1. Non-technical summary

Introduction

Environmental assessment is a process designed to take into account environmental impacts in a project or program plan development, right from the early stages of consideration. It serves to enlighten both the project owner and administration on the definition of the project or plan, with regard to environmental issues and those relating to human health in the area concerned, as well as to inform and facilitate public participation. It must report on the potential or proven effects of the project, plan or program on the environment, and analyze and justify the choices made with regard to the issues identified in the area concerned.

Plans and programs are referred to Strategic Environmental Assessments (SEAs). Maritime spatial planning (MSP) documents are systematically subject to this process, in accordance with article R.122-17 of the French Environment Code. The preparation and implementation of this document are carried out under the authority of the coordinating prefects, the maritime prefect of the Mediterranean area and the prefect of the region Provence-Alpes-Côte d'Azur. At national level, the planning process is overseen by the ministries responsible for the sea, the environment and energy.

This report describes the environmental assessment process carried out to update the strategic section of the Mediterranean MSP document for the third implementation cycle of the Marine Strategy Framework Directive (MSFD), and has been produced in accordance with article R.122-20 of the French Environment Code. In particular, it covers issues linked to offshore wind power planning, as the mapping of priority areas. Offshore wind planning has been integrated into the strategic document by law n°2023-175 of March 10, 2023 relating to the acceleration of renewable energy production.

This report was produced by the government departments in charge of drawing up the plan (national services in charge of marine spatial planning, marine ecosystems, offshore wind development, along with local states services), with the support of external service providers: the EPICES and Biotope consortia, and the CREOCEAN consultancy firm for elements specific to offshore wind power.

It should be noted that the updating of the MSP document, like its preparation, is carried out in two stages - the strategic section and then the operational section. This report concerns only the update **of the strategic section adopted in 2019**. The operational component adopted in 2022 remains unchanged at this stage. **In the remainder of this report, we will therefore refer to the MSP document's strategic section**.

This assessment benefits from feedback from the French Environmental Authority on both parts of the first strategic MSP documents.

Methodological choices and their limits

The SEA took place from April to December 2024. The SEA was structured around three main methodological choices:

a) Continuity with SEA of the previous MSP document

As the strategic section's update is not a complete overhaul, the methodology is largely in line with that of previous assessments, and in particular that of the first exercise.

b) Particular attention to the development of marine renewable energies, especially offshore wind power.

As planning the development of offshore wind power is the most significant evolution of the strategic section, particularly in terms environmental impact, it has been the subject of specific assessment work and developments in this report.

c) Taking into account the preliminary framework of Environmental Authority

At the request of the project owner, this SEA was the subject of a preliminary review by the Environmental Authority (EA)[1].

However, the very fact that the environmental assessment in this case concerns a planning document implies limits inherent in this type of plans orprograms. The uncertainties concerning, on the one hand, the assessment of the good ecological status of many environmental issues, and on the other hand, precise knowledge of the pressures applied on the marine environment by numerous human activities. The various impacts can thus be counted and compared according to various criteria, but in no way sized up in terms of their magnitude in relation to each other. This difficulty is inherent to the object of the analysis, which is a planning document. The impact of the planning document will therefore depend on the implementation of planned projects and activities, for which the information available is limited. This last limitation explains in particular the difficulties encountered in fully applying the mitigation hierarchy and precisely defining compensation measures on the scale of the MSP document's strategic section.

Brief presentation of the SFM and the context in which it was developed

With its maritime and coastal areas, France boasts a remarkable natural heritage and significant potential for socio-economic development. The sea and coasts are subject to multiple uses, as well as pressures from climate change, land-based pollution and the impact of human activities. In order to guarantee the good environmental status (GES) of the marine environment while enabling the economic and social development of the sea and coastline, a first national strategy was adopted in February 2017 for 6 years (2017-2023). This first National Sea and Coastline Strategy (SNML) was revised in 2023, and the SNML 2024-2030 was adopted by decree on June 10, 2024.

The **National Sea and Coastline Strategy** provides a reference framework for public policies concerning the sea and coast. The SNML thus embodies the maritime pillar of ecological planning, and is thus articulated with other national strategies, notably the national port strategy, the national biodiversity strategy, the national low-carbon strategy, the multi-year energy program and the national coastline strategy.

[1] Avis délibéré de l'Autorité environnementale pour le cadrage préalable de l'évaluation environnementale stratégique des stratégies de façades maritimes intégrant le développement de l'éolien en mer - Avis délibéré n° 2024-039 adopté lors de la séance du 13 juin 2024.

The National Sea and Coastline Strategy 2024-2030 sets four **main priorities for the period**:

— Carbon neutrality: to help achieve carbon neutrality by 2050, the accelerated deployment of offshore wind power, with a target of 45 GW installed by 2050, is combined with the decarbonization of ports and ship fleets, and the preservation of blue carbon ecosystems;

— Biodiversity: drawing on knowledge and innovation, the SNML promotes the preservation of maritime and coastal ecosystems in mainland France and the French overseas territories, in particular through the deployment of highly protected areas ;

— Equity: action must contribute to the short- and long-term well-being of the populations, employees and players in the maritime and coastal areas of France and its overseas territories, in particular by rethinking the tourism and economic attractiveness of coastal areas;

— Economy: innovation and training are mobilized to strengthen the competitiveness of our sustainable blue economy and the sovereignty of France in mainland France and the French overseas territories.

The MPS documents are the territorial declination of this national strategy.

France has chosen to use these documents to implement two European framework directives:

- **Marine Strategy Framework Directive** (Directive 2008/56 of June 17, 2008) aims maintain or achieve good environmental status in the marine environment. Accordingly, member states are required to draw up marine strategies, to be reviewed every six years.

- **The Maritime Spatial Planning framework directive** (Directive 2014/89 of July 23, 2014), which establishes a framework for maritime planning and requires member states to ensure coordination of the various activities at sea. Plans have thus been drawn up that identify the spatial and temporal distribution of relevant, existing and future activities and uses in their marine waters.

As such, they include maritime spatial planning elements and the marine environment action plan. From a formal point of view, the Environment Code (articles R219-1-7 to R219-1-14) stipulates that these documents comprise four parts:

- the existing situation, the challenges and a vision for the future of the Mediterranean area (part 1) ;

- the definition of strategic objectives from an economic, social and environmental point of view, and associated indicators; these are accompanied vocation map that defines coherent zones within maritime areas with regard to the general challenges and objectives assigned to them (part 2);

- procedures assessing the implementation of the **MSP document** (part 3);

- the action plan (part 4).

Parts 1 and 2 of the MSP document constitute the **strategic section**. The latter was drawn up in 2018 and was the subject of an initial strategic environmental assessment. Following subsequent consultations, this maritime strategy was officially adopted in each mainland maritime regions on October 14, 2019. **This SEA concerns the update of this first strategy, initiated in 2023.**

The updating of the strategic section was the subject of **a public debate**, organized between November 2023 and April 2024, shared with offshore wind planning. On the Mediterranean coast, the French National Commission for Public Debate ~~(CNDP)~~ organized almost 50 face-to-face events (public meetings, workshops, various initiatives, visits, mobile debates), including 33 with the project owner, attended by over 3,000 people, as well as some 15 webinars. In the Mediterranean region, 6 one-day events were held.
These included information "stopovers" in major towns along the coast, 5 "assemblies" of around 80 citizens convened by the French National Commission for Public Debate, and workshops with Regional Maritime Council members on proposals arising from the public debate (notably that of April 11, 2024). An online participatory platform was also set up, attracting more than 1,000 textual contributions (for all mainland maritime regions combined).

The minutes and balance sheet of the public debate, published by the National Commission on June 26, 2024, summarized the public's contributions and included requests for clarification and recommendations to the project owner (the French government and French TSO). On October 18, 2024, the ministerial decision of October 17, 2024 was published following the public debate on the updating of the strategic sections of the MSP documents and the mapping of priority maritime and land areas for offshore wind power [r2], as well as the project owners' report on the lessons learned from the public debate [3].

Linking the MSP document's strategic section with other plans and programs along the coast

An analysis is proposed to meet the challenges of coordination with other plans and programs along the coast, based on their "functional" nature (the programs pursue objectives that are partly common), or their "structuring" nature (compatibility/consideration required by law), or their scale (national, regional or basin-wide).

Given the **interactions between land and sea**, watersheds and land areas have an influence on maritime and coastal areas, particularly through water quality or obstacles to land/sea connectivity. The proper coordination of MSP document with land-based planning documents that have an impact on the sea and coastline, in particular water development and management master plans, regional sustainable development and territorial equality plans, territorial coherence plans and local town planning schemes.

[2] Online access to the decision: https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000050362918

[3] Access the report online: https://www.eoliennesenmer.fr/sites/eoliennesenmer/files/inline-files/Report%20MO_sep2024-A4-10_17.pdf

Main elements of the update and justification for the choices made

The report examines the changes envisaged when the strategic section is updated, and explains:

— reasonable alternative solutions that meet the purpose of the plan, scheme, program or planning document within its territorial scope. The advantages and disadvantages of each alternative are indicated;

— a statement of the reasons why the draft plan, scheme, program or planning document has been selected, particularly with regard to environmental protection objectives.

The main changes from the previous cycle are as follows:

(a) **the introduction offshore wind power planning** that meets France's commitments, with a national target of 45 GW commissioned by 2050, with a view to achieving carbon neutrality by that date. The priority zones identified in the Mediterranean aim to install 2 GW of new projects by 2035 and 1.1 GW by 2040. These zones are supplemented by zones for 2050. (see below)

(b) strengthening the protection of marine ecosystems through the development of **highly protected areas planned on the scale of each maritime region**

(c) . The target of 5% of Mediterranean waters covered by **highly protected areas** by 2027 has been included in the national sea and coastline strategy and in the national biodiversity strategy.

(d) **the updating of the vision for the maritime region**, with a horizon of 2050 instead of 2030 for the former strategic section. The changes reflect a strengthening of the environmental dimensions through variety of angles of approach (climate change, the land-sea link). In particular, these changes to the vision reflect the desire to take better account of climate change and its effects, in line with the commitments made by France in various national, European and international texts.

(e) **updating of the assessment of the initial status** of marine waters, to evaluate whether or not good ecological status has been achieved for each ecological issue.

(f) the **updating of environmental targets** (in order to make more operational those adopted in the previous cycle that still lacked monitoring indicators or had indicators that had not been evaluated, and adjust the wording of certain EOs or indicators to improve their readability. Some EOs have been created to take account of changes in certain public policies (for example, the setting of a target for the development of highly protected areas).

(g)**updating the socio-economic tragets**) to reflect the objectives of the national strategy 2024-2030 and following the work carried out on the façade (changes in context and issues), and also taking into account the actions the MSP document action plan (2022), which provide specific responses to certain issues.

(h) **updated vocation maps** which identify coherent zones within the maritime region and provide spatial reference points for the strategies put in place.

The report considers various alternative scenarios to updating the strategy: no update, no articulation between maritime planning and offshore wind planning, or with the development of strong protection. The focus is on the reasonable alternative options discussed for offshore wind power.

The reasons for updating the socio-economic and environmental targets are also presented.

The first strategy identified 24 strategic targets, broken down into 53 environmental targets (74 indicators, of which only 41% could be calculated during first cycle) and 62 socio-economic targets (measured by 130 indicators, of which 65 were planned for the 2nd cycle).

For the socio-economic targets, the updating work was based on regular exchanges between the national MSP unit and local state services supplemented by exchanges with members of the regional maritime council, the MSP technical committee (government departments and facade operators) and following the conclusions of the public debate.

Offshore wind power development

The rapid reduction of greenhouse gas emissions, in line with France's international and European commitments, is at the heart of mitigating climate change, which is now a major threat to all ecosystems.

The national strategy 2024-2030 identifies carbon neutrality as one of four priorities, and places the development of offshore wind power as a pillar of the decarbonization of energy in France. Objective 13 defines national targets of 18 GW commissioned by 2035 and 45 GW of generating capacity by 2050. For the Mediterranean area in particular, the aim is to develop 2 to 3.5 GW of new projects over the next 10 years. To achieve this target, the updated strategy introduces wind power planning for two horizons:

- **A map of priority areas in which offshore wind farm projects can be awarded within 10 years** of its adoption;

- **A map of priority areas by 2050**, which will be refined and revised after further public participation, scheduled to take place within the next ten years**.**

Alternative scenarios to the development of these additional offshore wind power capacities to be installed by 2050 (to meet our needs for decarbonized electricity and achieve our climate objectives of lower greenhouse gas emissions) reduce or even eliminate the effects of these installations on the marine environment, but make the decarbonization of the French energy mix highly uncertain. The environmental report examines alternative options (no development of other means of production, or development of other renewable or nuclear means of production).

At the end of the public debate, the French government identified the following priority areas offshore wind power development over the next 10 years and up to 2050 on the Mediterranean coast:

- Golfe du Lion Centre (GLC) - Priority area for the 10-year horizon, to be covered by the 10th offshore wind tender (AO10), for 2 GW.
- Golfe du Lion Est (GLE) - 10-year priority area for subsequent tendering procedure(s), for 1.1 GW
- Golfe du Lion Ouest (GLO) - Priority area by 2050 for the development of a project with an indicative capacity of around 1.1 GW, the contours of which will be defined by further environmental studies and ongoing consultation with stakeholders.

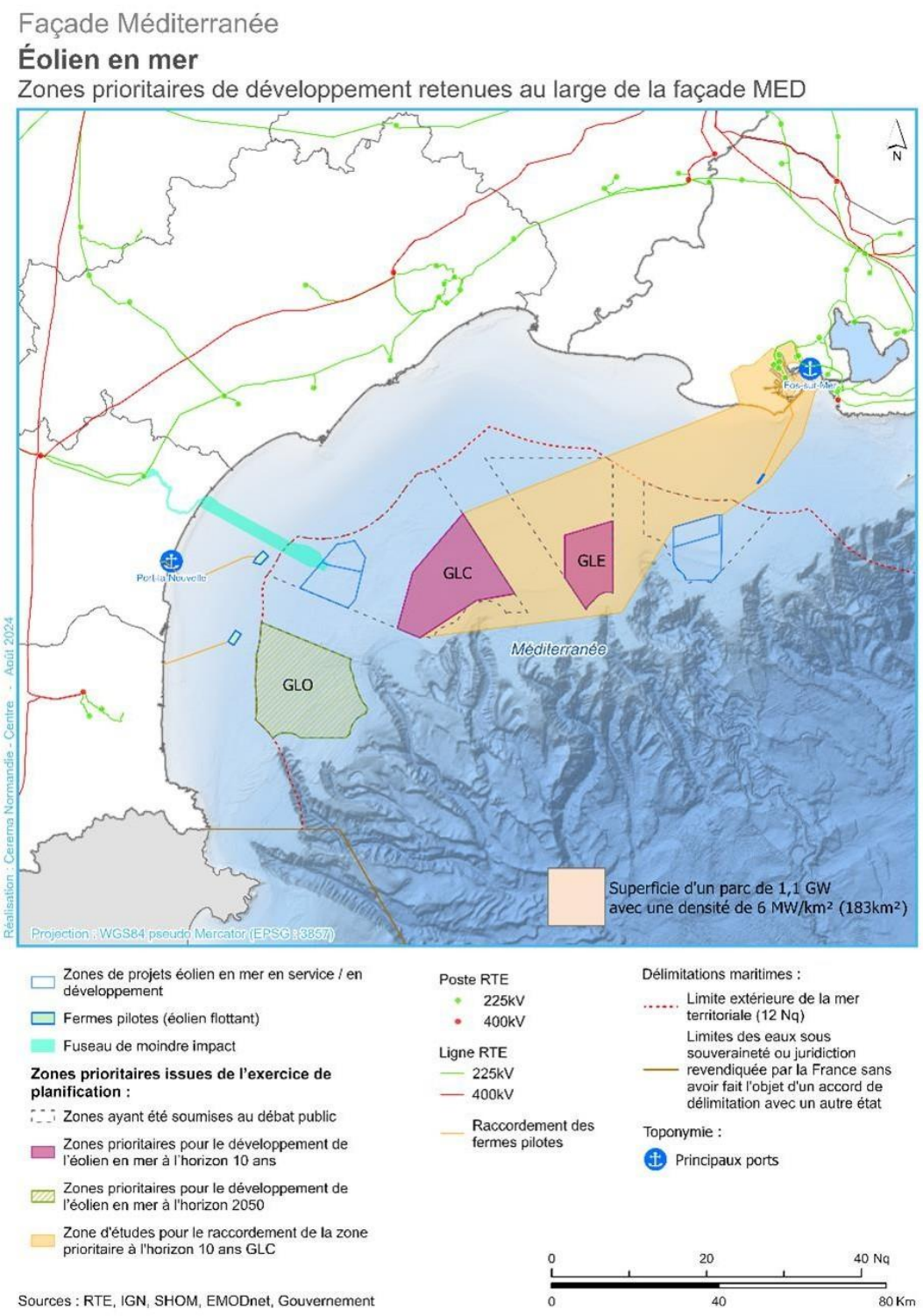

Figure 1: Priority development zones off the MED coast

Initial state of environment

The MSP document implements the marine strategy framework directive (MSFD) and, as such, directly targets the maintenance or achievement of good ecological status in marine waters. To this end, the "marine environment" section includes an initial state of the environment and objectives dedicated to achieving good ecological status.

However, the notion of "environmental issue" as defined in the SEA is broader than the notion of "ecological issue" defined by the MSFD and based on "descriptors" of the good ecological status of marine waters, to cover landscapes, GHG emissions, air quality and risks. This report takes up the structure of the issues established during the SEAs of the first MSP exercise (strategic and operational sections), with a few changes to take into account (1) the requests for greater detail expressed by the Environmental authority in its opinions on the previous SEAs, and (2) new elements contributing to the establishment of this inventory (in the descriptor sheets in particular). The result is a list of 19 issues to be taken into account, divided into three categories (see table below).

Issue category	Acron.	Environmental issues	Correspondence with MSFD descriptors	Characteristic elements
Issues related to the components of the marine environment	HB	Benthic habitats	D1	Quality of major biogenic, rocky, sedimentary and wetland habitat types
	HP	Pelagic habitats	D1	Deep-sea habitats, food webs
	MT	Mammals and turtles	D1	Species distribution and abundance: home range of sedentary bottlenose dolphin groups, seal colonies, feeding areas, other cetaceans, sea turtles
	OM	Seabirds	D1	Species distribution and abundance: nesting, feeding areas, colonies, wintering sites for seabirds and coastal birds, areas maximum density, functional areas, birds migrants
	PC	Fish and cephalopods	D1	Species distribution and abundance: functional halieutic zones (spawning grounds, nurseries), localized populations (benthic invertebrates, elasmobranchs), areas of concentration and abundance amphihaline fish migration
	EC	Commercial species	D3	Stock status of commercially exploited fish, crustacean and mollusc species
Pressures on the marine environment	ENI	Non-native species	D2	Non-native species that are invasive or disrupt ecosystems
	Eut	Eutrophication	D5	Human-induced eutrophication
	Int	Integrity of funds	D6	Disturbance and physical loss of the seabed
	Hyd	Hydrographic changes	D7	Hydrographic conditions
	Cont	Contaminants	D8	Chemical contaminants in the environment
	Qs	Health issues	D9	Chemical or microbiological contaminants in seafood products intended human consumption
	From	Waste	D10	Quantity of waste and micro-waste floating, on the shore, on the seabed, ingested
	Br	Noise	D11	Level of noise disturbance by impulsive or continuous man-made noise
Other environmental issues	Pay	Land and underwater landscapes	Not concerned	Elements of coastal landscapes (lighthouses, classifications) and underwater landscapes
	GHG	GHG emissions	Not concerned	GHG emissions

	Air	Air quality	Not concerned	Air pollutants
	Ris	Natural and human hazards	Not concerned	Climatic, natural and industrial risks
	Co	Knowledge	Not concerned	Production of knowledge about environments, species and socio-economic activities

For each of these issues, the report presents: (1) a summary of their main characteristics on sea and coastline, (2) a summary of their current status, based on scientific productions integrated into the strategic section, (3) a spatial analysis of the deviation from good status or the level of issue at the scale of the vocation zones.

The graph below summarizes the analysis carried out on the good environmental status deviation or the level of challenge.

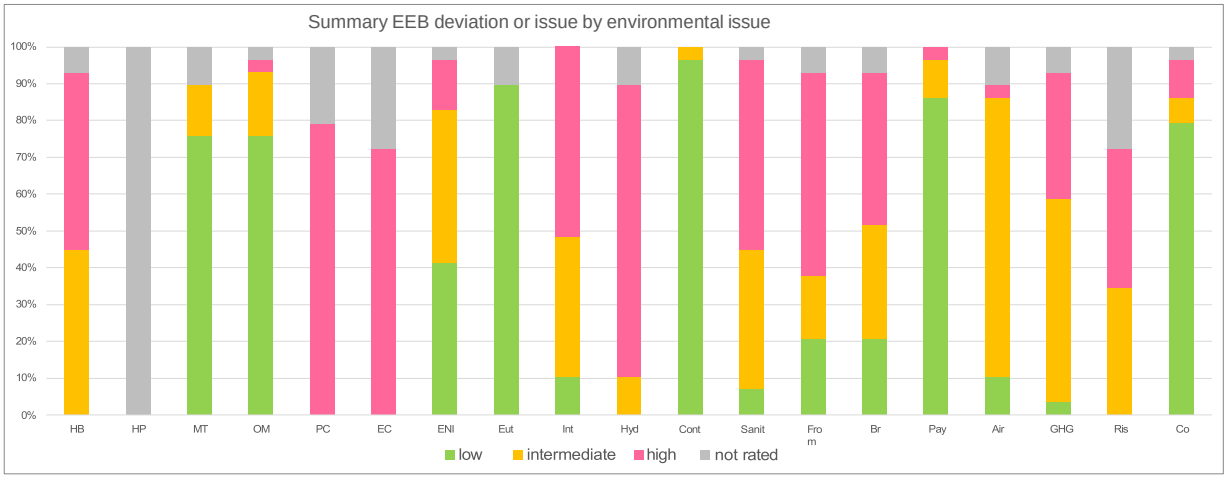

Figure 21 - Summary of deviation from good ecological status (GES) or challenge level by environmental challenge.
Percentages are relative to the number of vocation zones (i.e. 27). For example: for benthic habitats, the deviation from the EEB is high for around 55% of vocation zones.

Changing pressures and activities

The interactions between activities and the marine environment are manifold. Indeed, activities can generate pressures on the marine environment (environmental modifications, pollution, overexploitation, climate change, non-indigenous species, etc.) and lead to impacts on species and habitats.
Matrixes are proposed in the report to cross-reference the pressures generated by sectors of activity with the marine environment and the potential impacts generated.

The report summarizes recent trends in activities and pressures over the last cycle.

A number of key findings stand out:

- The most important activities along sea and coastline **have shown varying trends in recent years**. Although some are declining (seaside activities/tourism

coastal[4] , aquaculture, defense and public intervention at sea, industry and maritime transport), the majority are on the rise (agriculture, submarine cables, shipbuilding, pleasure boating, professional fishing, energy production, research and development, and maritime public works).

- Of the 17 activities studied, the trends for two could not be updated (coastal artificialization, for example - monitoring tools are currently being developed), and recreational fishing still could not be assessed - even new indicators are being developed. For other activities, trends remain the same for 6 and change for 7 others. There seems to be **a reduction of pressures** linked to beach activities/coastal tourism, aquaculture, defense and public intervention at sea, industry and maritime transport, **and a strengthening** linked to those agriculture, submarine cables, shipbuilding, pleasure boating, professional fishing, energy production (in particular MRE with the development of offshore wind), research and development, and maritime public works.

- The reliability of these trend estimates is highly dependent on the availability of indicators for the entire sea and coastline.

Impact analysis

At the strategic stage, the impacts identified remain "potential" insofar as the actual impacts depend in particular on the measures taken as part of the MSP document's action in order to achieve socio- economic and environmental targets.

On the one hand, potential negative impacts are likely be reduced by implementing mitigation hierarchy as part of these measures. On the other , the environmental benefits expected from certain environmental targets will also depend on how they are implemented.

A) potential impact of environmental targets

It appears that changes in environmental targets are likely to generate 380 potential impacts on the 19 environmental issues.

By their very nature, environmental targets aim to improve the ecological status of the marine environment. However, while 60% of impacts are considered positive, 40% are conservatively considered neutral at this stage.

This due to the fact that some objectives are based on compliance with existing regulations or the absence of any increase in anthropogenic pressures compared with their current level, or include indicators that have yet to be defined. Reinforcing the drive to improve ecological status will require improved knowledge and coordination with other planning processes (inland surface waters planning, in particular).

B) potential impact of socio-economic strategic targets

An update of the impact of the first socio-economic targets was carried out, by (1) analyzing the consequences of any changes in the titles and indicators of existing socio-economic targets

[4] The COVID pandemic may be one of the explanatory factors for the years 2020 and 2021.

on their impacts; (2) analyzing the consistency of impacts with the activities/issues crossover matrixs; (3) integrating the impact assessment of socio-economic targets-related actions analyzed during SEA of the operational component of the first planning document (2021); (4) assessing the impacts of the new socio-economic targets.

The specific socio-economic targets of the Mediterranean area are likely to generate 444 potential impacts. The vast majority of socio-economic targets are likely to have a positive or neutral impact (around 84%), the remainder (16%) likely to have a negative impact. However, this conclusion needs to be qualified, as actual impacts will depend on the precise conditions of implementation of the socio-economic targets and the application of the mitigation hierarchy.

Issues relating to the marine environment are those with the highest number of impacts, particularly for benthic habitats (32 impacts), marine mammals and turtles (33 impacts), seabirds (31 impacts) and fish and cephalopods (27 impacts). For these marine environment issues, around half of the impacts were positive, compared with less than 18% negative and almost 35% uncertain.

In terms of issues relating to pressures on the marine environment, the issues of seabed integrity (30 incidences), hydrographic changes and waste (25 incidences each) and noise (24 incidences) are the ones with the highest number of incidences, . The other issues have fewer than 20 impacts each. On average, almost 40% of these impacts are positive, 45% are classified as uncertain and around 17% as negative.

In terms of other environmental issues, GHG emissions (25 impacts), landscape (24 impacts) and air quality (23 impacts) are those with the most impacts, with an average of 45% positive, 40% uncertain and 15% negative. The natural risk issue (16 incidences) has a majority of positive incidences (63%), while knowledge issue has 8 incidences, all positive.

C) potential impact of the vocation map

By organizing the various uses of the marine environment spatially, the vocation map itself has an impact on the environment. The distribution of marine protected areas and activities is designed to minimize negative environmental impacts and optimize positive measures. An analysis of cumulative pressure levels on the various environmental issues was carried out in each sector of the vocations map.

For each sector, activity levels (aquaculture, MREs, maritime transport, etc.) were cross-referenced with issue levels (environmental, pressure, other issues), in current and future situations, to identify a pressure level. There are limits to this exercise, linked to availability and accuracy of information on activities, particularly in the future.

A summary of this analysis for all the sectors on the vocation map, with regard to the current and future situation, is presented in the report.

It shows :

- an overall "high" level of cumulative pressure from socio-economic activities is observed for all sectors located close to the coast (i.e. vocational zones: 1,2,3,4,5,8,9,10,11,12,13,14,15,16,20,21,22,23,25 and 26).
  What's more, these pressures are exerted on high levels of environmental issues (mainly issues linked to the components of the marine environment, the integrity of the seabed, hydrographic changes or even health issues, waste, GHG emissions or risks). The level of pressure could increase further in the future, although it is not possible to say to what extent.
- an overall "intermediate" level of cumulative pressure from socio-economic activities has been identified for all sectors located further offshore (zones 6,7,18,19,24). For zones 6 and 7, the level of pressure is currently moderate, but is set to increase in the future, due to the development of offshore wind farms. In these areas, these pressures are exerted on various levels environmental issues, depending on the issues studied: many are strong (especially those linked to components of the marine environment), but many other issues are weak or even intermediate (especially those linked to societal environmental issues).
- for zone [275], the pressure level has not been qualified, so it is not possible to estimate the cumulative pressure level. In addition, the level pressure has not always been assessed, but the overall level pressure is relatively high.

D) FOCUS ON OFFSHORE WIND POWER

The development of offshore wind power makes a major contribution to mitigating climate change by producing low-carbon electricity. Combined with energy sobriety and efficiency, the decarbonized electrification to which wind power contributes will eliminate the need for carbon-based fossil fuels (oil, gas), with a view to achieving carbon neutrality by 2050.

It should be noted that the availability carbon-free electricity will enable the production of carbon-free fuels (ammonia, hydrogen, etc.) that can be used by the various ship fleets, or their electrification, thus reducing greenhouse gases and atmospheric pollutants from these fleets.

This contribution underpins the offshore wind power development objectives set out in the National Sea and Coastline strategy 2024-2030. However, this development must be carried out under conditions that minimize local negative impacts on the marine environment.

An analysis of the expected environmental impact of offshore wind farms is proposed for each development phase (construction, operation, decommissioning) for the entire maritime region, and in particular for the most sensitive areas: benthic habitats, marine avifauna, marine mammals, fish and mega-invertebrates.

THE ANTICIPATED EFFECTS OF THE CONSTRUCTION PHASE WILL MAINLY AFFECT :

- Benthic populations and functional zones for fish populations, directly impacted by modifications to the seabed;

- Marine mammals are sensitive to the noise generated by construction work and the risk of collision with ships.

Priority is therefore given to locating developments outside benthic and reducing noise pollution.

THE ANTICIPATED EFFECTS OF THE OPERATION MAINLY AFFECT :

- Birds, with a risk of collision, loss habitat and obstacles to movement.

Avoidance/reduction are therefore particularly focused on locating wind farms outside functional zones for the most sensitive bird species.

E) potential impact on Natura 2000 areas

Of the 27 zones delineated on the vocation map, 24 are Natura 2000 sites: 33 Special Protection Areas and 68 Special Areas of Conservation are located on the maritime region.

On the Mediterranean area, the overall impact analysis shows that :

- A clear majority of document targets have a positive impact on the various groups of Community interest, and all groups are concerned by these positive impacts. All socio-economic activities are concerned by targets aimed at improving practices.
- Very few of the targets have a negative impact, although all the groups are concerned. Among the activities concerned by negative impacts, only aquaculture and offshore wind energy are subject to development via the designation of new potentially exploitable zones, while the other impacts concern already existing activities. However, the planning of areas suitable for aquaculture development has been postponed, in view of the launch of a study in 2025 to update and enrich the criteria for defining these areas.
- the development of offshore wind farms covers areas of interest for marine mammals (in particular the Natura 2000 site for bottlenose dolphins in the Gulf of Lion), seabirds and terrestrial migrants; and the connection zones are located in the vicinity of sites of major interest for birds (Camargue). Projects likely to affect Natura 2000 sites must specify their impact and the mitigation measures implemented on these sites in a Natura 2000 impact . This assessment must ensure that the activity does not harm the conservation objectives of the species and/or habitats that led to the designation of the affected site.

- Targets relating to existing activities with negative impacts concern maritime transport and free access to the sea and coastline. **The MSP document plays an important role in the supervision of both historical and new activities, to limit their impact on the environment, notably through environmental targets and the vocation map**. **Several socio-economic targets also incorporate an environmental dimension, and should limit the negative impact of these activities.**

The plan aims to limit the degradation of marine, coastal and wetland benthic habitats, to reduce pollution and waste, to reduce marine mammals bycatch, seabirds and amphihaline fish, and to limit the risk of collisions and disturbance to marine megafauna during work at sea or induced by various activities. In addition, many socio-economic targets are part of 4

important cross-cutting themes relating to indirect reduction of pressures through adaptation to or mitigation of climate change, sober consumption (energy, water and land), the land-sea link, essential to the proper functioning of ecosystems, and the reduction of CO_2 emissions. As a result, the updated the strategic section should not significantly affect habitats and species of Community interest along the maritime region.

However, particular attention needs to be paid to ensuring that environmental and socio-economic targets are properly taken into account during projects development, and a more ambitious application of certain environmental targets that are currently considered to have a neutral impact could help mitigate the negative impact of activities.

A special effort to develop habitat restoration could also help in this direction. The impact analysis highlighted a point of attention for amphihaline fish of community interest: environmental targets appear to be sufficient to limit the negative impacts of existing and planned socio-economic activities, but view of their generally reduced conservation status, more attention is needed to aim for an improvement in their status in most SACs. In this context, the analysis also highlighted the importance of planning SPAs within Natura 2000 sites, and in particular the importance of choosing which areas to prioritize.

Although few impacts have been noted on migratory birds, there are gaps in the assessment of their conservation status within Natura 2000 sites. Programmes to acquire knowledge of these species, such as Migralion, should help to better identify the issues and thus better take into account the risks of impacts with activities. Measures will have to be identified at a later date for the distribution zones of the species concerned.

This is the case, for example, with professional fishing, for which a "fishing risk analysis" (impact assessment under the Nature directives) has been set up within the specific framework of establishing the guidance document for each Natura 2000 site. In case of offshore wind farms, the impact studies and mitigation measures that will be proposed will enable specific consideration of the issues in each zone concerned by these activities.

Analysis of mitigation measures taken to avoid, reduce or offset impacts

Impact avoidance and reduction are often difficult to distinguish in practice. Avoidance is understood as a geographical avoidance, which avoids all impacts on a given target. If not all impacts on a target are avoided, the term reduction is used.

Avoidance needs to be prioritized at every stage, particularly from the marine planning stage onwards.

Avoidance is achieved in MSP document's strategic section by the spatial planning of different human activities in the vocations map. An example of this is the choice to locate wind power development in certain maritime zones, away from major environmental issues. Priority areas for wind power development are also located outside the study sectors for strong protection.

Another form of avoidance lies in the choice of technologies associated with the development of socio-economic activities.

Then, at the level of the projects linked to each activity, additional avoidance or reduction choices can be made according to the context and the impact assessment.

It should be pointed out that, by its very nature, the strategic section is intended to include measures to avoid and reduce the pressures exerted on the marine environment. Indeed, insofar as the DSF must enable the maintenance or achievement of good environmental status in the marine environment, this ambition must be reflected in the strategic section, notably via environmental and socio-economic objectives, as well as in spatial planning choices.

For the MED area, the planning choices were specified in Appendix 6 of the strategic section, and focused on the following three themes: offshore wind farms, highly protected areas and aquaculture, following a logic of avoidance. This stage enabled us to :

- for aquaculture, to identify the areas of least environmental concern or sensitivity, while taking into account the technical and economic constraints on the development of activities, in order to reconcile the environment and socio-economic activities;

- for offshore wind farms, to plan the implementation of projects, in particular installed capacities (limiting the overall footprint of wind farms) and the start-up of construction work, in order to reconcile the various uses underway, while taking into account economic, technical and logistical issues, as well as the avoidance of the strongest environmental challenges.

- for highly protected areas, to identify the areas of greatest biological diversity to be given priority in the consultation process.

On the MED area, a review of socio-economic objectives has been carried out. Some of these new or revised socio-economic targets present potentially positive impacts on certain issues that may be negatively impacted (or uncertainly impacted) by other objectives. As such, the inclusion of these new socio-economic in the revised strategic section of the planning document can be seen as a step towards reducing the potentially negative or uncertain impact of other objectives.
The strategic section does not include any direct action to compensate for the impact of planning, but it does "anticipate and territorialize the compensation process, and prescribe conditions for subsequent projects[6]", to guide project developers towards degraded sites to invest in.

Specific mitigation measures to limit the impact of offshore wind farm projects will be defined at the end of the impact assessments. The report presents the mitigation measures that can be envisaged for these projects, as well as certain requirements imposed on future projects through specifications. Measures for monitoring the impact of the projects and the effectiveness of mitigation measures will also be defined at the end of the impact assessments.

[6] https://www.igedd.developpement-durable.gouv.fr/IMG/pdf/4__cadrage_dsf_bleu_v5_delibere_v2_cle5a794c.pdf

Indicators for monitoring potential impacts

An assessment of the environmental targets was carried out, with regard to the targets set for the indicators associated with the environmental targets in the previous version of the plan. It was found to be impossible to assess the majority (62%) of them. A project was launched to operationalize the indicators that could not be monitored and evaluated:

— for the majority of them, to keep them as they are[7] as soon as they can be made operational (implementation of a protocol, designation of an service responsible of the monitoring, data banking, etc.);

— for a number of them, to retain them despite certain existing reservations about the possibility of making them operational (but with prospects deemed sufficient to justify maintaining them): funding not yet secured, data provision procedures to be specified, monitoring procedures to be defined with the creation of a tool... ;

— for a small number of them, to remove them as non-operational.

This work will enable to better assess whether the environmental targets are achieving their goal - and the associated positive impacts - the next cycle. However, four environmental targets have been retained without indicators, which have yet to be defined for the next cycle.

In addition, a number of environmental targets and indicators have been created to reflect changes in public policy. These environmental targets and indicators are all based on operational monitoring systems, thus ensuring broader coverage all ecological issues and associated monitoring (e.g. marine litter).

With regard to socio-economic targets, the end-of-cycle evaluation of the first Mediterranean plan enabled assess 47 of the 130 indicators identified (i.e. around 35%) for monitoring 62 strategic targets. The main methodological issues involved in revising the socio-economic and associated indicators (deliverable 5) are :

- Simplification and clarification of targets and indicators ;
- The accessibility and robustness of the data banks with the selected indicators;
- The association of targets with indicators reflecting the ambitions of the Integrated Maritime Policy.

As a result of this updating exercise, the revised strategy now identifies 13 socio-economic or cross-functional targets, accompanied by 121 indicators, comprising: 51 new indicators, 13 indicators maintained as they are, 47 indicators with minor changes to their titles for greater clarity, and 10 replaced indicators (i.e. with more substantial changes than the previous ones).

[7] Possibly with a few formal changes (wording).

The SEA for the first strategy in 2019 proposed an analysis of the ability of socio-economic targets monitoring indicators to account for potential impacts, seeking to identify the two families of indicators that seemed useful for this assessment, namely:

(1) indicators for monitoring the activity concerned, in terms of "quantity(to track its possible development), but also qualitatively (desired changes for the ecological transition);

(2) indicators to assess the interface between the activity and the environment, using pressure indicators as well as indicators of dependence on the natural environment contribution to environmental management.

An analysis of the indicators in the revised strategy shows that several comments made in the previous environmental assessment of 2019 have been taken into account. Thus, several major targets have seen their indicators consolidated (addition of indicators to complete the existing ones), and strengthened in their precision (capacity to report on the stated target) and operational character (their capacity to be filled in). These modifications make up the bulk of the changes made.

However, certain aspects are not yet monitored, such as the onshore reclamation of dredged sediments, or support for ecological and energy sobriety in tourism services. Work has already begun on specifying the indicators to be used (the stakeholders in charge of data collection, data sources, frequency, etc.), and will be detailed in the monitoring system for the maritime façade strategy.