

## CONSULTATION OF THE ENVIRONMENTAL AUTHORITY

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EXPLANATORY NOTE ON ADDITIONAL TARGETS  
ENVIRONMENTAL OBJECTIVES, INDICATORS, TARGETS AND DEROGATIONS  
JOINT CONSULTATION ON THE ACTION PLAN AND MONITORING FRAMEWORK OF THE EAST CHANNEL - NORTH SEA  
SEA BASIN STRATEGY DOCUMENT

Date of consultation: 12/02/2021

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## Introduction

The first two parts of the Sea Basin Strategy Document (SBSD), forming the sea basin strategy, were adopted by Interpretation Order in September 2019. This strategy defines maritime space planning, 8 vocation zones for the Eastern Channel - North Sea, and objectives to be achieved in each of these zones or for the entire coastline. The order of 11 July 2018 on the criteria and methods to be implemented for the preparation of the first two parts of the SBSB recalls that the environmental targets (mentioned in Article R. 219-7 of the Environment Code) are defined so that the pressures exerted by human activities on the marine environment are compatible with the achievement or maintenance of good environmental status of marine waters by the end of the current cycle of the "Marine Strategy" framework directive. This decree also recalls that the indicators associated with environmental targets include targets against which the achievement of the objectives is assessed.

France has therefore made a commitment to the European Commission to achieve the environmental targets set out in this strategy: these are accompanied by ambitious, but realistic and measurable targets. At the time of the adoption of the coastline strategy, not all of these targets could be defined, due to a lack of data or the progress made in the consultations: 27 targets remained to be defined for the Eastern Channel and North Sea. Work was performed to evaluate and consolidate existing monitoring frameworks in order to define them at the time of the adoption of the action plan: consistency between these networks and those used for monitoring the objectives of the Marine Strategy Framework Directive (MSFD) was sometimes reinforced on this occasion. At the end of the consultation, it will therefore be necessary to complete the maritime coastline strategy with the additional targets defined during this work and to complete Annex 6b of the Eastern Channel - North Sea Maritime Strategy accordingly.

However, as a result of this further work, a target could not be set - the reasons for this are detailed below. The indicator concerned is thus designated as a "candidate for the 3rd MSFD cycle", with further work to be performed to make it implementable for the next MSFD cycle. For this second cycle, on the other hand, this indicator will not be monitored and reported to the European Commission.

This note summarises how each of the additional targets set were defined and the nature of the work performed:

- on the definition of strong protection areas (Part A);
- to consider the new issues and ambitions of the SBSBs in relation to the first cycle of the Marine Action Plan (part B);
- within the framework of the construction of the master plans for water development and management (Seine-Normandie and Artois-Picardie) and of the consistency with the SBSB (part C).

Explanatory note  
Consultation of additional targets to the maritime coastline strategy defined in the framework of the work of the SBSB Action Plan  
Part A - Summary of the targets defined thanks to the work to identify candidate SPZs in the Eastern Channel and North Sea

environmental target	Indicator	Proposed target	Proposed SPZs
D01-HB-OE03. Reduce the physical disturbance of intertidal rocky habitats* caused by human use, particularly by fishing on foot *Boulder fields, intertidal mussel beds, cystoseira belts and lithophyllum floors	D01-HB-OE03-ind1. Surface of sensitive intertidal rocky habitats located in strong protection areas	Increase in the area of sensitive intertidal rocky habitats located in a strong protection zone, with at least one PFA proposed for each area of the SBSDs where the habitat is at high or major risk	The strong protection areas concerned are listed among the following existing* or potential** PFAs:  * Existing PFA concerned: "Saint Marcouf" *Naming of an area intended to host a PFA, the precise perimeter of which will be defined after local consultations. The potential PFAs concerned with intertidal rocky habitats are the following: "Chausey", "Falaise du Bessin occidental", "Ilot du Ratier", "Littoral seino-marin", "Baie de Canche", "Baie d'Authie" and "Baie de Somme"
D01-HB-OE04. Avoid physical disturbance to sabellarid bioconstructions (hermella) by trampling, recreational fishing and bottom fishing gear  EO applying to all Eastern Channel-North Sea, NAMO and SA frontages but targeting in particular: - Off the island of Groix (Sabellaria spinulosa) - Bay of Mont Saint-Michel (reefs on soft substrate at the sites of Saint-Anne de Champeaux/La Frégate) - Noirmoutier (S. alveolata reef on soft substrate in the south of the island, Barbâtre commune) - Bourgneuf Bay - Côte Oléronnaise (S. alveolata reef on bedrock in the west of the island)"	D01-HB-OE04-ind1 Proportion of the surface area of bioconstructions of the species Sabellaria alveolata constituting the main source areas for its larval distribution, located in strong protection zones  Nb: Hermelles are a special habitat. <sup>1</sup> As such, they are also covered by indicator D06-OE1-ind5. The targets for these two indicators will therefore be identical	100% of the bioconstructions of the species Sabellaria alveolata constituting the main source areas for its larval distribution located in the "Champeaux coastline" zone are located in a strong protection zone	Mont Saint-Michel Bay (reefs on soft substrate at the Saint-Anne de Champeaux/La Frégate sites)
D01-HB-OE06. Reduce physical disturbance to subtidal and circalittoral sedimentary habitats, particularly in the 3-mile zone	D01-HB-OE06-ind1 Proportion of surface area of subtidal and circalittoral sedimentary habitats located in strong protection areas	Increase the area of subtidal and circalittoral sedimentary habitats in strong protection in each of the following areas*, with at least one proposed SPZs per area of the SBSDs where the habitat** is at high or major risk	Naming of an area intended to host a SPZ, the precise perimeter of which will be defined after local consultations. The existing PFA concerned: "Saint Marcouf" The potential PFAs concerned with intertidal rocky habitats are the following: "Chausey", "Falaise du Bessin occidental", "Littoral seino-marin", "Baie de Canche", "Baie d'Authie", "Baie de Somme", "Banc à la ligne", "Ridens de Boulogne" *one copy of each habitat type (Atlantic V3 typology at level 3: 13 habitats apart from the specific habitats already dealt with in D06-OE02-ind2)
D01-OM-OE06. Limit physical, noise and light disturbance to seabirds* in their functional habitat areas  * See seabird species listed in the GES Order	D01-OM-OE06-ind3. Surface area of foreshore bird functional areas located in strong protection areas	Trend towards an increase in the area of foreshore bird functional areas located in strong protection zones	Among the 16 potential and 2 existing SPZs: - Sector 1: *Platier d'Oye * Line bench * Slack Estuary - Sector 2: * Bay of Canche * Authie Bay * Bay of the Somme - Sector 4: * Ratier Island * Bird bank (Orne Estuary) * Saint-Marcouf - Ile de Terre * Beauguillot - Sector 7: * Chausey

1 The concept of a particular habitat was included in Annex III of Directive 2008/56/EC of the European Parliament and of the Council establishing a Community framework in the field of marine environmental policy ("MSFD") but is no longer included in the version amended by Directive 2017/845/EC amending that Annex. They correspond to habitats of interest from the point of view of science or biological diversity. A list of specific habitats for France had been developed on this definition basis as part of the work to develop the EOs for the second cycle and is included in the EO technical dossier.

D06-OE02. Reduce disturbance and physical loss of generic and specific habitats associated with maritime structures, activities and uses	D06-OE02-ind2. Proportion of area of each particular habitat located in strong protection areas	Increase in the area of specific habitats (kelp, mussel beds, salt meadows, dwarf eelgrass beds, etc.) under strong protection in each of the following areas*, with at least one proposed SPZ per sector of the SBSDs where the habitat is of high or major concern	- Sector 1: * Slack Estuary: Salt meadows (and saltbush vegetation) -Sector 2: * Baie de Canche: Salt meadows (and saltwort vegetation), intertidal mires * Authie Bay: Salt meadows (and saltwort vegetation), intertidal mires * Baie de Somme: Salt meadows (and saltwort vegetation), intertidal mires - Sector 3: * Cauchois intertidal and cliff coastline: Laminaria, intertidal mussel beds * Subtidal seashore: Subtidal mussel beds - Sector 4: * Ilot du Ratier: Intertidal mussel beds * Western Bessin cliff: Laminaria * Beauguillot: Salt meadows (and saltwort vegetation), dwarf eelgrass beds * Saint-Marcouf: Laminaria, Subtidal mussel beds - Sector 7: * Mont Saint-Michel Bay: Hermelles (Littoral de Champeaux), Salt meadows (and saltwort vegetation) (Bay bottom sandy banks) * Chausey: dwarf eelgrass beds, marine eelgrass beds, kelp, maerl [lime-producing red seaweeds principally of the genus Lithothamnion used especially in France to reduce soil acidity] banks
D07-OE03. Limiting pressures and barriers to sea-land connectivity in estuaries and coastal lagoons	D07-OE03-ind1. Percentage of estuaries located in strong protection areas	Increase in the percentage of estuaries in strong protection, so that 8 estuaries of the coastline contain a strong protection zone	"Mont Saint Michel Bay sandy banks", "Beauguillot", "Banc aux oiseaux", "Baie de Somme", "Baie d'Authie", "Baie de Canche", "Slack Estuary", "Ilot du Ratier  *Naming of an area intended to host a PFA, the precise perimeter of which will be defined after local consultations

## Part A - Targets defined through work to identify strong protection zones on the coastline

### A. Context

7 targets had been adopted in 2019 as *"defined and agreed under measure M003 and adopted simultaneously with the SBS Action Plan"*. The work performed today within the framework of measure M003-NAT1B (adopted within the framework of the Marine Action Plan of the first implementation cycle of the MSFD) has made it possible to define 6 of them, the last one, relating to D07-OE03-ind2, not concerning the Eastern Channel - North Sea.

Measure M003-NAT1B provided for: *"Complete the network of marine protected areas by establishing strong protections in sectors of remarkable marine biodiversity"*. The aim of this measure is to create a consistent, connected network of strong protection zones (SPZs) that is representative of the diversity of marine ecosystems on each coastline in mainland France. These strong protections will be instituted as a priority within existing marine protected areas.

The context in the Eastern Channel - North Sea and at national level<sup>2</sup> has led to the acceleration of the implementation of the measure and the definition of a consensual and achievable protection objective by 2030. The methodological work of defining and then spatially identifying potential SPZs was therefore mainly performed in 2019 and 2020 at the same time as the work on Drafting the SBS: it now makes it possible to submit precise zoning for consultation.

However, this work has not been completed. A consultation is to be held shortly at national level to better understand the distribution of efforts between the coastlines, both in continental France and in the ultra-marine territories.

The work performed in 2019 to define these targets is detailed in the next two sections.

### B. Definition and prior identification of existing Strong Protection Zones (SPZ) in the Eastern Channel - North Sea

#### 1. What is a SPZ?

There are 5 criteria for defining an SPZ:

- it focuses on the remarkable biodiversity defined by the ecological issues of the MSFD;
- it is primarily implemented within a marine protected area;
- it has a specific regulation of activities to enable the main pressures on the ecological issues justifying strong protection to be significantly reduced or eliminated;
- it is based on a management document, drawn up by the governance body of the marine protected area (MPA) in question, defining protection objectives and a system for assessing the effectiveness of the system;
- it has an operational control system for its activities.

PFAs are neither a new MPA status nor additional MPAs. The aim is to recognise what exists and to strengthen its management or protection where appropriate. Therefore, in addition to the analysis of existing regulations and issues for the designation of PFAs, it is important that these areas are part of a representative global network, i.e., allowing for:

- each of the ecological issues identified in the coastline strategy documents are well represented in the network (representativeness criterion);
- several examples of the issue are represented in the network: for example, several meadow surfaces are present in the network of PFAs on the coast (replication criterion);

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<sup>2</sup> The new national protected areas strategy for 2020-2030, launched at the beginning of January 2021, plans to increase the surface area of the national territory (both land and sea) to 30% in protected areas, of which 10% should be strongly protected, both in mainland France and in the overseas territories.

- each copy of the issue is sufficiently large (viability criterion);
- each example of the target issue is linked to the others, i.e., these areas are sufficiently close (connectivity criterion).

## *2. Inventory and analysis of existing MPAs in the Eastern Channel and North Sea*

For the Eastern Channel and North Sea, the AFB (and later the OFB) initiated a process to designate marine protected areas and analyse the representativeness of this network in mid-2018, in close consultation with the managers of marine protected areas and the departments concerned.

This inventory considers the principle of "multi-stakeholder" SPZs: all ecological issues identified as strong or major are considered in the analysis. Thus, within the PFA, human pressures on these issues are removed or reduced to an insignificant level through regulation of activities. The identification of strong to major ecological issues has thus been used to define the environmental targets of the SBS, on which the manager(s) can act at local, regional or national level.

At this stage, 2 PFAs have been identified on the Eastern Channel - North Sea coast covering 0.69 km<sup>2</sup>. These are:

- Quiet zone including the island of Terre in the Saint-Marcouf archipelago, with the following main environmental issues present

- \* Subtidal mussel beds
- \* Cobble, gravel and circalittoral rocks
- \* Subtidal reefs
- \* Mediolittoral reefs
- \* Medium subtidal sands
- \* Gobies
- \* Laminaria
- \* Nesting crested cormorant, great cormorant, herring gull, great black-backed gull

- Enhanced protection zone known as the "Bird Bank" in the Orne estuary, with the following main environmental issues present

- \* Intertidal sediments
- \* Nesting and feeding area of Red Knots
- \* Areas of maximum density and functional areas identified for all seabird species during the breeding season
- \* Resting places for sea-calf seals

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 Part B - Summary of the new targets defined to consider the new challenges and ambitions of the SBSBs

environmental target	Environmental indicator	Proposed target	Nature of the work performed
Specific habitats			
D01-HB-OE05. Avoid physical disturbance of eelgrass beds (by anchoring, bottom fishing gear and fishing on foot)	D01-HB-OE05-ind1. Proportion of known area of eelgrass beds ( <i>Zostera marina</i> and <i>Zostera noltei</i> ) that is not open to mooring	100 %	Target defined with the support of the OFB
<p>For anchorages, EO applying to the whole of the Eastern Channel-North Sea, NAMO and SA coastlines but targeting in particular:</p> <ul style="list-style-type: none"> <li>- Chausey Archipelago</li> <li>- Morlaix Bay</li> <li>- Glénan Archipelago</li> <li>- Iroise Sea</li> <li>- Gulf of Morbihan</li> <li>- Gironde Estuary and Pertuis Sea</li> <li>- Arcachon Basin</li> </ul> <p>For recreational fishing, EO applying to the whole of the Eastern Channel-North Sea, NAMO and SA coastlines but targeting in particular:</p> <ul style="list-style-type: none"> <li>- Lancieux Bay</li> <li>- West coast of Armor (Pointe de Bilfot)</li> <li>- Morlaix Bay</li> <li>- Rade de Brest</li> <li>- Gulf of Morbihan</li> <li>- Gironde Estuary and Pertuis Sea</li> <li>- Bassin d'Arcachon"</li> </ul>	D01-HB-OE05-ind3. In Natura 2000 sites, proportion of intertidal meadow surface identified as "at moderate or high risk" in the analysis risks of undermining the conservation objectives of Natura 2000 sites subject to fishing pressure	<p>1) In the Normandy sites, in accordance with the decree of 27 April 1995 on the list of protected plant species in the Basse-Normandie region: 0% for <i>Zostera marina</i> and <i>noltei</i></p> <p>2) In other cases: downward trend</p>	Target defined with the support of the OFB
D01-HB-OE06. Reduce physical disturbance to subtidal and circalittoral sedimentary habitats, particularly in the 3-mile zone	D01-HB-OE06-ind2. In Natura 2000 sites, proportion of the surface area of sedimentary habitats (1160 and 1110 including maerl [lime-producing red seaweeds principally of the genus <i>Lithothamnion</i> used especially in France to reduce soil acidity] banks*) identified as "at moderate or high risk" in the framework of the analysis of the risks of undermining the conservation objectives of Natura 2000 sites subject to fishing pressure (bottom dragging gear)	<p>* Subtidal seagrass beds: 0% ;</p> <p>* maerl [lime-producing red seaweeds principally of the genus <i>Lithothamnion</i> used especially in France to reduce soil acidity]: 50% ;</p> <p>* Fine and silted sands (11101;11104;1160): 50% ;</p> <p>* Medium and coarse sands (11102;11103): 60 %</p>	Target defined with the support of the OFB
Seabirds			
<p>D01-OM-OE01. Reduce incidental catches of seabirds* (at sea and near colonies), and in particular reduce incidental catches of the most vulnerable species such as Balearic, Yelkouan and Ashy shearwaters by longlines, set nets and small pelagic seines</p> <p>* cf. seabird species listed in the GES Order</p>	D01-OM-OE01-ind1. Proportion of maximum density area at risk for which incidental catch avoidance or reduction measures are planned	100.00 %	Target defined with the support of the OFB
D01-OM-OE04. Reduce pressure from introduced and domesticated species on seabird breeding sites	D01-OM-OE04-ind1. Proportion of island breeding seabird colonies with high stakes* for which introduced and domesticated species represent a proven pressure.	<p>0 for remote island sites with no human occupation</p> <p>A downward trend for the others.</p>	Target defined with the support of the OFB and the Groupement d'intérêt scientifique oiseaux marins (GISOM)



D01-OM-OE05. Maintain or restore functional seabird habitats* in coastal wetlands  The map of functional habitats for sea birds will be drawn up on the occasion of the revision of the PoS or MoU and validated	D01-OM-OE05-ind1. Number and area of functional sites restored on the coastline.	Upward trend. The map of functional sites will be established during 2020 by the LPO or RNF.	Target defined with the support of the OFB
in CMF  * cf. seabird species listed in the GES Order	D01-OM-OE05-ind2. Functional habitat area of seabirds in wetlands of coastal municipalities.	Maintenance The reference value will be known in 2020 or 2021 by the LPO or RNF	
Integrity of the seabed - artificialization			
	D06-OE01-ind2. Percentage of artificial foreshore* (emerged structures and developments)	a) For the whole coastline, a downward trend in the average rate of artificialization of the upper foreshore in linear terms compared to the average reference rate evaluated at 0.9% for Eastern Channel-North Sea over 6 years b) For the whole coastline, a downward trend in the average rate of artificial development of the foreshore in ha compared to the average reference rate evaluated at 0.6% for Eastern Channel-North Sea, over 6 years	CEREMA report on "artificialization of coastal and littoral marine environments - Methods for determining indicators 1 and 2" (2021)
	D06-OE01-ind3. Percentage of artificial seabed (emerged and submerged structures and developments) between 0 and 20 m	For the entire coastline, a downward trend in the average rate of coastal land development in hectares compared with the average reference rate, estimated at [pending the results of the CEREMA study in March 2021]	CEREMA work in progress
Anthropogenic pressures			
D08-OE04. Limit the discharge of contaminants and the spread of non-indigenous species into the natural environment during the docking of vessels (recreational and professional) and submerged equipment (buoys, breeding structures, etc.)	D08-OE04-ind1. Number of ports equipped with docking areas with an effluent treatment system	Upward trend.	CEREMA study on the inventory and characterisation of docking areas (July 2018)
D11-OE01. Reduce the level of noise related to impulsive emissions with regard to the risks of disturbance and mortality of marine mammals	D11-OE01-ind1. Spatial extent of the recorded 'strong' to 'very strong' events as a percentage of the coastline	To be defined in the framework of TG Noise	TG Noise work in progress

## Part B - Targets set to address the new issues and ambitions of the SBSDs in relation to the APME

Special habitats:

### D01-HB-OE05-ind1 & ind3:

The targets defined are ambitious in view of the small areas occupied by these habitats on the coast, the status of the two eelgrass species in Normandy as protected species under the law of 10 July 1976 and the high sensitivity of the meadows to the physical pressures induced by anchoring (apart from ecological anchoring) or fishing on foot.

### D01-HB-OE06-ind2:

The target is the absence of moderate to high risk from dragging arts on eelgrass beds. It is defined in view of the small areas occupied by these habitats on the coastline, the virtual absence of dragging arts on this habitat, the status of protected species under the law of 10 July 1976 of the two species of eelgrass in Normandy and the high sensitivity of the meadows to physical pressures.

For the other habitats, the target is a 50% reduction in maerl [lime-producing red seaweeds principally of the genus *Lithothamnion* used especially in France to reduce soil acidity] beds and fine and silted sands and a 40% reduction in medium and coarse sands at moderate risk. It is defined with regard to the high sensitivity and fundamental ecological functions of these habitats (in particular the maerl [lime-producing red seaweeds principally of the genus *Lithothamnion* used especially in France to reduce soil acidity] and silted fine sands) and considers the dependence of certain uses on these habitats (in particular for coarse sands).

### Seabirds: D01-OM-E01-ind1:

The target is to identify those areas within the essential areas for seabirds (area of maximum density) that are at risk from incidental catch pressure (area at risk). For all of these areas, reduction measures (regulatory, contractual or voluntary) will be implemented to minimise this risk, as is required throughout the national territory due to the protection status of the species (all seabird species are protected) and within the SPA (special protection area) network due to the Birds Directive.

### D01-OM-OE04-ind1:

In January 2019, the OFB consulted the Groupement d'Intérêt Scientifique Oiseaux the sea (GISOM) in its capability as scientific expert to find out its capability to monitor, determine the reference value and information (and the associated methodology) for certain indicators relating to sea birds.

GISOM has thus committed itself to three indicators (D01-OM-OE04-ind1, D01-OM-OE04-ind2, D01-OM-OE06-ind1) and in November 2019 produced the methodological report associated with each of these indicators.

Concerning indicator D01-OM-OE04-ind1, GISOM first defined the list of island seabird colonies with high stakes and the list of introduced and domesticated species to be controlled. It has defined the monitoring materials, methods and devices to be used to identify whether or not pressure is present.

The current state of functional habitats available for seabirds (concentration of individuals on a limited number of sites and scarcity of potential carry-over sites) and the proven, but controllable, impacts of predation on breeding success lead to the setting of an ambitious target of no high-stake island colonies with proven pressure from introduced or domesticated species.

### D01-OM-OE05-ind1 & 2:

The concentration of anthropogenic pressures on the coastal strip has led in a few decades to a very rapid reduction in the area of functional habitats available to seabirds, which has resulted in a drop in numbers for the most sensitive species. For example, nearly a third of the seabird species breeding in France are now endangered or critically endangered (14 species out of 47).

The targets set correspond to the restoration of at least one functional site per marine sub-region by 2026. In the absence of a precise identification of suitable sites for this type of restoration, no figures could be proposed.

Seabed integrity - artificialization:

The SBSDs' targets on artificialization are innovative and ambitious. They require a perfectly shared understanding by all the players of the definition of artificialization, of the perimeter on which it is considered, and finally the sharing of a realistic and shared objective on a sensitive policy, on which the coastal economy partly depends.

In the framework of the second cycle (2018 - 2023) of implementation of the MSFD, a new environmental target D06 OE01 specifically addresses the artificialization of the coastal and nearshore marine environment, in the sense of physical losses. A second objective concerns the physical disturbance and physical loss of generic and specific habitats related to maritime structures, activities and uses.

The principle of this objective D06-OE01 is to control the artificialization of the shoreline (coastal line and lower levels), by defining a limit value (target) to be reached by 2026 for each indicator.

In this context, the indicators of objective D06 OE01 concerning the physical loss of habitat linked to the artificialization of the coastline, the foreshore and the seabed (0-20 m) adopted in the maritime coastline strategies in 2019 are as follows

- indicator 1 (MED coastline): Percentage of linear artificiality (structures and emerging developments);
- indicator 2 (Eastern Channel-North Sea, NAMO, SA coastlines): Percentage of artificial foreshore (emerged structures and developments). For this indicator specifically, two different targets have been set:
  - A target for the upper limit of the foreshore (in linear km): the method for calculating the target is the same as for indicator 1 concerning the Mediterranean coast;
  - A target for the intertidal space (in hectares) ;
- indicator 3 (Eastern Channel-North Sea, NAMO, SA, MED coastlines): Percentage of artificial seabed (emerged and submerged structures and developments) between 0 and 10 m ;
- indicator 4 (Eastern Channel-North Sea, NAMO, SA, MED coastlines): Percentage of artificial seabed (submerged structures and developments) between 10 and 20 m.

In order to simplify the work of the instructing services, it was decided to merge the indicators D06-OE01-ind3 and D06-OE01-ind4. Thus, this new indicator considers the percentage of artificial seabed between 0 and 20 metres.

The characterisation of a reference rate of artificialization was therefore essential to establish these targets. This rate was established by CEREMA for the linear and foreshore areas only (i.e., for indicators 1 and 2) and for the period 2002-2014, within the framework of a report entitled "artificialization of coastal and littoral marine environments, Methods for determining indicators 1 and 2" (CEREMA, 2021), which can be found in Appendix 1.

The main novelties brought about by the definition of these D06 OE1 indicators and their targets in relation to pre-existing indicators relating to the artificialization of the coastline and the coast in France are summarised below:

1. From the point of view of their definition and use, the indicators relating to artificialization in D06 OE1 of the MSFD correspond to the rate of artificialization of the linear coastline on the one hand (in kilometres, for all coastlines, called "upper limit of artificial foreshore" for the Atlantic and English Channel coastlines) and of the foreshore surface on the other hand (in hectares, for the Atlantic and English Channel coastlines only). In this respect, they differ from the rate of artificialization calculated at a given moment and offered by other pre-existing indicators;
2. In regulatory terms, the EO indicators of the MSFD and their targets are accompanied by a compatibility obligation for offshore authorisations. As a result, the requirement for reliable results is high. They must be able to be converted into absolute values in an accurate manner for easier processing of permits;

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3. In terms of the pressures considered, the indicators relating to artificialization in D06 OE1 of the MSFD focus on physical losses and do not consider the physical disturbances caused by structures. Indeed, another MSFD EO (D06 EO02) deals with physical disturbances. Moreover, the uncertainties in the calculation methods for considering physical disturbances are currently significant. This is why the indicators relating to artificialization in D06 OE1 of the MSFD only consider the area covered by the structures in the artificialization, without considering the zone of influence of the structures, unlike the assessment of artificialization performed within the framework of the integrated management of the coastline, for which it is essential to consider, even approximately, the zone of influence of the structures;
4. From a methodological point of view, concerning the "artificial linear length", the length of artificial linear length for the indicators of D06 OE1 of the MSFD is calculated without using a projection on a reference coastline, in order to adapt to changes in the reference land-sea boundary, which is currently being redefined (SHOM-IGN work) This is not the case for the WFD and the SNGITC, where the rate of artificialization calculated at a given time was based on a projection of coastal structures (identified from databases, aerial photographs, etc.) onto a reference coastline (Histolitt, v2, 2009, SHOM-IGN) which is now obsolete.

Anthropogenic pressures:

#### D08-OE04:

A study by CEREMA on all the coastlines identifies and characterises the docking areas: this survey was performed and delivered in July 2018 but was not shared with all the stakeholders. Thus, its results must be compared on the one hand with the detailed territorial analysis performed by the Rhone-Mediterranean-Corsica Water Agency within the framework of the WFD and the reduction of "black spots", and on the other hand with the analysis of the competent services for water policing (DREAL in Occitania, DDTM in PACA and Corsica) and the port management authorities.

The problem of a docking area and the technical solutions to be found must therefore be discussed on a case-by-case basis, and it is not relevant to set a numerical target, so the target is "upward trend".

#### D11-OE01:

TG Noise has not yet set any targets and is still working on them. The next TG Noise meeting is scheduled for 17 February 2021.

environmental target	Environmental indicator	Proposed target	Comments and possible derogations
<p>D05-OE01. Reduce nutrient inputs (nitrates and phosphates), particularly from rivers flowing into eutrophied marine areas</p> <p>EO applying to all Eastern Channel-North Sea, NAMO and SA coastlines but targeting in particular: Eastern Channel-North Sea: Picardy estuaries (Authie, Liane, Wimereux, Slack), Seine estuary, West coast of the mother-of-pearl, East coast of the mother-of-pearl and Barfleur at the eastern tip of the Cotentin</p>	<p>D05-OE01-ind1. Proportion of streams, rivers and watercourses leading to eutrophied marine areas with nitrate concentrations compatible with the GES threshold values for the Nutrient criterion (mainly in relation to the Chlorophyll-a criterion)</p> <p>Note: A selection of rivers leading to eutrophied* marine areas from the 45 rivers retained in the modelling work will be made when the thresholds are defined. The 45 rivers selected for the modelling are: - Eastern Channel-North Sea: the Aa, the Picard Estuaries (Authie, Canche, Somme estuary), the Bresle, the Arques, the Seine estuary, the Touques, the Dive, the Orne, the Seulles, the Vire and the Aure, the Douve, the Sienne, the Sée and the Sélune</p>	<p>Basin SN: 33% AP Basin: 50 %</p>	<p>associated derogation for the two basins SN and AP</p>
	<p>D05-OE01-ind2. Proportion of streams, rivers and watercourses leading to eutrophied marine areas with phosphate concentrations compatible with the GES threshold values for the nutrient criterion (mainly in relation to the Chlorophyll-a criterion)</p> <p>Note: A selection of rivers leading to eutrophied* marine areas from the 45 rivers retained in the modelling work will be made when the thresholds are defined. The 45 rivers selected for the modelling are: - Eastern Channel-North Sea: the Aa, the Picard Estuaries (Authie, Canche, Somme estuary), the Bresle, the Arques, the Seine estuary, the Touques, the Dive, the Orne, the Seulles, the Vire and the Aure, the Douve, the Sienne, the Sée and the Sélune</p>	<p>Basin SN: 100% AP Basin: 50 %</p>	<p>associated derogation for the AP basin</p>
<p>D05-OE02. Reduce nutrient inputs (nitrates and phosphates), particularly from small coastal rivers that flow into sensitive marine areas due to their confinement or the presence of habitats sensitive* to these inputs</p> <p>*habitats sensitive to eutrophication in the English Channel and Atlantic: maerl [lime-producing red seaweeds principally of the genus Lithothamnion used especially in France to reduce soil acidity] beds, sabellarid bioconstructions, eelgrass beds and salt meadows</p> <p>EO applying to all Eastern Channel-North Sea, NAMO, SA coastlines but targeting in particular:</p>	<p>D05-OE02-ind1. Proportion of streams, rivers and watercourses leading to sensitive marine areas due to their confinement or the presence of sensitive habitats* with nitrate concentrations compatible with the GES threshold values for the nutrient criterion (mainly in relation to the Chlorophyll-a criterion)</p> <p>* Note: A selection of rivers leading to sensitive marine areas due to their confinement or the presence of sensitive habitats among the 45 rivers retained in the modelling work at the time of the definition of the thresholds. The 45 rivers selected for the modelling are: - Eastern Channel-North Sea: the Aa, the Picard Estuaries (Authie, Canche, Somme estuary), the Bresle, the Arques, the Seine estuary, the Touques, the Dive, the Orne, the Seulles, the Vire and the Aure, the Douve, the Sienne, the Sée and the Sélune</p>	<p>Basin SN: 33 % Basin AP: Not relevant</p>	<p>associated derogation for the SN basin</p>

- Eastern Channel-North Sea: Picardy estuaries (Authie, Liane, Wimereux, Slack), Normandy-Breton Gulf (Sienne, Mont Saint Michel Bay)	<p>D05-OE02-ind2. Proportion of streams, rivers and watercourses leading to sensitive marine areas due to their confinement or the presence of sensitive habitats* with phosphate concentrations compatible with the GES threshold values for the nutrient criterion (mainly in relation to the Chlorophyll-a criterion)</p> <p>* Note: A selection of rivers leading to sensitive marine areas due to their confinement or the presence of sensitive habitats among the 45 rivers retained in the modelling work at the time of the definition of the thresholds. The 45 rivers selected for the modelling are:</p>	<p>Basin SN: 100 %</p> <p>Basin AP: Not relevant</p>	
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<div>Explanatory note</div> <div>Consultation of additional targets to the maritime coastline strategy defined in the framework of the work of the SBSD Action Plan</div>			
	- Eastern Channel-North Sea: the Aa, the Picard Estuaries (Authie, Canche, Somme estuary), the Bresle, the Arques, the Seine estuary, the Touques, the Dive, the Orne, the Seulles, the Vire and the Aure, the Douve, the Sienne, the Sée and the Sélune		
D07-OE03. Limiting pressures and barriers to sea-land connectivity in estuaries and coastal lagoons	D07-OE03-ind3. Number of non-removable obstacles whose impacts on currentology, sedimentology or continuity have been minimised	Basin SN: 15 obstacles AP basin: All obstacles	
D08-OE07. Reduce discharges of land-based contaminants to the sea* * excluding dredging and dumping activities	D08-OE07-ind1. Number of non-attainment of GES threshold in sediment and biota	Candidate indicator	The indicator has been classified as a "candidate for the 3rd MSFD cycle" due to methodological difficulties in defining a numerical target consistent with the indicator's title, particularly for sediments, in connection with the work in progress on a harmonised WFD-MSFD method.
	D08-OE07-ind2. Number of coastal water bodies with good chemical status under the WFD	<b>Basin SN: 47% AP</b> <b>Basin: 100 %</b>	derogation for the SN pool
D09-OE01-ind1. Reduce direct transfers of microbiological pollutants, particularly to bathing areas and shellfish production areas	D09-OE01-ind2. Proportion of REMI monitoring points on the coastline showing a deterioration in microbiological quality or showing a deteriorated quality that is not improving (general trend over 10 years)	0 %	

In accordance with IX of Article L. 212-1 of the Environment Code, the SDAGE must be compatible or made compatible with the environmental targets defined in the MAPs, when it is periodically updated in accordance with IV of Article L. 212-2. Conversely, the APME includes environmental targets and associated indicators for achieving good environmental status of marine waters, which are compatible or made compatible with the SDAGE (Article L. 219-9 of the Environment Code).

In accordance with the provisions mentioned in IX of Article L. 212-1 and insofar as many of the pressures on marine ecosystems are generated on land, the environmental targets of the SBSs concerning these pressures on land or in relation to water policy define new results to be achieved within the framework of the SDAGEs currently being drawn up for the third management cycle 2022-2027. As a result, the SDAGEs and WFD MoPs must define the measures contributing to the achievement of these results, within the limits of their legal scope, unless concessions to the achievement of these objectives are integrated into the strategic documents of the coastlines.

### **Eutrophication (D05OE01 ind1 and ind2 & D05OE02 ind1 and ind2)**

Of the four environmental targets defining descriptor 5, the targets for indicators 1 and 2 of EO1 and EO2 have not been adopted in September 2019 as these are dependent on the strategy deployed in the SDAGEs. They have thus been determined by the water agencies on the basis of the assessment methods and local strategies defined in them. The targets correspond to the objectives defined in the SDAGEs.

#### **The two environmental targets are**

- **D05 OE01:** Reduce nutrient inputs (nitrates and phosphates), particularly from rivers flowing into eutrophied marine areas
- **D05 OE02:** Reduce nutrient inputs (nitrates and phosphates), particularly from small coastal rivers that flow into sensitive marine areas due to their confinement or the presence of habitats sensitive\* to these inputs

#### **For each EO, two indicators have been defined and adopted in 2019:**

" Ind1/2: Proportion of streams, rivers and watercourses leading to eutrophied marine areas with concentrations of (nitrate/phosphate) compatible with the GES threshold values for the nutrient criterion (mainly with regard to the Chlorophyll-a criterion)

If the targets that correspond to those in the SDAGEs are different from 100%, concessions must be activated (see below).

#### **D05OE01 ind1:**

The target adopted for the Eastern Channel - North Sea is 33% for the Seine - Normandy Basin and 50% for the Artois - Picardy Basin of streams, rivers and watercourses leading to eutrophied marine areas with nitrate concentrations compatible with the GES threshold values for the nutrient criterion by 2026.

#### **D05OE01 ind2:**

The target for the Eastern Channel - North Sea coastline is 100% for the Seine - Normandy basin and 50% for the Artois - Picardy basin of rivers and streams leading to eutrophied marine areas



with phosphate concentrations compatible with the GES threshold values for the nutrient criterion by 2026.

**D05OE02 ind1:**

The target adopted for the Eastern Channel - North Sea is 33% for the Seine-Normandy Basin of streams, rivers and rivers leading to sensitive marine areas due to their confinement or the presence of sensitive habitats whose nitrate concentrations are compatible with the threshold values for achieving the GES for the nutrient criterion by 2026 (Artois - Picardy Basin not involved).

**D05OE02 ind2:**

The target adopted for the Eastern Channel - North Sea is 100% for the Seine-Normandy Basin for streams, rivers and rivers leading to sensitive marine areas due to their confinement or the presence of sensitive habitats whose phosphate concentrations are compatible with the threshold values for achieving the GES for the nutrient criterion by 2026 (Artois - Picardy Basin not involved).

**D07OE03 ind3:**

For the Eastern Channel - North Sea, the target is 15 obstacles that cannot be removed and whose impacts on currentology, sedimentology or continuity have been minimised by 2026 for the Seine-Normandy basin, and the target is all obstacles for the Artois-Picardy basin.

**D08OE7 ind2:**

Indicator 1 was defined as a "candidate" indicator because of the methodological difficulties in defining a numerical target consistent with the indicator's title, particularly for sediments, in connection with the work in progress on a harmonised WFD-MSFD method. Only indicator 2 makes up EO7.

According to the Seine-Normandy and Artois-Picardy SDAGEs, 47% of the coastal water bodies in the Seine-Normandy Basin and 100% in the Artois-Picardy Basin are in good chemical status. The target is therefore 47% for the Seine-Normandy Basin and 100% for the Artois-Picardy Basin.

**D09 OE1 ind1:**

In order to be in line with the SDAGE strategy, it was specified that a degraded quality was a worse status than a B classification (according to the Hygiene Package).

The target adopted for the Eastern Channel - North Sea is 0% for the Seine - Normandy Basin and 0% for the Artois - Picardy Basin of REMI monitoring points on the coastline showing a deterioration in microbiological quality or showing a deteriorated quality that is not improving (general trend over 10 years).

## Exemptions and justifications for concessions

### **D05-OE01: Reduce nutrient inputs (nitrates and phosphates), especially from rivers from rivers flowing into eutrophied marine areas**

#### **Artois Picardy Basin:**

According to the Actimer study, the required nitrate and phosphate abatement rates to achieve good status are achievable for the Aa and the Canche and not for the Somme and the Authie (50% reduction) by 2026. A target of 50% is proposed.

The reduction of nutrient inputs and transfers in the upstream catchment(s) of these water bodies requires action on many sources and, as far as diffuse pollution of agricultural origin is concerned, a generalised change in practices. The timeframe for the implementation of these measures and their effects will probably only bear fruit beyond 2027. Moreover, some of these nutrients come from the Seine plume, whose flow reduction target will not be met by 2026.

Nitrates in groundwater continue to feed rivers and the coastline even if reduction measures are implemented. Nutrients in general are also stored in the sediments, which may be re-circulated as a result of reworking following river maintenance and restoration operations or exceptional climatic events. The same applies to nutrients stored in soils subject to erosion under climatic conditions.

#### **Seine-Normandy Basin:**

A less stringent target for disproportionate costs and technical feasibility is foreseen for coastal water bodies.

More widely, it concerns part of the water bodies located on the rivers Arques, Seine, Dives, Orne, Seulles and Vire.

The reduction of agricultural nutrient inputs from the main source is conditional on the adoption of virtuous practices on a sufficiently large scale with regard to the water body's catchment area. The levers to promote these practices must be strong and significant enough to ensure a widespread and significant change in agricultural systems and practices, which imply profound changes in the supply chain and consumption patterns, which are difficult to initiate. Removing the obstacles to change is a challenge that requires significant human and financial resources.

The inertia of the response of the environment after pressure reduction can, moreover, be high: agricultural nutrients often constitute large stocks in the soil and the transfer time to the aquatic environment is medium to long term.

The parameters concerned are nitrates and phosphorus for continental rivers, dissolved inorganic nitrogen, phytoplankton and macroalgae for coastal waters, and physical chemistry and biological indices for water bodies.

The generic argumentation is available in the SDAGE Annex 2B. The argument will be made available on the website <http://www.seine-normandie.eaufrance.fr/> the adoption of the SDAGE-PDM 2022-2027

**D05-OE02: Reduce nutrient inputs (nitrates and phosphates), particularly from small coastal rivers that flow into sensitive marine areas due to their confinement or the presence of their confinement or the presence of habitats sensitive to these inputs**

**Seine-Normandy Basin:**

A less stringent target for disproportionate costs and technical feasibility is foreseen for the above-mentioned coastal water bodies.

More broadly, it concerns part of the water bodies located on the rivers Sée and Sélune.

The reduction of agricultural nutrient inputs from the main source is conditional on the adoption of virtuous practices on a sufficiently large scale with regard to the water body's catchment area. The levers to promote these practices must be strong and significant enough to ensure a widespread and significant change in agricultural systems and practices, which imply profound changes in the supply chain and consumption patterns, which are difficult to initiate. Removing the obstacles to change is a challenge that requires significant human and financial resources.

The inertia of the response of the environment after pressure reduction can, moreover, be high: agricultural nutrients often constitute large stocks in the soil and the transfer time to the aquatic environment is medium to long term.

The parameters concerned are nitrates and phosphorus for continental rivers, dissolved inorganic nitrogen, phytoplankton and macroalgae for coastal waters, and physical chemistry and biological indices for water bodies.

The generic argumentation is available in the SDAGE Annex 2B. The argument will be made available on the website <http://www.seine-normandie.eaufrance.fr/> the adoption of the SDAGE-PDM 2022-2027

**D08OE07: Reducing discharges of land-based contaminants to the sea**

**Seine-Normandy Basin:**

An extension of the deadline for natural conditions under the WFD is foreseen for the co-boundary water bodies: *FRHC60, FRHC61, FRHC11, FRHC12, FRHC13, FRHC14, FRHC15, FRHC16, FRHC17, FRHC18*.

Some specific substances are still present in the environment despite their ban on use or strong restrictions. In fact, their presence is due to the stock that has been built up previously and which regularly generates diffuse emissions that cannot be controlled. This is the case for PCBs in coastal water bodies, where PCB118, a global marker for PCBs and toxic for the environment, is found, mainly from the mobilisation of sediments in the Seine. Despite the fact that there are no current discharges (the discharge of PCBs was banned in 1987) and that concentrations are slowly decreasing, PCBs are still present.

The generic argumentation is available in the SDAGE Annex 2B. The argument will be made available on the website <http://www.seine-normandie.eaufrance.fr/> the adoption of the SDAGE-PDM 2022-2027