Το μεγαλύτερο μέρος του Εθνικού Πάρκου περιλαμβάνεται επίσης στο δίκτυο Natura. Το Εθνικό Πάρκο προστατεύεται επίσης από τη Σύμβαση Ραμσάρ. Ο Πίνακας 1 συνοψίζει τους διάφορους χαρακτηρισμούς/κηρύξεις που ισχύουν στο Εθνικό Πάρκο.

Πίνακας 1. Τύποι κηρύξεων και χαρακτηρισμών της περιοχής του Εθνικού Πάρκου Δέλτα Αξιού (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από τον Οργανισμό Φυσικού Περιβάλλοντος & Κλιματικής Αλλαγής)

Εθνική Νομοθεσία:	Καταφύγιο Άγριας Ζωής	
Δίκτυο Natura 2000:	GR1220002 (ΤΚΣ): Δέλτα Αξιού – Λουδία – Αλιάκμονα – Ευρύτερη περιοχή - Αξιούπολη (Έκταση: 41.496 εκτ.)	
	GR1220010 (ΕΖΔ): Δέλτα Αξιού – Λουδία – Αλιάκμονα – Αλυκή Κίτρους (Έκταση: 28.855 εκτ.)	
	GR1250004 (ΤΚΣ): Αλυκή Κίτρους – Ευρύτερη περιοχή (Έκταση: 1.457 εκτ.)	
Σύμβαση Ραμσάρ:	59: Δέλτα Αξιού, Λουδία, Αλιάκμονα (Έκταση: 11.808 εκτ.)	

Το σχέδιο διαχείρισης για το Εθνικό Πάρκο Δέλτα Αξιού βρίσκεται σε διαδικασία διαβούλευσης. Επί του παρόντος, στο Εθνικό Πάρκο ισχύουν οι κανονισμοί που προέρχονται από την εθνική νομοθεσία (Υ.Α. - ΦΕΚ 294/Δ/01-08-2018 όπως τροποποιήθηκε και ισχύει). Στα θαλάσσια τμήματα του Πάρκου ορισμένες από τις απαγορευμένες χρήσεις και δραστηριότητες είναι: εγκαταστάσεις και δραστηριότητες που μπορούν να διαταράξουν τη συνοχή του οικοσυστήματος (π.χ. αιολικά πάρκα), δόμηση και επέκταση οικισμών, καθώς και κάθε δραστηριότητα που θα μπορούσε να υποβαθμίσει το ευαίσθητο οικοσύστημα των εκβολών των ποταμών και των αμμοθινών. Ορισμένες από τις επιτρεπόμενες δραστηριότητες (υπό συνθήκες και μόνο μετά από περιβαλλοντική αδειοδότηση) είναι: επιστημονική έρευνα, επισκέψεις περιβαλλοντικής εκπαίδευσης, ερασιτεχνική και επαγγελματική αλιεία και μορφές εναλλακτικού τουρισμού, εξόρυξη άμμου στις όχθες των ποταμών και υδατοκαλλιέργειες.

Ένας άλλος τύπος προστατευόμενης περιοχής που συναντάται στο παράκτιο τμήμα της περιοχής μελέτης είναι τα Καταφύγια Άγριας Ζωής - ΚΑΖ (Πίνακας 2). Όλες αυτές οι περιοχές αποτελούν επίσης μέρος του δικτύου Natura. Σύμφωνα με τις διατάξεις της περιβαλλοντικής νομοθεσίας (Ν.3937/2011) η προστασία των ΚΑΖ είναι πολύ αυστηρή, επιτρέποντας μόνο: παρατηρητήρια άγριας ζωής, εξορυκτικές δραστηριότητες και διάνοιξη οδών μετά από κατάλληλη τεκμηρίωση και περιβαλλοντική αδειοδότηση.

Πίνακας 2. Θαλάσσιες και μερικώς θαλάσσιες περιοχές Natura της Περιφέρειας Κεντρικής Μακεδονίας που περιλαμβάνουν Καταφύγια Άγριας Ζωής (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από τον Οργανισμό Φυσικού Περιβάλλοντος & Κλιματικής Αλλαγής)

GR1220002	ΤΚΣ	Δέλτα Αξιού - Λουδία - Αλιάκμονα - Ευρύτερη περιοχή - Αξιούπολη (Περιοχές που περιλαμβάνονται στο Εθνικό Πάρκο Αξιού)	41.496 εκτ.
GR1220010	ΕΖΔ	Δέλτα Αξιού - Λουδία - Αλιάκμονα - Αλική Κίτρους	28.855 εκτ.
GR1250004	ΤΚΣ	Αλική Κίτρους - Ευρύτερη περιοχή	1.457 εκτ.
GR1270004	ΤΚΣ/ΕΖΔ	Λιμνοθάλασσα Αγίου Μάμα	626 εκτ.
GR1220012	ΤΚΣ	Λιμνοθάλασσα Επανομής και θαλάσσια παράκτια ζώνη	808 εκτ.
GR1270013	ΕΖΔ	Υγρότοποι Νέας Φώκαιας	421 εκτ.

Ο θαλάσσιος χώρος ένθεν της ακτογραμμής της Περιφέρειας Κεντρικής Μακεδονίας φιλοξενεί επίσης λιβάδια ποσειδωνίας, τα οποία τέθηκαν υπό προστασία το 2019, με την ΚΥΑ (ΦΕΚ 105/Δ/12-03-2019). Στις περιοχές αυτές απαγορεύεται η αλιεία με μηχανότρατες και οι υδατοκαλλιέργειες.

Ο Πίνακας 3 περιλαμβάνει τις επιπλέον περιοχές Natura που εντοπίζονται στην παράκτια ζώνη της Περιφέρειας Κεντρικής Μακεδονίας, πλέον όσων περιλαμβάνονται στον Πίνακα 2.

Πίνακας 3. Θαλάσσιες και μερικώς θαλάσσιες περιοχές Natura της Περιφέρειας Κεντρικής Μακεδονίας (πλέον των κηρυγμένων ως ΚΑΖ) (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από τον Οργανισμό Φυσικού Περιβάλλοντος & Κλιματικής Αλλαγής).

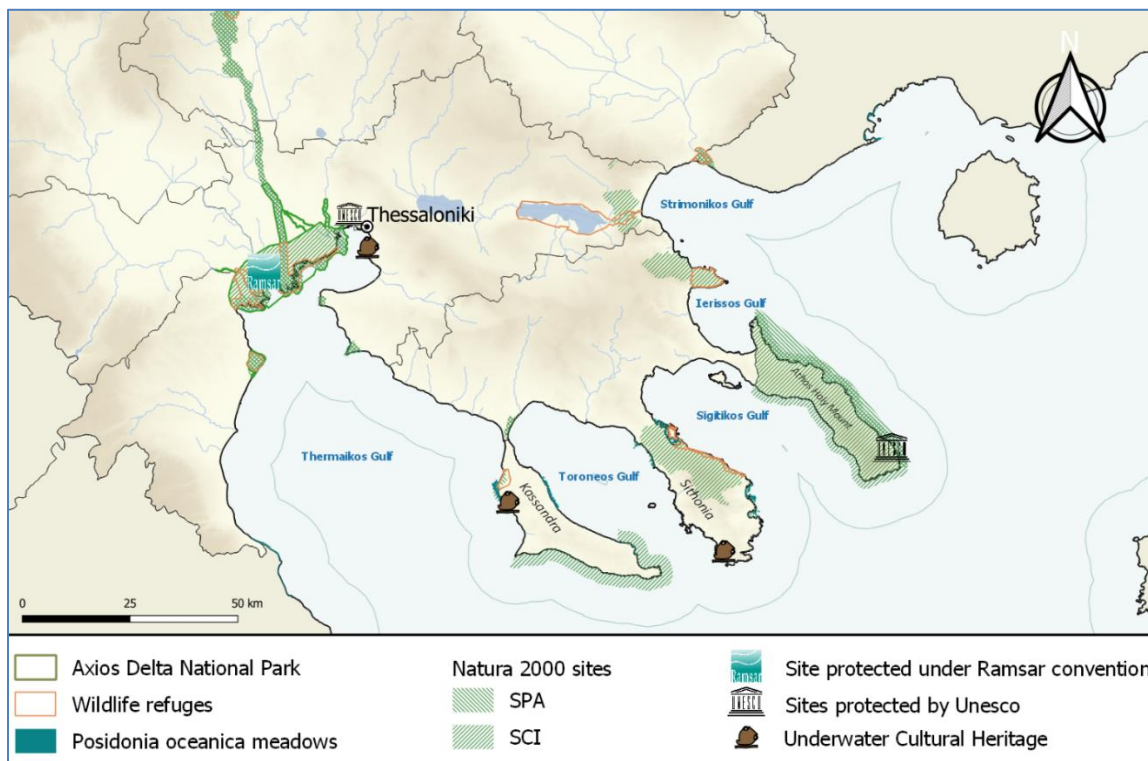
GR1270010	ΤΚΣ	Ακρωτήριο Πύργος - Όρμος Κύψας - Μάλαμο	1.179 εκτ.
GR1270008	ΤΚΣ	Παλιούρι - Ακρωτήριο και Θαλάσσια Ζώνη	16.161 εκτ.
GR1270007	ΤΚΣ	Ακρωτήριο Ελιά - Ακρωτήριο Κάστρο - Εκβολή Ραγούλα	526 εκτ.
GR1270009	ΤΚΣ	Πλατανίτσι - Συκιά - Ακρ. Ρήγας - Ακρ. Άδολο	990 εκτ.
GR1260002	ΤΚΣ /ΕΖΔ	Εκβολές Ποταμού Στρυμόνα	1.274 εκτ.
GR1220005	ΤΚΣ /ΕΖΔ	Λιμνοθάλασσα Αγγελοχωρίου	373 εκτ.
GR1270002	ΤΚΣ	Όρος Ίταμος - Σιθωνία	18.054 εκτ.
GR1270016	ΕΖΔ	Θαλάσσια Ζώνη Ανατολικά και Νότια Χερσονήσου Άθωνα	17.091 εκτ.

GR1270015	ΤΚΣ	Θαλάσσια Ζώνη Χερσονήσου Άθωνα	20.304 εκτ.
GR1220003	ΤΚΣ	Στενά Ρεντίνας – Ευρύτερη Περιοχή Σπήλαιο Δρακότρυπα – Σπήλαιο Λακκιά και Ρέμα Νερομάνα	5.896 εκτ.

Όσον αφορά τη διαχείριση και προστασία του συνόλου των περιοχών Natura, κατευθύνσεις περιλαμβάνονται στον περιβαλλοντικό νόμο 3937/2011. Και ενώ η υλοποίηση σχεδίων διαχείρισης είναι υποχρεωτική για τις περιοχές αυτές, τα σχέδια αυτά εκκρεμούν, ενώ αυτό του Εθνικού Πάρκου Δέλτα Αξιού βρίσκεται σε στάδιο διαβούλευσης. Σύμφωνα με τον περιβαλλοντικό νόμο, τα σχέδια διαχείρισης οφείλουν να καθορίζουν το είδος και την ένταση των ανθρώπινων δραστηριοτήτων που μπορούν να λάβουν χώρα εντός μιας Natura, τον τρόπο διεξαγωγής ερευνητικών εργασιών και τον τρόπο διασφάλισης και προστασίας της βιοποικιλότητας.

Όσον αφορά την ενάλια πολιτιστική κληρονομιά, το πλαίσιο και οι στρατηγικές κατευθύνσεις προστασίας στην Ελλάδα καθορίζονται από τους νόμους 3028/2002 και 4858/2021. Σύμφωνα με τις προβλέψεις της νομοθεσίας, η αγκυροβολία και η αλιεία απαγορεύεται σε εγγύτητα με κηρυγμένες ενάλιες αρχαιότητες. Ισχύουν επίσης ορισμένοι περιορισμοί για την κατάδυση με σκοπό την επίσκεψη των αρχαιολογικών ευρημάτων. Στην Περιφέρεια Κεντρικής Μακεδονίας υπό καθεστώς προστασίας βρίσκονται τρεις (3) περιοχές (Χάρτης 2):

- Θαλάσσια περιοχή κόλπου Θεσσαλονίκης (ΦΕΚ 384/Β/24-05-1989)
- Θαλάσσια περιοχή όρμου Κύψας (χερσόνησος Κασσάνδρας, Σάνη) (ΦΕΚ 1710/Β/19-11-2003)
- Θαλάσσια περιοχή στο Πόρτο Κουφό (χερσόνησος Σιθωνίας) (ΦΕΚ 1710/Β/19-11-2003)



Χάρτης 2. Περιοχές προστασίας της φυσικής και πολιτιστικής κληρονομιάς του παράκτιου χώρου της Περιφέρειας Κεντρικής Μακεδονίας (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από Geodata.gov.gr, listedmonuments.culture.gr και EMODnet).

Τομεακός σχεδιασμός

Στην Περιφέρεια Κεντρικής Μακεδονίας, ο τομεακός χωρικός σχεδιασμός αφορά τις οικονομικές δραστηριότητες του τουρισμού, των υδατοκαλλιεργειών, της αλιείας και των θαλάσσιων μεταφορών. Οι κατευθύνσεις που ισχύουν για την ΠΚΜ συνοψίζονται παρακάτω ανά τομέα.

Για τον τουρισμό, κατευθύνσεις περιλαμβάνονται στο Περιφερειακό Χωροταξικό Πλαίσιο (ΠΧΠ) της Περιφέρειας Κεντρικής Μακεδονίας (αναθεώρηση του 2020). Στην ουσία οι κατευθύνσεις του ΠΧΠ για τον τουρισμό αποτελούν προσαρμογή αυτών που περιλάμβανε το Εθνικό Χωροταξικό Πλαίσιο για τον τουρισμό, το οποίο αρχικά καταργήθηκε ενώ πλέον βρίσκεται εκ νέου υπό εκπόνηση. Έτσι, στο ΠΧΠ Κεντρικής Μακεδονίας, η παράκτια ζώνη χαρακτηρίζεται είτε ως "αναπτυγμένη τουριστικά περιοχή" είτε ως "αναπτυσσόμενη τουριστικά περιοχή". Εντός των περιοχών αυτών, το ΠΧΠ ορίζει ότι η τουριστική ανάπτυξη θα πρέπει να τεθεί υπό έλεγχο και ο σχεδιασμός και η αδειοδότηση θα πρέπει να διασφαλίζουν τη μη υπέρβαση της φέρουσας ικανότητας των παράκτιων οικοσυστημάτων.

Η υδατοκαλλιέργεια είναι ένας τομέας μεγάλης οικονομικής σημασίας για την Ελλάδα, αλλά και την Περιφέρεια Κεντρικής Μακεδονίας. Το 80% της μυδοκαλλιεργητικής δραστηριότητας της χώρας λαμβάνει χώρα στον Θερμαϊκό Κόλπο. Το Ειδικό Χωροταξικό Σχέδιο για τις Υδατοκαλλιέργειες εγκρίθηκε το 2011 και βρίσκεται υπό αναθεώρηση. Έχει ταυτόχρονα στρατηγικό αλλά και ρυθμιστικό χαρακτήρα, θέτοντας στόχους και χωροταξικές κατευθύνσεις εντός ειδικών περιοχών, όπως οι ΠΑΥ, ΠΟΑΥ, ΠΑΣΜ κλπ. Στην περίπτωση της Περιφέρειας Κεντρικής Μακεδονίας, το εν λόγω χωροταξικό σχέδιο πρότεινε τη δημιουργία δύο (2) Περιοχών Ανάπτυξης Υδατοκαλλιεργειών - ΠΑΥ (μία στον Θερμαϊκό και μία στον Στρυμονικό Κόλπο), λόγω του μεγάλου αριθμού μονάδων υδατοκαλλιέργειας που ήταν ήδη εγκατεστημένες. Εντός των εν λόγω ΠΑΥ, το Χωροταξικό Σχέδιο πρότεινε την περαιτέρω οργάνωση και εντατικοποίηση της δραστηριότητας, με τη δημιουργία τουλάχιστον δύο (2) ΠΟΑΥ (Περιοχών Οργανωμένης Ανάπτυξης Υδατοκαλλιεργειών), ακολουθώντας περιβαλλοντικά πρότυπα. Μέχρι σήμερα, έχει θεσπιστεί μόνο μία ΠΟΑΥ, στο νότιο τμήμα του Θερμαϊκού Κόλπου - Νομός Πιερίας (Π.Δ. 21-03-19 - ΦΕΚ 206/Δ/09.05.2019).

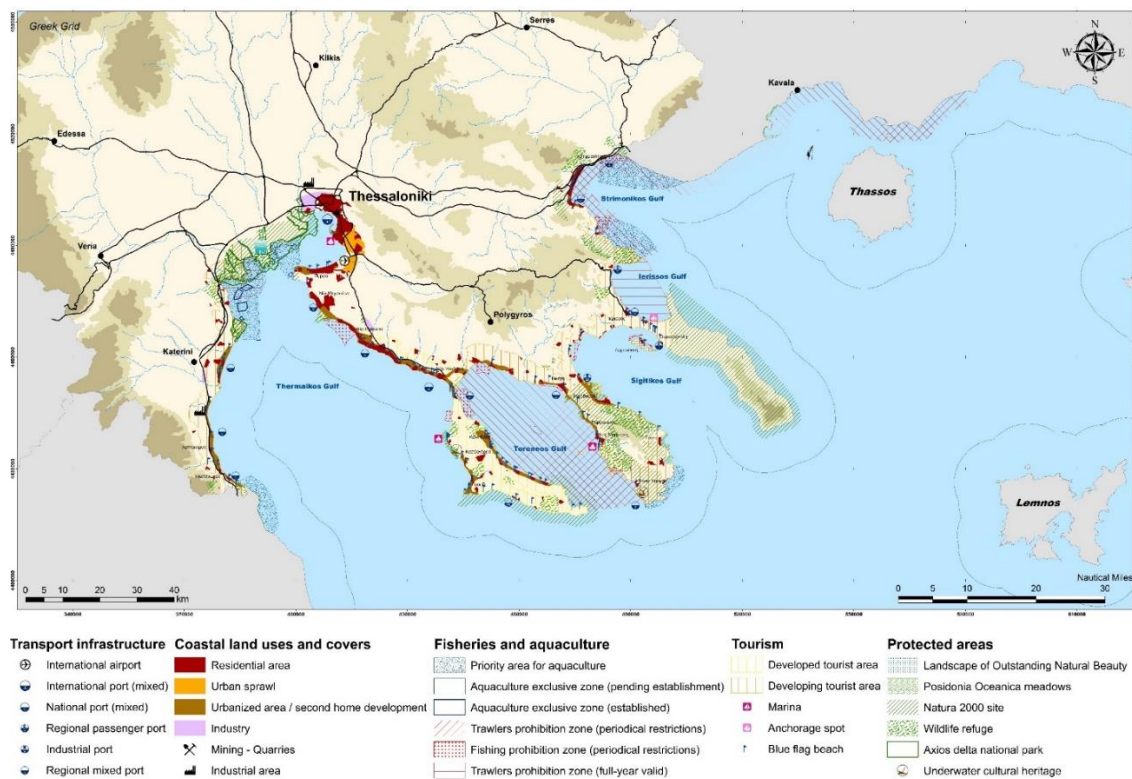
Εκτός από τις υδατοκαλλιέργειες, και η αλιεία είναι ιδιαίτερα ανεπτυγμένη στην Περιφέρεια Κεντρικής Μακεδονίας. Δεδομένης της ευαισθησίας των θαλάσσιων οικοσυστημάτων και του βυθού σε αρκετά θαλάσσια τμήματα της ΠΚΜ, έχουν καθοριστεί αλιευτικές ζώνες (Χάρτης 3), στις οποίες τίθενται περιορισμοί αναφορικά με τις μεθόδους και την ένταση άσκησης της δραστηριότητας. Οι πρώτες "ζώνες απαγόρευσης αλιείας με μηχανότρατα" στην Ελλάδα (και κατ' επέκταση και την Περιφέρεια Κεντρικής Μακεδονίας) θεσπίστηκαν ήδη από το 1966 με το Β.Δ. 917/1966 (ΦΕΚ Α-248/27.9.1966). Εντός των ζωνών αυτών, το εν λόγω Διάταγμα καθόρισε χωροχρονικούς περιορισμούς για τις μηχανότρατες. Πέραν αυτών των ζωνών, στην Περιφέρεια Κεντρικής Μακεδονίας το 2009 θεσπίστηκε άλλη μια ειδική ζώνη, με το Π.Δ. 68 - ΦΕΚ 90/Α/12.6.2009). Αφορά το Θερμαϊκό Κόλπο γενικά αλλά και ειδικά τα ύδατα σε εγγύτητα με τη μητροπολιτική περιοχή της Θεσσαλονίκης. Εντός της ζώνης αυτής το Διάταγμα καθορίζει την ελάχιστη απόσταση από την ακτή για την αλιεία, τις τεχνικές αλιείας καθώς και τις χρονικές περιόδους άσκησης της δραστηριότητας.

Τέλος, βασική (εθνική) στρατηγική που αφορά την Περιφέρεια είναι αυτή για τις θαλάσσιες μεταφορές και τις λιμενικές υποδομές και εγκαταστάσεις (εκπονήθηκε το 2012), η οποία βρίσκεται υπό αναθεώρηση. Στην ΠΚΜ, το λιμάνι της Θεσσαλονίκης είναι το σημαντικότερο. Κατατάσσεται ως "Λιμένας Διεθνούς Σημασίας" (ΦΕΚ 202/Β/16.2.07) και είναι ένας από τους πέντε αυτής της κατηγορίας στην Ελλάδα. Αποτελεί επίσης μέρος του Διευρωπαϊκού Δικτύου Μεταφορών (ΔΕΔ-Μ). Το τελευταίο Master Plan του λιμανιού εγκρίθηκε το 2018 (ΦΕΚ 77/ΑΑΠ/2018) και βρίσκεται υπό αναθεώρηση. Το Master Plan καθορίζει τις προτεραιότητες για τη χρήση και τη μελλοντική ανάπτυξη του λιμανιού. Σύμφωνα με το εν λόγω Σχέδιο (αλλά και κατ' εφαρμογήν της εθνικής νομοθεσίας), η περιοχή διαχείρισης του διεθνούς λιμένα Θεσσαλονίκης εκτείνεται σε απόσταση τουλάχιστον 500 μέτρων από την ακτογραμμή.

Εκτός από το λιμάνι της Θεσσαλονίκης, άλλα 15 - μικρότερης εμβέλειας και λειτουργίας - λιμάνια χωροθετούνται στην Περιφέρεια Κεντρικής Μακεδονίας (Πίνακας 4). Επιπλέον, υπάρχουν και τρία (3) τουριστικά λιμάνια (μαρίνες), εκ των οποίων το ένα βρίσκεται στη μητροπολιτική περιοχή της Θεσσαλονίκης και τα άλλα δύο στη χερσόνησο της Χαλκιδικής. Στη Θεσσαλονίκη βρίσκεται επίσης μία ιχθυόσκαλα, από τις 11 συνολικά που λειτουργούν στην Ελλάδα.

Πίνακας 4: Κατάταξη λιμενικών υποδομών Περιφέρειας Κεντρικής Μακεδονίας (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από το Περιφερειακό Πλαίσιο Χωροταξικού Σχεδιασμού και Αειφόρου Ανάπτυξης Κεντρικής Μακεδονίας και το ΦΕΚ 202/Β/16-02-07).

Διεθνής Λιμένας - Θαλάσσια Πύλη	Λιμένας Θεσσαλονίκης (Στρατηγικό Σχέδιο: ΦΕΚ 77/ΑΑΠ/2018)
Λιμένας Μείζονος Ενδιαφέροντος	Νέα Μουδανιά
Λιμένας Περιφερειακής Εμβέλειας	Νέα Μηχανιώνα (Ιχθυόσκαλα), Λιτόχωρο, Παραλία Κατερίνης, Επανομή, Νέα Καλλικράτεια, Νέα Σκιάνη, Νέα Φώκαια, Πόρτο Κουφό, Λαγονήσι, Νέων Ρόδων, Στρατωνίου, Σταυρού, Ασπροβάλτας
Τουριστικά λιμάνια (μαρίνες)	<u>Μητροπολιτική περιοχή Θεσσαλονίκης:</u> Αρετσού (Καλαμαριά) (Σχέδιο Λιμένα: ΠΔ 26-01-23 - ΦΕΚ 95/Δ/2023) <u>Λοιπή Περιφέρεια Κεντρικής Μακεδονίας:</u> Σάνη (Κασσάνδρα), Πόρτο Καρράς
Αλιευτικά Καταφύγια και αγκυροβόλια	Πηγαδάκια-Συκιά (Χαλκιδική), Καλλιθέα, Ουρανούπολη, Νικήτη Σιθωνίας



Χάρτης 3. Χωρική οργάνωση του θαλάσσιου χώρου της Περιφέρειας Κεντρικής Μακεδονίας (Πηγή: Επεξεργασία από την ερευνητική ομάδα REGINA-MSP του ΑΠΘ με δεδομένα από EMODnet, Υπουργείο Περιβάλλοντος και Ενέργειας, Marineregions.org, GEBCO, Περιφερειακό Πλαίσιο Χωροταξικού Σχεδιασμού και Αειφόρου Ανάπτυξης Κεντρικής Μακεδονίας, aliwia.hcg.gr, geodata.gov.gr και mapsportal.ypen.gr)

Εναρμόνιση με την Ευρωπαϊκή Πράσινη Συμφωνία και τις στρατηγικές για τις θαλάσσιες λεκάνες της Ε.Ε.

Τα περισσότερα από τα σχέδια και τις στρατηγικές που αναλύθηκαν παραπάνω, υιοθετήθηκαν πριν από την ανακοίνωση της Ευρωπαϊκής Πράσινης Συμφωνίας (EGD). Ως εκ τούτου, αναφέρονται έμμεσα - και όχι άμεσα - στους στόχους και τα ζητήματα που προωθεί η εν λόγω Συμφωνία. Ειδικότερα, η συσχέτιση / εναρμόνιση είναι πολύ πιο αισθητή στις εθνικές στρατηγικές (εγκεκριμένες ή υπό εκπόνηση) για την προστασία του περιβάλλοντος, το κλίμα και την ενέργεια, οι οποίες αναμένεται σύντομα να εξειδικευτούν στο περιφερειακό επίπεδο, και να αποτελέσουν συστατικό στοιχείων των σχεδίων και στρατηγικών που θα εκπονηθούν στο μέλλον για κάθε ελληνική περιφέρεια. Ειδική αναφορά στα σχέδια αυτά, επιχειρείται παρακάτω.

Το "Εθνικό σχέδιο για την ενέργεια και το κλίμα" της Ελλάδας εγκρίθηκε το 2019. Το σχέδιο θέτει ως κλιματικό στόχο τη μείωση των εκπομπών διοξειδίου του άνθρακα κατά περισσότερο από 56% (σε σύγκριση με το 2005) έως το 2030. Αυτό θα επιτευχθεί κυρίως με την αντικατάσταση της παραγωγής ηλεκτρικής ενέργειας από λιγνίτη με ανανεώσιμες πηγές ενέργειας (ηλιακή και αιολική), με στόχο την πλήρη απολιγνιτοποίηση μέχρι το 2028 και την επέκταση των ΑΠΕ από 18% σε τουλάχιστον 35% μέχρι το 2030. Οι στόχοι αυτοί υποστηρίζονται περαιτέρω από την εθνική νομοθεσία, όπως ο εθνικός νόμος για το κλίμα (Ν.4936/2022) και ο νόμος 4964 του 2022 σχετικά με την εγκατάσταση υπεράκτιων αιολικών πάρκων. Όλοι αυτοί οι στόχοι, αναμένεται να εξειδικευτούν και να αντιμετωπιστούν σε περιφερειακό επίπεδο, όταν θα εγκριθεί το Εθνικό Χωροταξικό Σχέδιο για τις ΑΠΕ (υπό αναθεώρηση) και όταν θα πραγματοποιηθεί η δεύτερη αναθεώρηση των Περιφερειακών Χωροταξικών Σχεδίων.

Επιπλέον, η Ελλάδα έχει θέσει την κυκλική οικονομία στον πυρήνα της αναπτυξιακής της στρατηγικής με το νέο "Εθνικό Σχέδιο Δράσης για την Κυκλική Οικονομία" που εγκρίθηκε το 2021. Πρόκειται για έναν οδικό χάρτη που θα καταστήσει την οικονομία της χώρας βιώσιμη και ταυτόχρονα ανταγωνιστική, σε πλήρη συμμόρφωση με τους στόχους του νέου σχεδίου δράσης της ΕΕ για την κυκλική οικονομία.

Όσον αφορά τη βιοποικιλότητα και το φυσικό κεφάλαιο της χώρας, έχει ήδη καταρτιστεί η "Εθνική Στρατηγική για τη Βιοποικιλότητα (2014-2029)", με τα συνοδά σχέδια δράσης να οφείλουν να αναθεωρούνται ανά 5ετία. Αντίστοιχα και για τους τομείς της αλιείας και της υδατοκαλλιέργειας, η Ελλάδα έχει εκπονήσει το "Πρόγραμμα Θάλασσας, Αλιείας και Υδατοκαλλιέργειας - ΕΠΘΑΥ (2021-2027)", το οποίο ενσωματώνει πλήρως τις προτεραιότητες που θέτουν οι στρατηγικές της ΕΕ και ιδίως η Ευρωπαϊκή Πράσινη Συμφωνία, η Στρατηγική για τη βιοποικιλότητα 2030 και η Στρατηγική "Από το αγρόκτημα στο πιάτο".

Όσον αφορά τα περιφερειακής κλίμακας σχέδια και στρατηγικές που αναλύθηκαν, τα περισσότερα από αυτά, περιλαμβάνουν επίσης αναφορές σε αρκετά από τα βασικά στοιχεία της Ευρωπαϊκής Πράσινης Συμφωνίας. Για παράδειγμα, στο Περιφερειακό

Χωροταξικό Πλαίσιο της ΠΚΜ (που εγκρίθηκε το 2020) όλες οι κατευθυντήριες γραμμές - για το θαλάσσιο περιβάλλον και για τους τομείς της υδατοκαλλιέργειας, της αλιείας, του τουρισμού και της ναυτιλίας - αναφέρονται στις πτυχές της βιοποικιλότητας και της διατήρησης των οικοσυστημάτων, και λαμβάνουν υπόψη τις διατάξεις της νομοθεσίας για την προστασία του περιβάλλοντος. Το ΠΧΠ για την Κεντρική Μακεδονία καθορίζει επίσης οριζόντιες δράσεις για τον μετριασμό της κλιματικής αλλαγής που αναφέρονται στην προώθηση των ΑΠΕ και τη θωράκιση της παράκτιας ζώνης από την άνοδο της στάθμης της θάλασσας, με βάση ένα σενάριο ανόδου κατά 0,7 έως 2,0 μέτρα τις επόμενες δεκαετίες. Το ΠΧΠ για την Κεντρική Μακεδονία, ασχολείται επίσης έμμεσα με τους πυλώνες του EUSAIR (Γαλάζια Ανάπτυξη, Διασυνδεδεμένες Περιφέρειες, Ποιότητα Περιβάλλοντος και Αειφόρος Τουρισμός). Επιπλέον, οι κανονισμοί για τις προστατευόμενες περιοχές τίθενται από το Ν. 3937/2011, ο οποίος είναι αφιερωμένος στην προστασία πολύτιμων περιοχών. Η προστασία και αποκατάσταση της βιοποικιλότητας και των οικοσυστημάτων (τα οποία θεωρούνται ως μείζον εθνικό κεφάλαιο) αναφέρονται σε όλη την έκταση του νόμου. Αντίστοιχα οι τομεακές στρατηγικές και σχέδια για τους τομείς της αλιείας και της υδατοκαλλιέργειας καθορίζουν κανονισμούς προκειμένου να διασφαλίζεται ότι οι δραστηριότητες αυτές ασκούνται με τρόπο που δεν απειλείται η βιοποικιλότητα και δεν υπονομεύεται η προστασία των οικοσυστημάτων.

Η "Στρατηγική για την προσαρμογή στην κλιματική αλλαγή" της Περιφέρειας Κεντρικής Μακεδονίας (η οποία συντάχθηκε πρόσφατα και εκκρεμεί η έγκρισή της) ενσωματώνει ευθέως στόχους της Ευρωπαϊκής Πράσινης Συμφωνίας. Η στρατηγική αυτή αποτελεί την εφαρμογή σε περιφερειακό επίπεδο της "Εθνικής Στρατηγικής για την προσαρμογή στην κλιματική αλλαγή".

Ζητήματα συμμετοχικότητας των ενδιαφερόμενων μερών

Για τη διευκόλυνση της συμμετοχικότητας στη λήψη αποφάσεων για θεσμικά κείμενα, σχέδια, στρατηγικές εθνικής κλίμακας και εμβέλειας κ.ο.κ, στην Ελλάδα λειτουργεί η εθνική ηλεκτρονική πλατφόρμα ("opengov") η οποία είναι ανοικτή σε όλους τους ενδιαφερόμενους (π.χ. δημόσια διοίκηση, οικονομικοί τομείς, ΜΚΟ, ενώσεις κ.λπ. καθώς και στο ευρύ κοινό). Εκτός του "opengov", από το 1999 λειτουργεί στην Ελλάδα και ένα ανώτατο όργανο διαβούλευσης, το οποίο ασχολείται ειδικά με στρατηγικές και χωροταξικά σχέδια που αναφέρονται σε εθνικό και περιφερειακό επίπεδο. Το Εθνικό Συμβούλιο Χωροταξίας (ΕΣΧ) αποτελείται από είκοσι εκπροσώπους από σωματεία, επιμελητήρια, ενώσεις κ.λπ. εθνικής εμβέλειας που εμπλέκονται στο χωροταξικό σχεδιασμό, καθώς και από άλλους δύο ειδικούς εμπειρογνώμονες σε θέματα χωροταξίας. Μεταξύ των 22 συνολικά μελών, ένα μέλος προέρχεται από την Ένωση Περιφερειών Ελλάδας (ΕΝΠΕ) και ένα άλλο μέλος από την Κεντρική Ένωση Δήμων Ελλάδας (ΚΕΔΕ). Κατά συνέπεια, η τοπική αυτοδιοίκηση α' και β' βαθμού, συμμετέχει έμμεσα στις διαδικασίες διαβούλευσης του Εθνικού Συμβουλίου Χωροταξίας, ενώ επίσης δύναται να συμμετέχει και στις διαβουλεύσεις μέσω "opengov".

Τόσο η Εθνική Χωρική Στρατηγική για το Θαλάσσιο Χώρο (ΕΧΣΘΧ) καθώς και το πρώτο Θαλάσσιο Χωροταξικό Πλαίσιο/Σχέδιο για τη θαλάσσια χωρική ενότητα 1 (ΘΧΕ1) (όπου βρίσκεται η Περιφέρεια Κεντρικής Μακεδονίας), υποβλήθηκαν πρώτα σε διαβούλευση μέσω της πλατφόρμας.opengov και στη συνέχεια στο Εθνικό Συμβούλιο Χωροταξίας. Τέλος, και τα δύο κείμενα, υποβλήθηκαν επίσης σε διαβούλευση και με τα Υπουργεία που έχουν αρμοδιότητες στο θαλάσσιο χώρο.

Σε αντίθεση με την πρακτική για τη Θαλάσσια Χωροταξία, η συμμετοχή των περιφερειακών αρχών (και κατ'επέκταση και της Περιφέρειας Κεντρικής Μακεδονίας) είναι πιο ουσιαστική και άμεση στις διαδικασίες κατάρτισης των χερσαίων περιφερειακών χωροταξικών σχεδίων, δεδομένου ότι οι Περιφέρειες διαβουλεύονται και γνωμοδοτούν για το οικείο τους Πλαίσιο, σε ειδική συνεδρίαση του Περιφερειακού Συμβουλίου.

Όσον αφορά την εμπλοκή των ενδιαφερόμενων μερών στα υπόλοιπα σχέδια που αφορούν τη θαλάσσια περιοχή της Κεντρικής Μακεδονίας, ισχύουν τα ακόλουθα: α. Για το Εθνικό Πάρκο Δέλτα Αξιού, η εμπλοκή των ενδιαφερομένων επιτυγχάνεται μέσω της οικείας Μονάδας Διαχείρισης που είναι υπεύθυνη για τη διαχείριση του Πάρκου (το σχέδιο διαχείρισης βρίσκεται επί του παρόντος υπό διαβούλευση), β. Για το διεθνές λιμάνι της Θεσσαλονίκης, δεν υπάρχουν διαθέσιμες πληροφορίες σχετικά με τη συμμετοχή των ενδιαφερόμενων μερών, καθώς το σχέδιο εγκρίθηκε πριν από χρόνια.

Εν κατακλείδι, θα πρέπει να σημειωθεί ότι η τοπική αυτοδιοίκηση (α' και β' βαθμού) της Περιφέρειας Κεντρικής Μακεδονίας έχει δείξει μεγάλο ενδιαφέρον στο παρελθόν για τη συμμετοχή της σε διαβουλεύσεις σχετικά με χωροταξικά, τομεακά, περιβαλλοντικά και άλλα σχέδια και στρατηγικές που αφορούν θέματα της περιοχής τους. Αξίζει επίσης να σημειωθεί ότι ειδικά στην Περιφέρεια Κεντρικής Μακεδονίας, συχνά διοργανώνονται και επιπλέον συμμετοχικές διαδικασίες, πέραν των θεσμικά προβλεπόμενων διαβουλεύσεων, ειδικά για σχέδια και στρατηγικές που αφορούν τη μητροπολιτική περιοχή της Θεσσαλονίκης, ευνοώντας ιδιαίτερα τη συμμετοχή τοπικών φορέων (και κυρίως τοπικών εμπειρογνομώνων).

Προκλήσεις για την επίτευξη ολοκληρωμένου σχεδιασμού και διαχείρισης του θαλάσσιου χώρου της ΠΚΜ

Για την επίτευξη ενός ολοκληρωμένου σχεδιασμού και διαχείρισης του θαλάσσιου χώρου της Περιφέρειας Κεντρικής Μακεδονίας, απαιτούνται ενέργειες προς δύο κατευθύνσεις:

A. (Θαλάσσια) χωρική διακυβέρνηση:

- Είναι σημαντικό οι ελληνικές Περιφέρειες να αποκτήσουν πιο ουσιαστικό ρόλο στη διαδικασία του Θαλάσσιου Χωροταξικού Σχεδιασμού, ειδικά για τις θαλάσσιες περιοχές σε εγγύτητα με την ακτογραμμή τους. Ο ρόλος τους μπορεί να είναι αντίστοιχος (ή/και πιο αναβαθμισμένος), με αυτόν που προβλέπεται για τα (χερσαία) περιφερειακά χωροταξικά σχέδια, όπου η περιφερειακή αυτοδιοίκηση είναι πιο ενεργή και παρέχει υποχρεωτικά γνώμη. Αυτό θα μπορούσε - και θα έπρεπε - να έχει συμβεί και κατά την

εκπόνηση του πρώτου θαλάσσιου χωροταξικού σχεδίου, για τη Θαλάσσια Χωρική Ενότητα όπου βρίσκεται η Περιφέρεια Κεντρικής Μακεδονίας.

- Η θάλασσα του Βορείου Αιγαίου (Θαλάσσια Χωρική Ενότητα 1), για την οποία έχει εκπονηθεί το πρώτο θαλάσσιο χωροταξικό σχέδιο είναι μια θαλάσσια περιοχή που μοιράζονται 5 ελληνικές Περιφέρειες (μαζί και η Περιφέρεια Κεντρικής Μακεδονίας). Είναι σημαντικό οι Περιφέρειες αυτές, να συνεργαστούν κάτω από ένα κοινό σχήμα διακυβέρνησης, για την αντιμετώπιση των κοινών και διαπεριφερειακών ζητημάτων που αφορούν τη θάλασσα του Βορείου Αιγαίου. Αυτό το σχήμα διακυβέρνησης θα μπορούσε να έχει τη μορφή μιας διαπεριφερειακής Κοινότητας Πρακτικής.
- Κατ'αναλογία, είναι επίσης σημαντικό να ενισχυθεί και η συμμετοχικότητα σε ενδοπεριφερειακό επίπεδο, μέσω ενός σχήματος διακυβέρνησης που θα εμπλέκει τοπικούς φορείς της ΠΚΜ από το δημόσιο και τον ιδιωτικό τομέα, αλλά και επιμελητήρια, επαγγελματίες, ΜΚΟ, εμπειρογνώμονες κ.λπ., με ενδιαφέροντα στο θαλάσσιο χώρο της περιφέρειας.
- Προκειμένου να έχει πιο ουσιαστική συμμετοχή σε θέματα ΘΧΣ, η τοπική αυτοδιοίκηση (α' και β' βαθμού) είναι σημαντικό να αποκτήσει τεχνογνωσία σε θέματα ΘΧΣ. Η ανάγκη αυτή αφορά και την Περιφέρεια Κεντρικής Μακεδονίας, αλλά και τις υπόλοιπες περιφέρειες που βρέχονται από το Βόρειο Αιγαίο.
- Κρίσιμη παράμετρος για τη διαδικασία λήψης αποφάσεων κατά το ΘΧΣ αποτελεί η διαθεσιμότητα και προσβασιμότητα γεω-χωρικών δεδομένων, η οποία στην περίπτωση της Περιφέρειας Κεντρικής Μακεδονίας (και γενικά στην Ελλάδα) είναι σχετικά περιορισμένη. Είναι σημαντικό, η υφιστάμενη εθνική βάση γεωχωρικών δεδομένων να επεκταθεί και σε δεδομένα για τη θάλασσα, καθώς και να επικαιροποιείται σε διαρκή βάση.

B. Χωροταξικός σχεδιασμός:

- Το σχέδιο ΘΧΠ για τη Θαλάσσια Χωρική Ενότητα 1 (Βόρειο Αιγαίο) πρέπει να εγκριθεί το συντομότερο δυνατό, ώστε να εμποδωθεί η πιο τοπο-κεντρική προσέγγιση σχεδιασμού στη θάλασσα του Βορείου Αιγαίου, ενσωματώνοντας τόσο τα τομεακά όσο και τα περιβαλλοντικά σχέδια και ρυθμίσεις που ισχύουν στην περιοχή.
- Με την έγκρισή του, το εν λόγω ΘΧΠ μπορεί και πρέπει να εξειδικευτεί περαιτέρω ανά Αναπτυξιακή Ζώνη (μία από τις οποίες αφορά τα θαλάσσια τμήματα της Περιφέρειας Κεντρικής Μακεδονίας) προκειμένου να ληφθούν υπόψη οι τοπικές ανάγκες και προτεραιότητες.
- Ειδικά για τη θαλάσσια Αναπτυξιακή Ζώνη της Κεντρικής Μακεδονίας, στόχος θα πρέπει να είναι η βέλτιστη οργάνωση και ανάπτυξη των υφιστάμενων θαλάσσιων δραστηριοτήτων (ιδίως των υδατοκαλλιέργειών, των θαλάσσιων μεταφορών και του θαλάσσιου και παράκτιου τουρισμού), με τρόπο ώστε να διατηρείται η ροή των οικοσυστημικών υπηρεσιών, ιδίως στους ευαίσθητους ημίκλειστους κόλπους.

- Μεταξύ των πολλών ημίκλειστων κόλπων της Περιφέρειας, ο Θερμαϊκός πρέπει να τύχει ιδιαίτερης προσοχής, λόγω της μεγάλης πίεσης που ασκείται από διάφορες χρήσεις και υποδομές (διεθνές λιμάνι, μεγάλη μητροπολιτική περιοχή, γεωργία στην ξηρά, υδατοκαλλιέργειες στη θάλασσα κ.λπ.)
- Ο ΘΧΣ στην Περιφέρεια Κεντρικής Μακεδονίας θα πρέπει να λάβει ιδιαίτερα υπόψη τον παράγοντα της διάδρασης στεριάς-θάλασσας, δίνοντας ιδιαίτερη έμφαση σε θέματα όπως η διάβρωση των ακτών και οι επιπτώσεις των παράκτιων οικιστικών περιοχών με τη θάλασσα (ιδίως στην περιοχή της Θεσσαλονίκης, καθώς και σε άλλες περιοχές με έντονο τουριστικό προσανατολισμό).

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