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Environmental targets

estrategias marinas

EsMarEs

"Spanish Marine Strategies, protecting the sea for all"



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PREAMBLE

Marine Strategies are the planning tool to manage and protect the marine environment. They are organized as cyclical processes of adaptive management, which must be kept up-to-date and reviewed every 6 years. Its main objective is the achievement of the Good Environmental Status (GES) of our seas by 2020. They are applied on the 5 Spanish marine subdivisions: Canarian, South-Atlantic, Estrecho and Alboran, Nor-Atlantic and Levantine-Balearic marine subdivision, which encompass marine waters, the seabed, the subsoil and the natural resources under Spanish sovereignty.

The first cycle of Marine Strategies started in 2012 with the implementation of the first three phases. After the initial assessment of both the marine environment and pressures and impacts caused by human activities, **GES** was defined for each of the 11 qualitative descriptors. Subsequently, a set of Environmental Targets and associated indicators were established, which guide progress towards achieving GES of the different components of the marine environment, as well as the pressures and impacts exerted on it.

Afterwards, in 2014, the **Monitoring Programmes** were established to evaluate the environmental status of the marine waters and the progress towards the achievement of GES, as well as to analyze the effectiveness of the **Programmes of Measures** defined in 2016.

Spain, as a Member State of the European Union (EU) and as a contracting party to a series of Conventions, Agreements and International Treaties, is obliged to ensure compliance with a significant number of Environmental Targets. The objetives stablished by the Marine Strategies must be coherent with these international or European targets.



"Spanish Marine Strategies, protecting the sea for all"

GLOSSARY OF TERMS

ENVIRONMENTAL TARGET. Qualitative or quantitative expression of the desired state/status of the different components of the marine environment, and pressures and impacts exerted on this environment.

GOOD ENVIRONMENTAL STATUS (GES). Environmental status of marine waters that gives rise to ecologically diverse and dynamis, clean, healthy and productive oceans and seas, in the context of their intrinsic conditions, and in which the use of the marine environment is at a sustainable level, thus protecting its potential use and activities for current and future generations.

ECOSYSTEM APPROACH. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which includes the essential processes, functions and interactions among organisms and their environment. In the context of Marine Strategies, the ecosystem approach is a tool to achieve a balance between the pressure of human activities and the conservation of the marine environment. This is essential in order to achieve or maintain GES and a sustainable use of marine goods and services by current and future generations.

DESCRIPTORS. They are the basis for the characterisation and definition of GES of the marine environment. The Marine Strategy Framework Directive 2008/56/CE (MSFD) provides a list of 11 qualitative descriptors (Annex I) that every Member State must take into account to establish GES. These descriptors must be developed according to the Commission Decision (EU)2017/848, of 17 may 2017, which establishes the criteria and methodological standards on good environmental status of marine waters as well as specifications and standardized monitoring and evaluation methods, and repeals Decision 2010/477/EU.

The Marine Strategies. Origin of the Environmental Targets

The Spanish Marine Strategies are a planning tool for the marine environment, whose application aims to **reach or maintain Good Environmental Status** by the year 2020.

It is an adaptive management process, structured in consecutive phases and applied to each of the **5 Spanish marine subdivisions**, whose cycle is repeated **every 6 years**.



DESCRIPTORS THAT DEFINE GES



To achieve GES, based on the 11 descriptors, the ecosystem approach will be applied to obtain a balance between the pressure of human activities and the conservation of the marine environment, as well as the sustainable use of goods and ecosystem services by current and

Types of Environmental Targets



Related to human activities that affect the state of the marine environment. These objectives arise when there is an evident relationship between pressure, status and impact. In those cases in which it is not possible to set quantitative targets, objectives aimed at maintaining temporary trends, decreasing or stable, of certain pressures can be established.

ENVIRONMENTAL INDICATORS

Indicators are the parameters or set of parameters chosen to **represent a certain situation or fact**, which can be described qualitatively or quantitatively, that allow to measure progress periodically in terms of the established goal, as well as determining the effectiveness of the measures adopted.

It is usual to use a set of **indicators** that facilitate the evaluation of the proposed targets, since their use reduces the number of parameters that must be controlled to those that can represent more broadly and effectively the functional and structural aspects of the ecosystem.



General and Specific Targets of the Marine Strategies

Overall target To achieve or maintain good environment status in the marine environment, through its planning, conservation, protection and improvement.	State targets	Operational targets	Pressure targets
SPECIFIC TARGET To protect and preserve the marine environment, including its biodiversity, avoid its degradation and restore marine ecosystems in areas that have been adversely affected.	\checkmark	\checkmark	\checkmark
SPECIFIC TARGET To prevent and reduce discharges to the marine environment, aiming at phasing out pollution of the marine environment, to ensure that there are no impacts or risks to marine biodiversity, marine ecosystems, human health or the allowable uses of the sea.	\checkmark	\checkmark	~
SPECIFIC TARGET To ensure that activities and uses in the marine environment are compatible with the preservation of biodiversity.	\checkmark	\checkmark	

Specific and Particular Targets of the Marine Strategies

SPECIFIC TARGET

To protect and preserve the marine environment, including its biodiversity, avoid its degradation and restore marine ecosystems in areas that have been adversely affected

PARTICULARES TARGETS

- **A.1** To ensure the conservation and recovery of marine biodiversity through effective measures and instruments
- **A.2** To achieve a complete, ecologically representative, coherent and well-managed network of marine protected areas
- **A.3** To ensure the conservation of marine habitats and species, especially those considered threatened or in decline



A.1 To ensure the conservation and recovery of marine biodiversity through effective measures and instruments

	ENVIRONMENTAL TARGET	SUBDIVISIONS	INDICATOR	STATE	PRESSURE
s	To regulate for avoiding the commercial exploitation and by-catch of elasmobranchs of deep waters		Captures of these species	D1, D4	D3
target	To coordinate monitoring programs of by-catch		Existence of coordination system	D1, D4	
ional	To develop activities to recovery species and restore habitats		Habitats and species conservation status	D1, D6	
perat	To ensure an adequate marine surveillance		Existence of surveillance systems.	A	LL
0	To establish control programs for those species whose proliferation indicates a threat to local food webs		Existence of monitoring programs	D1,D4	D2, D3
	To reduce the intensity of human pressures on habitats		Extension of biogenic and/or protected habitats potentially affected by human activities	D1, D6	
gets	To minimize the introduction or expansion of non-indigenous species		Number of pathway management measures	D1,D4, D6	D6
act tar	To eradicate or decrease the abundance of invasive species		Number of invasive species and area subject to treatment	D1,D4, D6	D2
ir impa	To reduce the mortality of the species which are at the top of food webs		Mortality of the population of species at the top of the food web	D1, D4	D3
sure c	To prevent the impacts produced by cultivated species on the food webs		Existence of control programs	D1,D4	D2, D3
Pres	To reduce or avoid the increase of Diadema populations		Distribution and extension of Diadema aff. Antillarum	D1,D4, D6	
	To facilitate the regeneration of vegetation cover		Vegetation cover of algae and phanerogams	D1,D4, D6	
 (r	anarian Nor-Atlantic narine subdivision marine subdivision	South-Atlantic marine subdivision	Levantine-Balearic marine subdivision	Estrecho a marine sul	nd Alboran bdivision

DESCRIPTORS



A.2 To achieve a complete, ecologically representative, coherent and well-managed network of marine protected areas

	ENVIRONMENTAL TARGET	SUBDIVISIONS	INDICATOR	STATE	PRESSURE
Operational targets	To promote the Spanish Network of Marine Protected Areas		Percentage of the subdivision included in the Spanish Network of Marine Protected Areas/Implementation of management plans	D1,D6	
	To complete the Natura 2000 network		Percentage of the subdivision included in the Natura 2000 network/Implementation of management plans	D1	

A.3 To ensure the conservation of marine habitats and species, especially those considered threatened or in decline

	To maintain increasing or stable trends of key species population		Population trends of those species used as assessment elements	D1,D4	D3
	To maintain increasing or stable trends in the distribution area of biogenic habitats		Trends in the distribution area of habitats	D1,D6	
argets	To maintain the parameters of the qualitative descriptors on the status		Indicators to assess the estate of benthic communities	D1,D6	
itate ti	To maintain stable the body size distribution considering large individuals		Trends in the 95 percentile on size distribution	D1,D4	D3
	To maintain the CSF with a value lower than 1		CSF	D1, D4	D3
	To maintain the range of species distribution		Range of distribution	D1,D4	D3

DESCRIPTORS: D1: Biodiversity; D2: Non-indigenous species;D3: Commercially exploited species;D4: Food webs; D5: Eutrophication; D6: Sea-floor integrity; D7: Alterations of hydrographical conditions; D8: Contaminants and their effects D9: Contaminants in fish and other seafood; D10: Marine litter; D11: Underwater noise.

DESCRIPTORS



SPECIFIC TARGET

To prevent and reduce discharges to the marine environment, aiming at phasing out pollution of the marine environment, to ensure that there are no impacts or risks to marine biodiversity, marine ecosystems, human health or the allowable uses of the sea

PARTICULAR TARGETS

- **B.1** To adopt and implement the necessary measures so that the introduction of substances or energy into the marine environment does not produce significant negative effects on marine ecosystems or the goods and services they provide
- **B.2** To adopt and implement the necessary measures to ensure that concentration of contaminants is at levels that do not produce pollution effects
- **B.3** To improve scientific knowledge of cause-effects and impacts in relation to the introduction of substances or energy in the marine environment

B PARTICULAR TARGETS

B.1 To adopt and implement the necessary measures so that the introduction of substances or energy into the marine environment does not produce significant negative effects on marine ecosystems or the goods and services they provide

	ENVIRONMENTAL TARGET	SUBDIVISIONS	INDICATOR	STATE	PRESSURE
	To reduce marine litter on coastlines		Moving average in the number of visible litter items within a 5 year-interval		D10
	To reduce the surface of the continental shelf affected by marine litter generated by fishing activities		Percentage of sample grids with marine litter		D10
	To reduce the quantity of marine litter generated by fishing activities in the continental platform		Marine litter density		D10
s	To ensure underwater noise does not produce significant impacts		Registered cases of noise impact on the marine biodiversity		D11
State targets	Not to exceed nutrient assessment values established by OSPAR		Nutrient concentration		D5
	To reach or maintain adequate levels of nutrients		Nutrient levels		D5
	To reduce the quantity of marine litter generated by fishing activities in beaches.		Number of items/ 100 m of beach		D10
	To reduce the growing trend of phosphate concentration		Phosphate concentration		D5
	Not to exceed baseline values of nitrate and phosphate		Nitrate and phosphate concentrations		D5
	Not to exceed baseline values of Chlorophyll a		Chlorophyll a values		D5
ets	To reduce the volume of untreated discharges		Volume of direct and indirect discharges		D5,D8,D9,D10
e targe	To reduce frequency of discharges without adequate treatment from ships and platforms		Frequency of untreated discharges		D8,D9
essure	To reduce the amount of marine litter generated both, by inland and marine sources		Amount of marine litter on coastline and/or continental shelf		D10
Pre	To reduce the growing trend of nutrient concentration		Nutrient concentrations		D5
	Canarian Nor-Atlantic marine subdivision	South-Atlantic marine subdivision	Levantine-Balearic marine subdivision	Estrecho a marine sul	nd Alboran odivision

DESCRIPTORS

B PARTICULAR TARGETS

B.2 To adopt and implement the necessary measures to ensure that concentration of contaminants is at levels that do not produce pollution effects

	ENVIRONMENTAL TARGET	SUBDIVISIONS	INDICATOR	STATE	PRESSURE
	To comply with established contaminant levels in biota		Levels and trends of contaminants in biota		D8
argets	Not to exceed the biological levels of response to contamination in indicator organisms		Levels and trends of biological effects		D8
State t	Not to exceed maximum regulatory levels for contaminants in commercial species		Levels of contaminants in commercial species		D9
	To ensure that contaminant levels in marine sediments are decreasing or remaining stable over time		Levels and trends of contaminants in sediments		D8
Op. Targets	To minimize the impact and magnitude of significant pollution events		Existence of risk based analysis processes		D8

DESCRIPTO

B.3 To improve scientific knowledge of cause-effects and impacts in relation to the introduction of substances or energy into the marine environment

	To promote surveys addressed to quantify the impact of atmospheric deposits	Surveys on atmospheric deposition impacts	D5
tional	To improve the knowledge of pollution and its effectspollution and its effects	Number of surveys and projects on this subject	D8
Opera Targ	To improve the knowledge of marine litter characteristics and impacts	Number of surveys and projects on this subject	D10
	To improve the knowledge of underwater noise	Number of surveys and projects on this subject	D11

DESCRIPTORS: D1: Biodiversity; D2: Non-indigenous species; D3: Commercially exploited species; D4: Food webs; D5: Eutrophication; D6: Sea-floor integrity; D7: Alterations of hydrographical conditions; D8: Contaminants and their effects D9: Contaminants in fish and other seafood; D10: Marine litter; D11: Underwater noise.



SPECIFIC TARGET

To ensure that activities and uses in the marine environment are compatible with the preservation of biodiversity

PARTICULAR TARGETS

- **C.1** To ensure that sectoral policies and administrative actions with an impact on the marine environment are compatible with the achievement or maintenance of good environmental status defined in marine strategies
- **C.2** To adopt and implement the necessary measures so that the human activities do not have a significant impact on the physical conditions of the marine environment
- **C.3** To promote a better knowledge of spanish marine ecosystems and their responses to human activities, as well as better access to the environmental information



C.1 To ensure that sectoral policies and administrative actions with an impact on the marine environment are compatible with the achievement or maintenance of good environmental status defined in marine strategies

	ENVIRONMENTAL TARGET	INDICATOR	STATE	PRESSURE
	To maintain updated the lists of threatened species and their evaluation	Review of threatened species catalogues	D1,D4	D3
	To promote international cooperation for the assessment and monitoring of populations with a wide geographical distribution	Number of international initiatives	D1,D4	D3
gets	To ensure public participation in the Marine Strategy	Number of public participation initiatives and outcome assessments	ALL	
Tar	To achieve coordination between administrations, institutions and marine environmental sectors	Number of initiatives, projects and coordination meetings	ALL	
	To develop management plans for marine recreational activities	Management plans on activities and/or uses	D1,D6	D3
	To ensure appropriate management of fish stocks	Management outcomes and % of fish stocks (assessed, within safe biological limits and at maximum sustainable yield)	D1,D4	D3

DESCRIPTORS

C.2 To adopt and implement the necessary measures so that the human activities do not have a significant impact on the physical conditions of the marine environment

nal	To apply mitigation measures along the coast affected by physical alterations		Habitat conservation status	D1,D4,D6	D7
eratio	To ensure that environmental impact studies take hydrographical conditions into account		% of environmental impact studies in marine projects related to hydrographical alterations		D7
g.	To promote that marine ecosystem depending on river mouths are considered on the establishment of environmental flows		% of river basin management plans which consider marine ecosystem for the establishment of environmental flows		D7
ate gets	To ensure that the area affected by permanent physical alterations is limited		Area affected by permanent physical alterations caused by human activities	D1,D4,D6	D7
Targ	To ensure that localised and permanent physical alterations do not threat habitats		Habitat affection	D1,D4,D6	D7
	Canarian Nor-Atlantic marine subdivision marine subdivision	South-Atlantic marine subdiv	c Evantine-Balearic Evantine subdivision	Estrecho an marine sub	d Alboran division

PARTICULAR TARGETS

C.3 To promote a better knowledge of spanish marine ecosystems and their responses to human activities, as well as better access to the environmental information

	ENVIRONMENTAL TARGET	SUBDIVISIONS	INDICATOR	STATE	PRESSURE
	To improve the access to information on the marine environment		Level of access and quality of the available information on the marine environment	A	.LL
	To increase knowledge of the seabed		% of the area studied within the subdivision	D1,D6	
	To increase the knowledge on habitats		% of habitats studied	D1,D6	
gets	To improve knowledge about the effect of human activities on habitats		Number of studies and scientific projects on these subjects	D1, D6	D8,D10
al targ	To improve the understanding on non-indigenous species		Number of studies and % of the subdivision area covered by regular programs on non-indigenous species	D2	
ratior	To obtain information about commercially fish stocks		Number of fishing stocks in the forthcoming marine strategy	D1,D4	D3
Ope	To improve the understanding on food webs		Existence of proper indicators for food webs assesments	D1,D4	
	To develop a national system for monitoring oceanic variability and to establish an alert system		Existence of a national system for monitoring oceanic variability and an alert system	D1	D7
	To ensure the traceability of commercial species		Percentage of fish products in the 1st and 2nd point of sale whose origin is known		D9
	To improve the quality of information obtained from professional and recreational fishing activities		Availability of useful information	D1, D4	D3

DESCRIPTORS: D1: Biodiversity; D2: Non-indigenous species; D3: Commercially exploited species; D4: Food webs; D5: Eutrophication; D6: Sea-floor integrity; D7: Alterations of hydrographical conditions; D8: Contaminants and their effects D9: Contaminants in fish and other seafood; D10: Marine litter; D11: Underwater noise.

DESCRIPTORS

Environmental Targets by Marine Subdivisions





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