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POST-2020
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SPAIN
CONSERVATION OF MEDITERRANEAN MARINE AND COASTAL BIODIVERSITY BY 2030 AND BEYOND

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Mediterranean Action Plan
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SPAIN
CONSERVATION OF MEDITERRANEAN MARINE AND COASTAL BIODIVERSITY BY 2030 AND BEYOND

Ecological Status, Pressures, Impacts, their Drivers and Priority Response Fields

POST-2020
SAP BIO

Strategic Action Programme
for the **Conservation** of **Biodiversity**
and **Sustainable Management**
of **Natural Resources**
in the **Mediterranean Region**

List of Acronyms

ABNJ	Areas Beyond National Jurisdiction
ACCOBAMS	Agreement for on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
CBD	Convention on Biological Diversity
CEEEI	Spanisg Catal.ogue of Exotic and Invasive Species
CEPESCA	Confederación Española de Pesca (Spanish Fishing Confederation)
CFP	Common Fisheries Policy
COP	Conference of Parties
CSIC	Consejo Superior de Investigaciones Científicas
EBSA	Ecological and Biological Significance Area (from CBD)
EC	European Commission
EcAp	Ecosystem Approach of the UNEP/MAP
EIONET	European Environment Information and Observation Network
EU	European Union
EFFM	European Fund for Fisheries and Maritime affairs
FAD	Fish Aggregating Device
FB	Fundación Biodiversidad, MITECO, Spain
FAO	Food and Agriculture Organisation of the United Nations
FRA	Fisheries Restricted Area designated by the GFCM
GFCM	General Fisheries Commission for the Mediterranean
HAB	Harmful Algal Blooms
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICZM	Integrated Coastal Zone Management
IEO	Instituto Español de Oceanografía
IEPNB	Spanish Inventory of Natural Heritage and Biodiversity
IEEM	Spanish Inventory of Marine Species
IEHM	Spanish Inventory of Marine Habitats
IIEB	Iniciativa Española Empresa y Biodiversidad
IUCN	International Union for Conservation of Nature
IMAP	Integrated Monitoring ans assessment programme of the Mediterranean Sea and Coast and related assessment criteria (UNEP/MAP)
IMO	International Maritime Organisation
LIC	Lugar de Interés Comunitario (for Natura 2000; SCI in English)
MAP	Mediterranean Action Plan
MAPA	Ministry of Agriculture, Fisheries and Food, of Spain
MEDPAN	Mediterranean MPA managers network
MPA	Marine protected area
MSFD	Marine Strategy Framework Directive (EU)
NAP	National Action Plan
NGO	Non Governmental Organisation
OAPN	Organismo Autónomo de Parques Nacionales
OECD	Organisation for Economic Cooperation and Development
OECM	Other Effective Conservation Measures
OSPAR	Convention for Protection of the Marine Environment North-East Atlantic
PEPNB	Plan Estratégico Patrimonio Natural. y la Biodiversidad 2011-2017
QSR	Quality Status Report 2017
RAC/SPA	Regional Activity Centre for Specially Protected Areas
RAMPE	National Marine MPA Network of Spain

SAC	Special Areas for Conservation (Natura 2000; ZEPA in Spanish)
SCI	Sites of Community Interest (Natura 2000; LIC in Spanish)
SEPRONA	Nature Protection Service of the Civil Guard, Ministry of the Interior
SAP/BIO	Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region
SCI	Sites of Community Interest (for Natura 2000, LIC in Spanish)
SDG	United Nations Agenda 2030 Sustainable Development Goals
SPA	Special Protection Area (ZEPA for birds, under Natura 2000)
SPAMI	Specially Protected Area of Mediterranean Importance
SPNHB	Strategic Plan for Natural Heritage and Biodiversity (PEPNB)
UNCLOS	The United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund For Nature
ZEPA	Zonas de Especial Protección para la Aves (SPA)

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Executive Summary

During the period 2010-2020 there has been a significant progress in the state of knowledge of marine biodiversity in Spain, estimated at 55%, rising to 61% if we refer exclusively to the priority conservation components. It is documented through the Ministerial Report on the Law on the Natural Heritage and Bioversity (2018), the extensive Spanish Inventories on marine species, on Exotic and Invasive species (over 200 spp listed), and on over 500 habitats in the Mediterranean waters. We also drew information from the MSFD National Assessment reports (2012 and 2019), and the reports to the CBD (2019), ACCOBAMS (2019), the Barcelona Convention (QSR 2017), The UNEP/MAP EcAp's Quality Status Report (2017), OECD (2015), plus the contribution from over 20 NGOs specialized in marine biodiversity, and an extensive list of scientific papers

Some conclusions can be drawn from all this research efforts, however, always considering the serious limitations of a general knowledge delay about marine ecology. Many marine research projects are still developing methodologies, while others offer preliminary diagnosis on partial or local aspects of marine ecology, biodiversity, and its complex relations to bio-geographical diversity and human uses. The situation is still hampered by the fact that the extensive marine waters in Spain (aprox. 257.951 Km2 jurisdictional waters in the Mediterranean Sea) hold the highest diversity in the Medterranean. Researchers also underline the existence of marked year-to-year fluctuations so the historical data series, around 10 years old, may be too short to conclude about trends.

The draft report was reviewed by UNEP SPA/RAC, the Spanish Ministry MITECO, and a number of Spanish marine experts, and discussed during an on-line workshop on October 6th, 2020.

Species inventories: the work is mostly completed, as compiled in the extense and detailed Spanish Inventories of: Natural Heritage and Biodiversity (IEPNB); Marine Species (IEEM; updated by experts in May 2020); Marine Habitats (IEHM); and the Spanish Catalogue of Exotic and Invasive Species (CEEEI).

Information on marine species, including invasive species: The distribution and relative abundance of most of the common and protected marine species is described in the IEEM. The invasive macrophyte algae species group is expanding, being particularly disturbing in the Strait environments the alga ***Rugulopteryx okamurae***; also the blue crab (***Callinectes sapidus***) and the spider crab (***Percnon gibbesi***). Working groups on particular Invasive Alien Species were set by the Ministry to promote coordination with Autonomous governments; a campaign to eliminate Invasive Alien Species is also promoted by the Spanish Federation of Municipalities and Provinces.

Information on marine habitats: The Spanish Inventory of Marine Habitats includes the standard list of over 500 types of marine habitats in the Spanish Mediterranean waters, gradually described together with their hierarchical classification, and their spatial distribution. Descriptive sheets are been developed for each of the most characteristic or singular habitats. The distribution and cartography of the main habitats coverage and resolution are in many cases limited, their structure and ecological functions are not always known. As for today, the habitats are mainly monitored by the IEO in the declared SCIs and SACs, as well as by other institutions under regional goverments..

Monitoring: The IMAP (Integrated monitoring and assessment programme of the Mediterranean sea and coast and related assessment criteria of UNEP/MAP) is complied with through a large number of national programmes, among them the Monitoring Programs in the framework of the Marine Strategy. Through these programs, the Ministry for the Ecological Transition tries to boost coherence among the MSFD criteria with IMAP Common Indicators In this sense, the EcAp coordination group of the UNEP/MAP and its thematic Correspondence Groups on IMAP Implementation (CORMONs) are carrying out a very important work for the integration of monitoring efforts.

The IEPNB Indicator System is being developed, but not yet completed. The mid-term report on the application of measures for the Marine Strategies shows that 84 of the new measures are already underway, of which 64 are fully implemented. It is worth noting the positive assessment of the European Commission on the assessment of the environmental status of the marine environment by Spain, being the best rated country in the Mediterranean.

Protected areas: Spain's protected marine area has continued to grow in coverage and representativity, particularly in 2018 with the extension of the Cabrera National Park and the establishment of the SPAMI Cetacean Migration Corridor. Marine protected areas now cover 28,8% of our Mediterranean waters. A Declaration from the Council of Ministries (January 2020) commits to protect the 30% of marine waters by 2030.

Institutional capacity: The legal and institutional background for marine conservation in Spain's Mediterranean waters is reasonably complete, and complying with the provisions in the Barcelona Convention. Perhaps the most remarkable point is complementarity between different actors at the National level, particularly 5 Ministries in charge of Environment (MITECO), Fisheries (MAPA), Science (IEO and CSIC on marine research), Economy (through Industry), and the enforcement of marine regulations (SEPRONA and the Maritime Service of the Guardia Civil, Ministry of the Interior). Also, the five Autonomous Communities and 2 Autonomous Cities riberine to the Mediterranean Sea have their own environment, fisheries, and marine enforcement institutions. All these institutions coordinate and hold shared activities, for example the Marine Reserves, the Master Plan for the National MPA network (RAMPE), or the centres for wildlife and the stranding of cetaceans. Over 30 Universities and specialized marine NGOs are collaborating in the study of marine biodiversity. However, the institutional capacity should be strengthened with more human and financial resources, especially in the MITECO headquarters where only 5 civil servants have to deal with the present commitments, all of which are expected to grow in the future, and the human capacity in marine research centres to face the growing monitoring needs and commitments.

Participation of the economic sectors and the public: The integration of biodiversity conservation objectives in other sectorial policies (rural development, agriculture, forestry, fishing, tourism, hydrology) is one of the goals of the Strategic Plan (SPNHB). Also, a Nature and Biodiversity Tourism Sector Plan is under preparation. The Ministry (MITECO) develops together with the IEO, the Spanish Fishing Confederation (CEPESCA), and specialized NGOs the INTEMARES Project (2017-2024), the broadest marine conservation Project in Europe (49.8 million €). Being strongly participative, it has resulted in an enormous wealth of information on fundamental topics to be applied in planning and management processes, but most importantly, has gained a strong legitimacy and trust among the main actors in the conservation and management of the marine natural resources.

Transboundary issues:

We may underline the close coordination with other EU countries under the Marine Strategy Framework Directive, which recalls the Member States to coordinate through the Conventions on regional seas.

Spain and France also collaborate for the best management of the cetacean corridor. Besides, Spain agreed, together with France, Italy and Monaco, to carry out an assessment on the maritime traffic pressure over cetaceans, and might, if the conclusions suggest so, propose to the IMO the establishment of a Particularly Sensitive Sea Area (PSSA) in the northwest Mediterranean area.

Collaboration with other non-EU Mediterranean countries is facilitated through the active participation of Spain through the Barcelona Convention, and on fisheries and stock assessment within the GFCM, and tuna with ICCAT.

There are specific conservation strategies such as for the Balearic Shearwater (***Puffinus mauretanicus***), marine turtles and kelp forests triggering coordination meetings with other countries such as France, Portugal and the UK.

Critical impacts and effects on marine and coastal biodiversity

Angiosperms: Four autoctonous species (***Zostera marina, Zostera noltii, Posidonia oceanica*** and ***Cymodocea nodosa***) are considered in clear regression, except in specific and protected areas. The situation of ***Zostera marina*** is particularly critical, having in the past 3-4 years entered a deep regression leading to its almost complete disappearance, probably due to illegal trawling. Regeneration activities for this species are under way. The general trends in marine angiosperm meadows, their impacts from invasive species, waste, trawling, mooring, pollution, and sand extraction, will be assessed in the Atlas for marine meadows of Spain deemed for 2021; regarding ***Posidonia*** meadows, these to date deemed in a good general status in Andalucia. In the Balearic islands, which holds the 50% of all the Posidonia coverage in Spain (650 Km^2), up to 6 Km^2 of Posidonia meadows are estimated lost every year due to water pollution and mooring; the habitat has been strongly protected through a specific Decree (27/07/2018) in the Balearic islands.

Invertebrates: the status of ***Patella ferruginea*** is critical given the intensive recollection of the bigger sized individuals and the low recruitment rates. ***Pinna nobilis*** has suffered an unprecedented mortality since 2016 due to the parasitic protozoon ***Haplosporidium pinnae***, of which only a few populations remain free. Crustaceans under serious threat are the spider crab (***Maja squinado***), today under a reintroduction project, or ***Aristaeomorpha foliácea*** of which only seldom, isolated individuals are captured. The red shrimp (***Aristeus antennatus***) is also overexploited.

Vertebrates: On cetaceans, after 61 scientific papers (2011-2018) and monitoring over 5 million long-line hooks, only 56 accidental captures and 15 stranding events have been registered. Ship-strikes are a special threat regarding sperm whales along the Balearic waters and the Gibraltar Strait. The whale-watching activity is regulated by months by a Royal Decree of 2007; critical areas for the killer whales were designated in the Strait and Gulf of Cadiz, from which other cetaceans can benefit, as in these areas all active systems for underwater or underground exploration, and whale watching activities are banned. The Regional governments in Andalucia, Baleares, Catalonia, Murcia, and Valencia, have established stranding centres following strict protocols established by experts, which in a short time will be coordinated through a national stranding network.

Regarding marine birds, the information has improved sharply but is still fragmented. The worrying situation of the Balearic Shearwater (*P.mauretanicus*) with a 14% annual decline, and low adult survival (0.81) predicts the species may disappear in about 60 years. Audouin's Gull populations are also decreasing. Main causes of these populations decline are the bycatch, and to a lesser extent, the invasive predators in colonies..

Economic activities: Only one of the 23 stocks (4%) remains in a good status, while other 12 stocks (52%) are either in unknown or uncertain status. Control of the fishing activity was strengthened through the implementation of the electronic logbook system, and a fisheries training plan was carried out to reduce mortality from accidental catch of sea turtles and seabirds. The Spanish fleet is progressively incorporating scientific observer programs on board. Also, Guidelines for the Sustainable Development of Mediterranean Aquaculture have been prepared through an agreement between IUCN and the General Secretariat for Fisheries of Spain. Tourism and recreational activities also pose problems to biodiversity, particularly through coastal infrastuctures, vessel mooring, and recreational fisheries.

At this point **the main needs** related to marine conservation may be:

- Enforcement in MPAs needs to be strengthened, mostly through effective complementarity and coordination of all related authorities (Defence, Interior, Transportation, Fisheries, Environment), through the adoption of new remote technologies, and easing sanction and juridical procedures.
- The recently and widely expanded Natura 2000 marine Network in Spain faces several challenges, mainly to conclude the development of participated management plans, to guarantee the effective protection and management of the sites,and to consolidate integrated governance. The implementation of participatory processes is a solid methodology but very time-consuming for area officials.
- A sharp increase is needed in the declaration of strictly no-take/no-entry marine protected zones (today only a 0.019% of the Spanish Mediterranean waters).

The National MPA Network of Spain (RAMPE) needs to be implemented through its Master Plan, ensuring complementarity and coordination, optimizing resources and information sharing.

- There are serious shortages on human resources to cope with the growing demand of marine conservation. Only 6 biodiversity officers in the Ministry headquarters, need to follow all aspects related to marine biodiversity, habitats, and protected areas, for all the national and international commitments. The national authorities need to evaluate all plans, programs or projects in protected areas under state competences, as well as processing of the authorizations of all the activities subject to regulation, and the design and application of a sanctioning procedure that, today, has not yet been articulated. Also the human capacity in marine research centres needs to be strengthened to face the growing monitoring needs and commitments.

Related to marine biodiversity:

- Cartography needs to extend into many other unexplored areas and in some cases, particularly on coastal hábitats, its resolution improved,
- Follow-up programmes for benthic habitats are needed to evaluate their structure, functions and trends.
- The national network following stranded cetaceans, needs to be strengthened with human resources and financial support.
- The development of a strategy to reduce accidental catches of seabirds in Spanish fisheries, and the conservation plans and strategies for *Pinna*, turtles, shearwaters, shags, and cetaceans should be concluded by 2022.
- For invasive species, the abundance and trends of different species, particularly invasive algae such as ***Rugulopteryx okamurae***, and the blue crab ***Callinectes sapidus***, remains to be determined. The creation, coordination and follow-up of Working Groups on exotic and invasive species, with the Autonomous Governments and advisory groups, is being acomplished.

Other:

- In coastal areas, the impact of recreational activities needs to be controlled and mitigated, including recreational and illegal fisheries.
- Capacity building, specifically for marine conservation objectives, targeting managers and field technicians, local environmental, fisheries, and enforcement authorities, needs to be strengthened. We also need further training in contracting and processing agreements**,** in sanctioning procedures, and legal support.
- Financial resource mobilisation, stronger financial means, are needed given the weak means, both human or material, for the existing and ever growing demands of marine conservation.
- Cartographycal methodologies should be harmonized with other Mediterranean countries

1.

Information consulted

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The list of documents consulted is in **Annex 3,** including the most relevant international documents as recommended by SPA/RAC.

About the **quality and comprehensiveness of available information documents:**

The main sources of information have been the Spanish Ministerial Report on the Law on the Natural Heritage and Biodiversity (MITECO 2018), the Spanish Inventory of Natural Heritage and Biodiversity (IEPNB), the extensive and updated Spanish Inventories on marine species (IEEM) and hábitats (IEHM) and the Spanish Catalogue of Exotic and Invasive Species (CEEEI). The most recent and analytic assessments were found in the second cycle National AssessmentEvaluation Reports to the EU Marine Strategy MSFD (MITECO 2019) for the Strait and Alborán and for the rest of the Spanish Mediterranean waters (Levantino-Balear demarcation). These documents are the core sources to this report. It is important to note that for the development of the Marine Strategies Spain has been taken into account the coordination and coherence among the criteria of the MSFD and the Common Inicators of IMAP (Integrated monitoring and assessment programme of the Mediterranean sea and coast and related assessment criteria (UNEP/MAP).

Other relevant information was drawn from the Sixth Report of Spain to the CBD (2019), and to the 7th MOP of ACCOBAMS (2019). Also the National Report to the Barcelona Convention (2014-2015) provided information, mostly on the institutional and legal background. The contribution from over 20 NGOs specialized in the conservation of marine biodiversity, plus an extensive list of scientific papers, complete a comprehensive view of this complex issue.

However, as compared to terrestrial research, we must consider the general delay of knowledge in marine ecology. Many marine research projects are still developing methodologies, while others offer preliminary diagnosis on partial or local aspects of marine ecology, biodiversity, and about its complex relations to geographic diversity and to human uses. Researchers also underline the existence of marked year-to-year fluctuations in the Mediterranean oceanographic conditions, so the historic data series, around 10 years old, may be too short to conclude about some any robust trends. As a result, and as recognized in the Spanish Assessment Evaluation Report to the EU Marine Strategies (MITECO 2019), the marine biodiversity status can not be accurately assessed throughout, on strict scientific terms, given the insufficient information on many of the detailed indicators related to species, marine bottom habitats, trophic network, water quality, and pollution issues, in such an extensive marine territory. However, we can report considerable advancement on all these fields.

2.

Marine and coastal ecosystem status including their species

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2.1. General Biological characteristics

a) Notes on the oceanographic background

The extraordinary geomorphological, oceanographic and biogeographic heterogeneity present in the Spain Spanish jurisdictional waters, translates into a great diversity in the marine environment, which treasures the greatest marine biological diversity in Europe.

Most of the marine environmental data in the mediterranean waters of Spain are collected over 2 different marine sub-regions (legally called "demarcations"):

- The Estrecho-Alboran marine demarcation between southern Spain and Morocco inthe Mediterranean waters East from the Gibraltar Strait to the Cabo de Gata; and
- The Levantino-Balear marine demarcation, along the Eastern coasts of Spain, from Cabo de Gata to the border with France, including the Balearic islands.

In this section we need to treat them separately, given the marked differences in the physical and biological character of both demarcations.

The **Alboran Sea**: has three different water masses:

- Atlantic Surface Water, circulating East in a depth range of 0 to 150-200 m, with temperature values between 9 °C and 16 °C and salinities from 36.2 ‰ to 36.6 ‰.
- Intermediate Mediterranean Water, flowing West between 200 and 700 m depth, it presents decreasing salinities from east to west and exceeds 38 ‰ in the Alboran Sea and temperatures around 13.2 °C. It has an oxygenation of 4.2 ml l -1.
- Western deep Mediterranean water. It circulates below 1,000 m depth, presenting salinity values of 38.4 ‰, temperature of 12.7 °C, and oxygenation of 4.2 ml l -1 (Millot, 1987).

The upwelling events are very important since they induce high productivity in the westernmost part of the Alboran Sea, throughout most of the year, as reflected in the high concentrations of chlorophyll found in this area (García - Górriz and Carr, 2001).

The **Levantino-Balear** marine demarcation, between the imaginary line with 128º orientation from the Cabo de Gata meridian to the border with France, basically the Eastern Spanish coast and the Balearic islands, includes the Formentera depression 1000 m deep, the wide Menorca channel only 100 m deep, and the Émile Baudot submarine cliffs down to 2500 m deep, plus a platform with the island of Cabrera (6.418 Km^2) and the submarine mountains Monte Ausias Marc and Monte dels Oliva, with a 513 Km^2 volcanic field.

The water column, with a marked seasonal stratification during the summer, mixes during the fall until it reaches "quasi-homogeneity" during the winter, at which time the temperature varies from 13 °C at the bottom to 14 °C from the surface. The salinities of the surface waters oscillate throughout the year between 37 and 37.5 ‰ in the Algerian basin, due to the presence of Atlantic Surface Water, with values between 38 and 38.2 38 in the north of the Balearic Islands.

2.2 Biodiversity

According to the last Report on the State of Natural Heritage and Biodiversity (2016), the state of knowledge is of 55%, rising to 61% if we refer exclusively to the priority conservation components (Report from Spain to the CBD 2019). Overall, 54 species of invertebrates, 44 of fish, 3 reptiles, 36 birds, 9 mammals, 3 vascular plants and 6 algae, are protected in the Spanish Mediterranean waters.

2.2.1. Description of water column Biological communities

The Spanish Mediterranean waters are the first in the basin to receive surface waters from the Atlantic—which is richer than the Mediterranean—with practically the same characteristics of temperature and salinity as in the Gulf of Cádiz. The Alborán Sea is one of the places in the Mediterranean where higher primary production rates can be found. Average production values range between 70 and 120 g/cm^3 (Camiñas 2008), with a period of maximum production in winter and spring. As a result of high primary productivity, bacterial degradation of organic matter provides intense nutrient regeneration. The highest concentrations of nutrients were observed in spring (mean values: 2.54 µM NO3-, 0.21 µM PO4 3-, 1.55 µM Si (OH) 4) and the lowest in summer (mean values: 0.54 µM NO3-, 0.13 µM PO4 3-, 0.75 µM Si (OH) 4).

The most coastal water bodies in the Spanish Eastern coasts are characterized by the existence of a phytoplankton bloom during which the planktonic biomass can even double, while the waters furthest from the coast lack this bloom. If these data are compared with the average values of the Mediterranean, the remarkable relative productivity of these waters is verified: during the blooms values of 1 mg m^3 Chl are reached, while the average of the global maximums for the entire Mediterranean do not exceed 0.28 mg m^3 Chl. The existence of a winter bloom is also confirmed, its average value would reach 0.5 mg m^3 Chl, but locally can exceed 3 mg m^3 Chl. There is also a notable gradient related to proximity to the coast, so that the most coastal areas would be the most productive, particularly at the end of spring after the main water input from coastal sources.

Phytoplankton:

Nutrient-rich water from the north Atlantic joins with favourable conditions for phytoplankton (high fluorescence, low turbidity). Nutrients are also borne by the eddy induced by upwelling. Circulation controls the input of nutrients and phytoplankton biomass observed on the surface during the phases in which there is no upwelling (end of spring, summer and early autumn). The presence of Atlantic over Mediterranean waters allows for high diversity and the subsistence of species that become increasingly rare towards the east. Unlike in the rest of the Mediterranean, only a few populations present greater density and plankton biomass, particularly the copepod ***Paracalanus parvus*** (Camiñas 2008) recently described as a species complex including ***P. parvus, P. indicus*** and ***P. quasimodo*** (Kasapidis *et al.* 2018), all of them found in northern Alboran Sea (Yebra *et al.* 2019).

According to Mercado *et al.* (2005), the abundance of phytoplankton (200 ml^{-1} cells) in Alboran is high compared to the values described for adjacent areas, and its interannual variability is more significant than its seasonal variability. Thus, in times of high nutrient concentrations, phytoplankton communities dominated by diatoms and small flagellates have been observed, while diatoms are displaced by coccolithophores in times of greater stability in concentrations. The areas with the highest concentration are located in the eastern basin and to the SE and NE of the Strait of Gibraltar. For their part, the areas especially poor in phytoplankton are located in the areas of convergence of surface waters, identified in the south-western and south-eastern sectors of the basin. This highlights a difference in phytoplankton abundance between the northern and parts of the **Alboran Sea.**

The phytoplankton community of the Levantino-Balear marine Demarcation is dominated by diatoms, which account for 55% of the diversity with 143 species, followed by dinoflagellates, with 28% and 63 taxa, and coccolithophorids, with 14% and 33 taxa. The groups represented by a smaller number of species were ***Chrysophyceae*** with 6 (2.5%) and ***Eustigmatophyceae*** and ***Euglenophyceae*** both with 1 (0.4%).

Zooplankton, and singularities existing in the described area with respect to other Mediterranean ones:

During the warmer years, with a greater presence of southern waters, the abundance of zooplankton clearly decreased, finding an inverse relationship between temperature and the most abundant zooplankton groups, such as copepods, appendicularians and siphonophores (Fernández de Puelles *et al.,* 2007). The cold years show greater zooplankton abundance, when the colder, saltier northern Mediterranean waters occupy the area. In general, the zooplankton is very diverse, as corresponds to an oligotrophic zone in these temperate-warm latitudes, but it seems to have a rapid and synchronous response to the hydrographic changes in the zone closely linked to large-scale processes that occur in the Atlantic. The interannual fluctuations in the zooplankton communities are related to indices of a larger scale than the regional one (Fernández de Puelles *et al.*, 2007). In some cases, these fluctuations have been attributed to the effect of climatic indices such as the NAO (North Atlantic Oscillation) index, observing that the largest amounts of zooplankton in the area and especially of its most abundant groups such as copepods, appendicularians, or cladocerans were correlated with the NAO (Fernández de Puelles and Molinero, 2007).

Atlantic and Mediterranean zooplankton species coexist in the Alboran Sea, which added to the high primary production in the area, produces a very high zooplankton biomass and presents among the highest zooplankton production rates of the entire Mediterranean Sea (Yebra *et al.* 2017).

For the larvae of different mesopelagic species (whose adults live off the shelf, in deep waters) north of the 36ºN parallel, those belonging to arctic-boreal species, such as ***Benthosema glaciale*** dominate. As do in the south those of temperate-subtropical nature, such as ***Ceratoscopelus maderensis***. In the northern coastal zone, fish larvae of different taxonomic groups (myctophids, sparids, gobids, callyonimids, blenids and botids) were present throughout the seasonal cycle considered (spring, summer and autumn).

In summary, the seasonal pattern of zooplankton and each of its groups in the sea surface layer (0-100m), is defined as an oligotrophic zone. Two relevant peaks are distinguished in late winter and spring, which seem to follow phytoplankton when the cold, salty northern waters of the western Mediterranean reach the area.

2.2.2. Information on invertebrate bottom fauna, macro-algae and angiosperms including species composition, biomass and annual./seasonal. variability

a) Macro-algae and angiosperms:

In the Alboran Sea, the four autochthonous species of angiosperms ***Zostera marina, Zostera noltii, Posidonia oceanica*** and ***Cymodocea nodosa***, are all in clear regression, except in specific areas such as the Cabo de Gata Natural Park. For some of these species, the Alboran Sea represents its distribution limit, as in the case of ***Zostera marina***, which only appears in some very specific areas of the Mediterranean (Robles, 2010). It is also the limit for the Mediterranean endemic ***Posidonia oceanica*** towards the west, the meadows being very threatened at this point.

In the North Alboran Sea, 8,955 hectares of ***Posidonia oceanica*** have been listed, being Almería, with 8,239 ha, the province with the largest extension. There are 65 locations, 45 in Almería, 9 in Granada and 11 in Málaga. In the Balearic Islands, there is 50% of Posidonia coverage in Spain, a total of 650 km^2 that have been protected with a specific Decree (07/27/2018) from the Autonomous Government of the islands.

Throughout the Spanish Mediterranean the deep meadows of ***C. nodosa*** are found between 15 and 35 m deep on sandy bottoms in areas where, due to strong hydrodynamics or bottom instability, the ***P. oceanica*** meadows cannot develop. In the Alborán Sea there are 1,530 hectares of ***Cymodocea nodosa*** meadow, 99.7% of them in Almería and the rest in Granada, although it has been observed in 59 localities (10 in Malaga, 13 in Cádiz, 7 in Granada and 28 in Almería). In Malaga and Granada it is in frank regression, the main threat to the species being illegal trawling.

In 2009 the alarming situation of ***Zostera marina*** in Andalusia was confirmed. The species had not been observed in Malaga since 2006; in Granada the presence of a loose bush in Velilla was confirmed; in Almería it is found as testimonial in the Cala de En Medio. The situation of ***Zostera marina*** in Andalusia is Critical This phanerogam, typical of cold Atlantic waters, had highly diverse meadows in the Alboran Sea, mainly in Malaga, Granada and Almería (Rueda *et al.* 2009). In the past 3-4 years the species has entered a deep regression that has led to its almost complete disappearance, probably due to illegal trawling in Spanish waters, since it occurs in Morocco with similar environmental conditions but without illegal trawling. Although being an Atlantic species, the progressive warming of the waters does not favor its maintenance in Andalusia.

Zostera noltii has an infralittoral distribution and generally appears forming mixed prairies with ***Cymodocea nodosa***, mostly in various parts of the coast of Almeria; it was sighted in Motril (Granada) en 2008, but not observed again.

The Laminaria forests, due to the great diversity of forms, are present in specific habitats and microhabitats, and displaying some decline/regresion. Four species of laminariales can be found in the Alboran Sea: ***Laminaria ochroleuca, Phyllariopsis purpurancens, Phyllariopsis brevipes*** and ***Saccorhiza polyschides***; of which ***L. ochroleuca*** is included in Annex I of the Berne Convention as a strictly protected flora species.

b) Typical bottom communities of the Levantino-Balear marine demarcation can be summarized as:

- Supralitoral rock community are permanently emerged areas, subject to strong insolation and low humidity. Different species of mollusks (eg ***Littorina punctata, L. neritoides, Patella rustica*** or ***P. ferruginea***) and crustaceans (eg ***Pachigrapsus marmoratus*** or ***Chthamalus depressus***) appear in this area.
- Photophilic community of the infralittoral rock of beaten areas: appears in the first centimeters below sea level, in areas with high irradiation and exposed to high hydrodynamics. Among the algae we can mention ***Cystoseira mediterranea, Hypnea musciformis*** and ***Lithophyllum*** incrustans. In terms of fauna, sponges (such as ***Clathrina coriacea***), cnidarians (such as ***Aiptasia diaphana***), mollusks (such as ***Mytilus galloprovincialis*** or ***Dendropoma lebeche (petreum***), and crustaceans (such as ***Eriphia verrucosa*** or ***Balanus perforatus***) are present in these communities.
- Community of infralitoral sciaphilic algae from beaten areas: develop in areas of low irradiation and exposed to waves. Algae such as ***Cladophora pellucida*** and ***Valonia utricularis*** appear in these communities. In terms of fauna, there are cnidarians like ***Sertularella ellisi*** or ***Clavularia ochracea***, mollusks like ***Lithophaga lithophaga*** and ***M. galloprovincialis***, crustaceans like ***B. perforatus***, bryozoa like ***Turbicellepora magnicostata*** and sea squirts like ***Pseudodistoma cyrnusense***.
- Infralittoral pebble community: The typical fauna is made up of some cnidarians (eg ***Anemonia sulcata***), and sea squirts (***Botryllus schlosseri***), but mobile fauna (mollusks, crustaceans, polychaetes, echinoderms and some species of fish) are the most dominant. When these communities suffer the effects of contamination, species of algae and polychaetes replace the fauna described above.
- Coastal detrital bottom community: are soft substrate bottoms, with sediments of mixed, terrigenous and biogenic origin. These extend from the end of the Posidonia meadows, in biocenosis of well-calibrated sands, either of precoraligen or coralligen, to depths of 100 m or more.
- Community of coralline or circalittoral sciaphilic algae in calm areas: The dominant organisms and main builders are calcareous algae, both in species and in biomass. The well-developed coralligen can present a stratification, with an elevated or erect stratum, formed by large gorgonians and erect sponges, an intermediate stratum, formed by large colonies of bryozoans, sponges, sea squirts, hydrozoans and polychaetes, and a lower stratum formed above all by calcareous algae, bryozoans, sponges and motherworms. Mobile fauna also find refuge and food in this forest. There are more than 15 species of typical coralline algae, being very numerous the species of sponges and cnidarians present. Groups such as bryozoans, ascidians, molluscs, crustaceans, echinoderms, polychaetes, flatworms and euryurids are also well represented, and the fauna is very abundant.
- The bottoms of Maërl are formed by calcareous algae, living and dead, mainly by free and articulated rhodophytes of the families Corallinaceae and Peyssonneliaceae, the most characteristic species being ***Phymatolithon calcareum*** and ***Lithotammion coralloides***. Due to its biological characteristics (low growth rate, calcareous nature, quality water requirements ...) these are communities very sensitive to anthropogenic pressures.

2.2.3. Marine invertebrates:

- Its diversity is enormous, accounting for 96% of marine species, among which 28% are endemic species. The main groups are porifera, cnidarians, ctenophores, flatworms, nemertines, mollusks, crustaceans, annelids and echinoderms.

- **Cnidarians**: ***Astroides calycularis*** is in regression throughout the Mediterranean, among other causes due to the destruction of their habitat, pollution, and their accidental or intentional capture. It is present in all the Andalusian provinces of the Alboran Sea, best represented in the provinces of Granada and Cádiz in 28 and 27 sites, respectively. The best populations are found in Granada, with the highest average densities in almost all depth ranges and coverage ranges around 90% in almost all localities. An average density of the species was estimated by depth ranges and by province. The data indicates that in the range of 0-5 m, Cádiz and Granada show the highest values, with more than 28,000 m2 polyps. The values obtained in Almería and Málaga, for this depth range, are similar and have more than 24,000 m^2 polyps. In the depth range of 5 - 7.5 m, Granada has the highest density, with values greater than 28,000 m^2 polyps, followed by Málaga and Cádiz with similar values, greater than 24,000 m^2 polyps and Almería with more than 22,000 m^2 polyps. In the bathymetric range of 10-15 m Granada has density values of more than 28,000 m^2 polyps and Cádiz of 26,500 m2 polyps. As for the coverage of the substrate containing colonies, the values range between 80% and 95% in all the provinces, being somewhat lower in Malaga.

- **Crustaceans:** During the last decades, a total of 115 species of decapod crustaceans have been identified on the seabed between 50 and 800 m deep in the Western Mediterranean. Of these species, 108 correspond to decapod crustaceans: 12 ***Dendrobranchiata***, 26 ***Caridea***, 1 ***Stenopoidea***, 1 ***Erionacidea***, 4 ***Palinuridea***, 2 ***Nephropidea***, 2 ***Thalissinedea***, 19 ***Anomura*** and 42 ***Brachyura***, and in addition, 4 stomatopods that form a separate order.

- **Echinoderms:** Between the species of sea urchins found in the Mediterranean, the most abundant are: the black sea urchin (***Arbacia lixula***), the purple sea urchin (***Sphaerechinus granularis***) and the common sea urchin (***Paracentrotus lividus***). In the Balearic Islands these species are not commercially exploited, except for the holothuria ***Stichopus regalis***. ***Centrostephanus longispinus*** is a very rare echinoid in shallow bottoms and more abundant in the circalittoral, although it does not live in all types of substrates and conditions. It appears on the Andalusian coast on rocky bottoms with high sedimentation, in infralittoral and shallow circalittoral (in Granada it appears shallower, linked to cave areas or as a migrator from deep nearby environments). It is found in all provinces but its populations are highly fragmented.

Molluscs:

- The endemic gastropod ***Dendropoma lebeche*** in Almería occupies and estimate coastline of 50 linear km (Rodalquilar with 1,100 m^2 of platform). The highest densities are also observed in Almería, with values of 160,000 ind m^2. The maximum and minimum density of adult individuals by m^2 varies greatly depending on the formations (isolated specimens, crusts or reefs). The populations do not suffer great threats and the values of density of individuals remain stable.

- Medium and small specimens of ***Charonia lampas*** predominate, so we suspect of selective extraction of large specimens by divers. According to Templado *et al.* (2004), on the island of Alborán their populations are maintained thanks to their isolation from the continent, the lowest fishing preassure and the absence of contamination and spills.

- ***Patella ferruginea*** best populations are in the islands of Chafarinas and of Alborán; and it can be found up to Cabo de Gata, with populations even in anthropized environments such as ports and levees in Melilla. Although recruitment occurs frequently in some localities, there is no population with an age structure that ensures the viability of the species in the area.

- Regarding ***Pinna nobilis***, an endemic and protected mollusk, a strong regression is reported. Formerly classified as "vulnerable", since 2016 has undergone an unprecedented Mass Mortality Event, its populations affected by the presence of a new species of protozoan parasite, ***Haplosporidium pinnae***, which parasitizes the connective tissue and the digestive gland causing a high inflammatory response and severe organic dysfunction (Catanese *et al.*, 2018). It is important to note that still two populations resist being affected by the pathogen: the Mar Menor coastal lagoon and the Ebro Delta. The population of ***Pinna nobilis*** in the Mar Menor coastal lagoon suffered a crisis in 2016 eutrophic losing part of the population of ***Pinna nobilis*** in the lagoon. Recent samplings indicate the existence of several hundreds of individuals where the pathogen seems to be absent (Catanese *et al.*, 2018); in 2020, after the Dana storm drastically reduced salinity in the lagoon, the pathogen was recorded, but it again dissapeared after the salinity levels recovered (Vázquez *et al.* 2017, and ***pers. comm***.). On the other hand, in the Ebro Delta there are two population centers in the Bahía dels Alfacs and the Bahía del Fangar with thousands of individuals. However, a massive mortality outbreak caused by the pathogen was detected in July 2018 in the outermost part of the population of the Banya Peninsula, and in 2020 the storm Gloria caused an almost complete mortality to the ***Pinna*** populations in Bahía del Fangar (Vázquez *et al.* 2017, and ***pers.comm***.).

2.2.4. Information on vertebrates other than fish

The following information is from 2019, and has been synthesized from the second cycle Assessment to the MSFD recently presented by Spain (MITECO 2019), from the six-year reports to the Habitats and Birds Directives, and from the National Report of Spain to the MOP-7 of ACCOBAMS.

a) Marine mammals:

There are 14 species present, of which 9 resident species can be considered common: the fin whale (***Balaenoptera physalus***); the sperm whale (***Physeter macrocephalus***), the Cuvier's beaked whale (***Ziphius cavirostris***), the common dolphin (***Delphinus delphis***), the striped dolphin (***Stenella coeruleoalba***), the bottlenose dolphin (***Tursiops truncatus***), the Risso's Dolphin (***Grampus griseus***) the pilot whale (***Globicephala melas***) and the killer whale (***Orcinus orca***); 4 are considered occasional: the humpback (***Megaptera novaeangliae***), the minke whale (***Balaenoptera acutorostrata***), the northern bottlenose whale (***Hyperoodon ampullatus***) and the false killer whale (***Pseudorca crassidens***); and one is rare, the porpoise (***Phocoena phocoena***).

- Common bottlenose Dolphin (***Tursiops truncatus***): in the Autonomous Community of Valencia, the latest published data indicates an abundance of 1,333 bottlenose, with an approximate range of 739-2,407 (Gómez de Segura *et al.*, 2006), and in the Balearic Islands (2004) Forcada and collaborators made a joint abundance estimate of 7,654 individuals.

- Striped Dolphin (***Stenella coeruleoalba***): Gómez de Segura *et al.*, (2006) estimated an abundance of 15,778 dolphins listed in the waters of the Spanish central Mediterranean (from the Ebro delta, in Tarragona, to Águilas, in Murcia). It is the most frequent and abundant cetacean species in the Mediterranean Sea and its presence is well documented.

- Risso's Dolphin (***Grampus griseus***): a gregarious species, whose annual survival rate for juveniles is 0.87 and for adults 0.95. There are no population estimates throughout the western Mediterranean, although the densities obtained in different studies are low compared to other odontocetes. From calculations by capture-mark-recapture by photo-identification in the Pelagos Sanctuary, it was estimated that the population was 130 individuals (95% CI = 90-230). There is no recent study on the demographic characteristics of the pilot whale population in the western Mediterranean.

- Cuvier's beaked Whale (***Ziphius cavirostris***) is considered "Common" in Alboran Sea In the rest of the Mediterranean Spanish waters it would be "Occasional". Very little is known about the reproductive parameters of the Cuvier's calf. It does not seem to be seasonality in reproduction. Little is also known about demographics.

- Sperm Whale (***Physeter macrocephalus***): The deep-water shelf and slope areas of the eastern Balearic archipelago contain a high density of sperm whales. Both social units and mature males are consistently observed here, being considered a reproductive area. During the monitoring programs, a new reference abundance value of 442 individuals was included for waters of the Balearic Islands. The population seems to remain stable, or even increase slightly in its strength, the large confidence intervals of the estimates, prevent being categorical in this regard.

- Fin Whale (***Balaenoptera physalus***) is present along the Spanish Migration Corridor of cetaceans. It is usually located both near and far from the coast, but more frequently far from it. Diet consists mainly of invertebrates (krill), some schooling fishes, and occasionally small cephalopods (Aguilar and García-Vernet, 2018). It is the only mysticete commonly observed in the western Mediterranean, whose population is considered an isolated subpopulation from the rest of the populations of the North Atlantic. Due to its pelagic customs in practically all aspects of its life, most of its biological and ecological characteristics are unknown.

- Blue Whale (***Balaenoptera musculus***) is not a common species, occasional individuals enter the Mediterranean Sea during their transoceanic migrations.

- Long-finned Pilot Whale (***Globicephala melas***) - is usually located far from the coast in submarine canyons, although occasionally observed near the coast. Their main food are cephalopods, although sometimes they also feed on small pelagic fish.

- Killer whale (***Orcinus orca***): In some areas its presence may be seasonal, generally associated with the migratory movements of its prey. It avoids seas with little productivity like the Mediterranean, but it is relatively frequent in the Strait and the Alboran Sea, where it is a common sight during spring and summer in the Strait. Its wide distribution range and its complex movement patterns make it extremely difficult to study the population sizes of this cetacean.

b) Marine birds:

In the Estrecho-Alboran marine demarcation there are few nesting seabirds, but some important sites, especially for Audouin's gull. Other breeders are Scopoli's and Cory's shearwaters (Chafarinas islands), as well as gulls and terns in coastal wetlands from Andalucia (***L. genei, L. melanocephal.us, S. hirundo, S. albifrons***). The Balearic Shearwater and the European storm-petrel use these waters to feed, and all seabirds moving between the Atlantic and the Mediterranean use it as migration corridor.

Regarding demographic parameters, the Strait-Alboran area is marked by the absence of data. In this case, only partial Audouin gull data are available.

In the Levantino-Balear marine demarcation there are 14 nesting species of marine birds, including Shearwaters, Petrels, Cormorants, Gulls and Terns. The Spanish Institute of Oceanography (IEO) has consolidated the collection of bird data in its observer program over the surface longline fleet, demersal longline and set nets (García-Barcelona *et al.*, 2016), and other organizations, including the University of Barcelona and SEO / BirdLife have developed various projects to evaluate the problem and seek solutions where necessary. Studies relate for the first time the incidence of by-catches in fishing gears over the demography of some species, identifying as particularly sensitive the shearwaters and the shag cormorant (***Phalacrocorax aristotelis***), particularly by the University of Girona, and to a lesser extent the Audouin's gull.

- Scopoli's Shearwater (***Cal.onectris diomedea***) where the few demographic data available for the period of this report in the Alboran Sea[1] suggest a declining trend, despite no monitoring has been conducted in recent years. In the rest of the Spanish Mediterranean waters, information is fragmentary, with two populations followed reasonably well for years: Pantaleu (Mallorca) and Columbretes, and to a lesser extent Illa de l'Aire (Menorca), where birds show intermediate features between Balearic and Yelkouan, suggesting historical hybridization. Demographic analyses show that the population of Pantaleu remains almost stable, but this stability is only explained by high immigration, since if it were isolated, it would experience a 10% annual decline (Sanz-Aguilar *et al.* 2016). These authors postulate that the situation should be generalizable to the population of the western Mediterranean, which would indicate that the species is not in good condition.

- Balearic Shearwater (***Puffinus mauretanicus***): a recent demographic study in the Levantino-Balear marine demarcation' breeding colonies estimates the annual decline of the species at 14%, and related accidental catches to 45% of adult mortality, becoming the most important threat and they predict 60 years of average extinction time (Genovart *et al.*, 2016). For this reason, the Critically Endangered category was recently ratified for the Balearic shearwater. In the Levantino-Balear marine demarcation, Arcos *et al.* (2017) estimate populations as still uncertain,

1 https://journal.s.plos.org/plosone/article?id=10.1371/journal.pone.0004826#s4

with contrasting figures resulting from colony estimates (about 3,000 breeding pairs) and counts at sea (over 25,000 individuals, that would account for a breeding population of ~ 7,000 pairs assuming demographic equilibrium). Whatever the case, the population trend is negative, with a low adult survival rate (0.81). If the current scenario does not change, a recent population viability model predicts that the species would disappear in about 61 years. Main threats are those that cause direct adult mortality, mainly fishing bycatch at sea and predation by introduced species on land (on colonies). Particular concern deserves fishing bycatch, in light of new evidence that demonstrate high mortality by small-scale demersal longlines in the Iberian Mediterranean, with several hundreds of birds involved every year during the late spring. Colony monitoring has been very limited in the past, but new projects allowed new colonies to be covered recently, and it is desirable to continue these efforts as to better understand the demography of the species, including potential inter-colony differences. Work in the colonies has also included some recent rat eradication campaigns. On this regard, a recent study by CSIC, SEO/BirdLife, IRBI & AZTI, allowed to assess the demographic trend of a new colony, in W Ibiza (Sa Conillera-Es Bosc), using data collected from 2011 to 2019. The outcome was exactly equal to that of Mallorca: 81% adult survival, 14% annual decline. This provides support to the idea that the decline is extended to all the population. Moreover, the studied colonies had no predators, suggesting that the problem is at sea (by-catch) and that other colonies with predators might be in even worse condition.

- European Storm Petrel (***Hydrobates pelagicus***): It is worth mentioning that this is a very secretive species, the breeding population difficult to count and the population size unclear. The trend observed in the two main colonies studied is very different, being clearly positive in Benidorm and negative in Espartar, which is the main colony for the species; in Benidorm, actions have been taken to improve the population, such as the elimination of yellow-legged gulls (***Larus michahellis***) specialized in preying on Petrels, or the placement of nest boxes, making it difficult to know with certainty if the observed population increase reflects the situation of the species or the result of good management. In the case of Espartar, the time series is still too short to establish clear trends. In other colonies the species appears relatively stable, although monitoring is less intensive.

- Audouin's Gull (***Larus audouinii***): it is in an almost good status in the Alboran Sea where data of a fairly high quality are available, with a reproductive success of 0.32, higher than the 0.25 established at the threshold of the EU Marine Strategies. However, in recent years a clear decline has been noticed (J.Arcos, SEO/Birdlife com. pers.). In the Levantino-Balear demarcation the situation of the Audouin's gull seems worrying, with a continued decline since 2008, which sets off alarm precisely shortly after this species has been discontinued from the IUCN list of threatened species (Genovart *et al.*, 2018). The great mobility of the species forces to monitor all the colonies simultaneously to corroborate the intuited trend. A fairly marked decline is observed, representing a difference of close to 8,000 pairs between the maximum and minimum years. It is not ruled out that these couples have not disappeared, but have moved to another place outside the demarcation and even in Spain, which makes the analysis considerably more difficult. It is interesting to add that it is a relatively recent colonizer of the Iberian Mediterranean coast, with the first reproduction data in the Ebro delta in 1981.

- Sandwich Tern (***Sterna sandvicensis***): the data is of fairly good quality, but due to the typical oscillations of the species, we need to work with long and statistical time series to minimize the large dispersion of the sample. In this sense, there are currently 3 data periods (6 years), but only the last one with annual censuses, so little information is still available. It is important to note that in 2012 the absence of data was considered as years in which the species did not reproduce. In 2018 we can conclude that the species does not seem to be experiencing a decline, but it remains stable or even increases slightly.

- Common Tern (***Sterna hirundo***), as for the Sandwich Tern, it is risky to assess since it is a very fluctuating species and with very mobile colonies. However, given the total number of breeding pairs throughout the period we can consider it may be in a good condition.

- Little Tern (***Sternula albifrons***), for which the 2018 data is based on censuses of the main colonies on an annual basis. In general, the species seems more or less stable, but it is considered that not enough information is yet available to conclude if it is in a good conservation status, or not.

c) Marine Turtles

- Loggerhead Turtle (***Caretta caretta***): is the only species that can be considered habitually present. There is no nesting in the Alboran Sea (other than one nest recorded in Málaga, Aug.2020; Mireia Aguilera, UVIC.Cat, ***pers.comm***), it is basically a juvenile transit area. Only 30% comes from the Mediterranean, with a prevalence of specimens from the Northeast Atlantic. The specimens from the Algerian basin are not neritic but oceanic (they preferably feed on gelatinous zooplankton). In the rest of the Spanish Mediterranean Sea, the Northeast Atlantic contributes less than 4% of the Loggerhead Turtles. Genetic analyses on hatchlings of Spanish nests have shown the contribution of both Atlantic and Mediterranean parents to these clutches, so they are not the remains, due to tourism development, of a diminished past population. The specimens of the Iberian coast are mainly neritic (they consume fish and benthic invertebrates. In Spanish waters, used as a preparation area in their migration to the coastal areas of the western Atlantic, individuals rarely reach adult sizes, their presence is close to the coast is scarce and most of the individuals have a mainly oceanic life with an eminently pelagic diet based on a great variety of small-sized marine animals and low movement speed. It is frequently associated with fishing boats, feeding on discards, baits or entangled animals. Most of the Spanish Mediterranean loggerhead turtles are juveniles under 70 cm in curved carapace length, both neritic and oceanic. They feed preferably on gelatinous zooplankton (Revelles *et al.*, 2007; Cardona 2012), while those of neritic habits consume fish and benthic invertebrates (Cardona *et al.*, 2012). It is discussed whether there has been an increase in nesting events on the Spanish Mediterranean coasts during the last 15 years, as described in Italy, or a simple increase in detection (Carreras *et al.*, 2018). In any case, the rate is only 1.1 nest or nesting attempt per year since 1992, even slightly growing to up 5 successful nests in 2019, and 11 nests in 2020, which shows an increasing trend however still with little demographic relevance. The main cause of anthropogenic mortality of the loggerhead turtle in the Levantine-Balearic marine demarcation is bycatch in surface longlines, followed by bycatch by trawling.

- Leatherback Turtle ***(Dermochelys coriacea)***: is the second most frequently encountered turtle species in our Mediterranean waters, but is not known to breed.
- Green Turtle (***Chelonia mydas***): the presence of this species in Spanish waters is rare, with individuals found occasionally in the Alboran Sea, Balearic Islands, Levante and Catalonia. To date, there is no nesting record on the Spanish coasts. In the Mediterranean, nesting activity is limited to the eastern basin, where the green turtle nests on the beaches of Turkey, Lebanon, Syria, Israel, Egypt and Cyprus, and sporadically on some Greek islands in the Aegean Sea. The closest nesting populations to the Iberian Peninsula are the Guinea Bissau colony and the Bioko colony in Equatorial Guinea.

There is no model allowing to estimate the carrying capacity for any of the three turtle species considered, making it impossible to give a threshold value for their population density. In any case, in the early 2000s, there were 2.6 km2 turtles on the Iberian continental shelf.

2.2.5. Inventory of the temporal occurrence, abundance and spatial distribution of non-indigenous, including invasive, species

The main threats are biofouling, the ballast waters, the invasive species driven by plastics and garbage, aquaculture and species related to water exchanges with aquaria (MITECO 2019, Levantino-Balear, p.11). Other than marine species, it should be noticed that terrestrial mammals introduced on islands (rats, cats,...) have a severe impact on seabirds.

a) In the **Estrecho-Alboran** marine demarcation, more new invasive species are detected, the largest increase corresponding to algae, which represent a real threat to our waters. The status of species already established could not be evaluated.

The main non-native species detected on the Estrecho-Alboran marine demarcation are the following:

- ***Percnon gibbesi***: Known as spider crab, a crustacean considered an invader in the Balearic Islands. It is present in different parts of the Mediterranean Spanish coast, also observed in Cartagena, the Mar Menor, and in the province of Almería, which is the westernmost event in the Mediterranean.
- ***Oculina patagonica***: This coral is usually found on harbor breakwaters and observed in practically all locations with a natural rocky substrate. The largest populations in Alborán are found in Almería throughout the coastline, in port areas and in almost all rocky substrates; in Malaga in the ports of Caleta de Vélez, Málaga and Benalmádena; and in natural hard substrates of Benalmádena and Punta Chullera. In Granada in six locations, always small colonies.
- ***Asparagopsis armata*** lives in shallow photophilic rocky habitats, both in communities of ***Cystoseira spp***. and ***Posidonia oceanica***. It is present in the four Andalusian provinces with coast in the Alboran Sea. It appears at the bottom of western Almería and in the bay of Almería, at depths of up to 7 m. In Granada it is extended almost continuously along all the rocky substrates of the coast. In Malaga it is found along the entire coastline, up to 5-7 m deep
- ***Asparagopsis taxiformis*** It is found mainly in rocky substrates and / or ***Posidonia oceanica*** meadows It effectively competes with ***Asparagopsis armata***, relegating it to the first few meters of the water column. In Almería it is distributed throughout the coastline, although it is very abundant in the east, on rocky bottoms and / or ***Posidonia Oceanica*** meadows, between 5 and 25 m. In Granada it is on the entire coastline, from 3-20 m. In Malaga it is abundant around the Natural Place of the Cliffs of Maro-Cerro Gordo and absent until Punta de la Chullera, between 3-14 m. The scarcity of rocky bottoms in Malaga may be limiting the presence of the genus ***Asparagopsis*** in the province.
- ***Caulerpa racemosa***: In 2008 it was observed for the first time in Andalusia, on the Terreros Island (SPAMI Levante Almeriense). The affected area had more than 3 ha. In 2009 a new invaded locality was located about 6 km south of Terreros Island. It has been observed in more than one linear kilometer, between 20 and 30 m deep, invading the circalittoral floor, while on Terreros Island it had only been observed in the infralitoral, between 13 and 17 m.
- ***Acanthurus monroviae*** has an Atlantic distribution , it was cited in southern Spain in 1987 (Golani *et al.*, 2002) and currently appears to be seen with some frequency on the Granada coast of Almuñécar (Sánchez Tocino, 2004).
- ***Fistularia commersonii*** has one only registration in the Alboran Sea, back in 2007, when several specimens were seen in the Berenguel Bay (Almuñécar, Granada, Spain) and in the Herradura Bay (Almuñécar, Granada, Spain) (Sánchez Tocino *et al.*, 2007).
- ***Rugulopterix okamurae***, of asiatic origin, has turned a real problem for net fishing gears and because of its accumulation in beaches in areas close to the Strait (Muñoz *et al.* 2019). By 2020 it has quickly spred into other areas, such as Cabo de Gata.

b) In the **Levantino-Balear** marine demarcation, by 2012 it was concluded that neither the good environmental status of the demarcation as a whole, nor the survival of the different types of habitats it includes, seemed to be under serious threat due to the presence of invasive species (MITECO 2012, Levantine-Balearic). In 2018 we found more evidence on the impact, distribution and extent of some invasive species, but we still can not assess specific impacts around their effects.

Here the group of invasive macrophyte algae species is expanding, although the abundance and trend in the different follow-ups by species remain to be determined. The available information establishes a network of sampling points in the Catalan-Balearic zone. The colonization of sessile filtering organisms in ports and marinas such as the sea squirt ***Aplidium accarense*** or the colonization by algae such as ***Halimeda incrasata*** is also detected more locally.

Following the general tendency of tropicalization in the Mediterranean waters, there is an expansion towards the north of species more typical of the warmer areas of the South, and the introduction of species in the area from the eastern Mediterranean. On the other hand, there are also processes of expansion of more typical species of the Northeast Atlantic, such as the case of the ***Callinectes sapidus*** crab whose expansion in the demarcation seems to be accelerating in recent years; in some areas the species begins to be very abundant and is sold in fish markets (Mar Menor and Catalonia).

A complete list of exotic/invasive in the Mediterranean waters of Spain is attached in **Annex 1**, including 121 species for the Estrecho-Alborán, and 125 species for the Levantino-Balear marine subdivision.

2.3. Information on species of commercial. interest for fishing (fish, mollusk and shellfish)

In the second cycle MSFD Spanish assessment report (MITECO 2019) a detailed review was carried out regarding the main biological groups in the marine trophic chain, particularly fish (big and small), and several mollusc species.

Among the pelagic fish present in the Alboran Sea, the species belonging to the families of the Clupeids, the Engulids, the Scommbrids, the Tunas and the Carángidae stand out; almost all of them with commercial interest. The main representatives of the Clupeidae family in the Alboran Sea are sardines (***Sardina pilchardus***), alacha (***Sardinella aurita***) and sprat (***Clupea spratus***). Other species of abundant small pelagic fish in the Alboran Sea are the silver fish (***Argentina sphyraena***), the vogue (***Boops boops***), the needle (***Belone belone***), the flying fish (***Exonautes rondeleti***), the horse mackerel (***Trachurus trachurus*** and ***T. mediterraneus***) and several species corresponding to the family Myctophidae, especially ***Benthosema glacial.e*** and ***Myctophum punctatum***. Depending on the season, tuna such as mackerel (***Scomber scomber***) and melva (***Auxis thazard***) are also abundant. Another tuna present is bluefin tuna (***Thunnus thynnus***), which carries out annual migrations between the Atlantic and the Mediterranean, with adults entering the Mediterranean in spring and summer and juveniles and adults leaving for the Atlantic in autumn. Swordfish (***Xiphias gladius***), barracuda (***Sphyraena sphyraena***) and sunfish (***Mola mola***) are also abundant.

Among the sharks that can be found in the Alboran Sea are the blue shark (***Galeus glaucus***), the shortfin mako (***Lamna cornubica***), the red shark (***Scyliorhinus canicula***) and the dogfish (***Gal.eorhinus Galeus***), among others. On some occasions also the white shark (***Carcharodon carcharias***), the horned or hammerhead shark (***Sphyrna lewini***) and the basking shark (***Cetorhynus maximus***) can be sighted.

As for benthic and demersal fish, in the areas closest to the coast, with depths less than 50 m deep, it is common to find species such as the vulture (***Boops boops***), the bream (***Diplodus sargus***), the gorazo (***Pagellus bogaraveo***), sea bass (***Dicentrarchus labrax***), sole (***Solea vulgaris*** and others), turbot (***Scophthalamus rhombus***) and red mullet (***Mullus surmuletus, Mullus barbatus***). As we move away from the coast and as depth increases, diversity decreases. Without leaving the continental shelf and above 50 m depth, the most common species are: gobies (***Gobius spp***.), Conger eels (***Conger conger***), hake (***Merluccius merluccius***), red mullet, flatfish (type sole, rooster, monkfish ...), horse mackerel (***Trachurus spp***.), Bream and pageles (***Pagellus spp***.). When leaving the continental shelf, on the upper part of the slope between 200 m and 500 m deep, rays (***Raja spp***.), Blue sharks (***Prionace glauca***), conger eels, monkfish, hake, blue whiting (***Micromesistius poutassou***) appear, brótolas (***Phycis blennoides***), peluas (***Arnoglossus laterna***) and pout (***Trisopterus minutus***). And in the lower part of the slope, from the 500 m depth, there are stingrays, conger eels, monkfish, blue whiting, hake, broccoli, pelotas, bream and redfish.

Considering the fish community as a whole, 6 species of elasmobranch and 6 of osteictium represent more than 85% of the total biomass. Of these, the species ***M. merluccius*** is clearly the one that contributes the most biomass to the community as a whole and seems decisive. Among the fish considered large, the most important are ***Scyliorhinus canicula*** (47%), ***Raja clavata*** (27%), ***Galeus melastomus*** (9%) and ***Zeus faber*** (8%), representing

91% of the total biomass. Of these, ***R. clavata*** is the only species that shows a significant increase throughout the historical series ($p = 0.03$). The significant decrease in LFI throughout the historical series that our results show to be more related to an increase in the biomass of small fish than to a decrease in the biomass of large fish. In particular, this index is remarkably influenced by the annual oscillations in biomass of the ***Glossanodon leioglossus*** species.

To protect threatened elasmobranchs, among other species, some marine protected areas, particularly the tracts between the existing MPAs in Tabarca and Cabo de Palos, and the western submarine canyons in the Gulf of Leon, may need to be enlarged following recent research (Gimenez *et al.* 2019).

As for small fish, a great inter-annual variability can be observed, with 5 species contributing the highest biomass to the total. The high interannual variability is one of the most marked characteristics of these species, extraordinarily conditioning the final value of the indicators. It can be seen how the total biomass of small fish is largely determined by the biomass of ***Glossanodon leioglossus*** (36%), and to a lesser extent by ***Mullus surmuletus*** (11%) and ***Micromessistius poutassou*** (7%). These three species represent approximately 55% of the total biomass of small fish.

In the Levantino-Balear demarcation, the pelagic community detected through the use of scientific echo sounders on the continental shelf is composed of nine coastal pelagic species, mainly small and medium pelagic species, such as sardines, anchovies, Mediterranean horse mackerel (***Trachurus mediterraneus***), the vogue (***Boops boops***), alacha (***Sardinella aurita***), tonino (***Scomber colias***), Atlantic horse mackerel (***Trachurus trachurus***), blue horse mackerel (***Trachurus picturatus***) and mackerel (***Scomber scombrus***). All of them form banks or characteristic groups during the day, near the bottom, and at night they carry out a vertical migration towards the surface, dispersing, mixing with each other and forming layers. Other species, such as blue whiting (***Micromesistius poutassou***) or lantern fish (***Lampanyctus crocodilus, Myctophum punctatum, Maurolicus muelleri*** and ***Ceratoscopelus maderensis***), frequently appear at the end of the continental shelf or at the beginning of the slope, forming very characteristic and dense layers or aggregations.

In the area between Cape Palos and Cape Creus, bottom trawling campaigns have recorded 386 species, of which fish are the group with the highest representation (153), followed by crustaceans (91), mollusks. (69), echinoderms (35) and others (38). The identified associations are dominated by fish, mostly on the shelf, where cephalopods such as ***A. media*** and ***I. coindetii***, and crustaceans such as ***L. depurator*** and ***D. arrosor*** also appear. A higher number of crustacean species, such as ***P. heterocarpus, M. tuberculatus*** and ***N. norvegicus***, begin to appear on the upper slope, being in the middle slope where crustaceans have an important contribution to the structure of the association, both in number of species as abundance.

In general, the contribution of chondrichthyans to established associations is very low, except for the case of ***S. canicula*** and ***Etmopterus spinax*** in the deepest stratum. The highest average abundances are in ***Micromesistius poutass Glossanodon leioglosus, Gadiculus argenteus, Spicara maena*** and ***Capros aper*** among fish, ***Plesionika heterocarpus, Pasiphaea sivado*** and ***Aristeus antennatus*** among crustaceans, and ***Al..loteuthis media*** among cephalopods. ***Merluccius merluccius*** (90%) is the species that appears in the most samples, followed by ***Boops boops, Capros aper*** and ***Mullus***

barbatus with 60% frequency. The cephalopods ***Illex coindetii, Al..loteuthis media*** and ***Eledone cirrhosa***, as well as the crustacean ***Liocarcinus depurator*** and the echinoderm ***Astropecten irregularis***, also exceed 60% frequency of occurrence.

In the Balearic Islands, some differences are observed with the associations of the Peninsula. Of a total of 352 species listed in fishing prospecting campaigns carried out in the Balearic Islands (153 fish, 55 crustaceans, 59 molluscs, 29 echinoderms and 56 species belonging to other taxonomic groups), 115 corresponded to commercial demersal species (83 fish, 19 decapod crustaceans, 12 cephalopod molluscs and 1 holothuroid echinoderm).

Anchovy (***Engraulis encrasicolus***) is mainly distributed in the Tramuntana area, especially in the area of the Gulf of Rosas, close to the Gulf of León, and at the mouth of the Ebro river. It is found from the coast at 200 m deep, occupying the entire continental shelf. The sardine (***Sardina pilchardus***), is distributed throughout the Levantino-Balear area, although it is very scarce in the Gulf of Vera, with a more coastal distribution, not exceeding 100-110 m depth. The sardine laying season in the Mediterranean runs between the months of October and May, with peaks of laying in October, December and February, the latter being the most important (Palomera and Olivar, 1996). In the Mediterranean, this species can reach 22.5 cm, although it normally does not exceed 18 cm. On the shallower littoral platform (up to 80-90 m depth), the catches are dominated by red mullet (***Mullus barbatus*** and ***M. surmuletus***), the common octopus (***Octopus vulgaris***) and different species of sparids and scorpids. On the deepest platform (from 100 m to 200 m deep), catches of hake (***Merluccius merluccius***), monkfish (***Lophius spp***.), St. Peter's fish (***Zeus faber***) and white octopus (***Eledone cirrhosa***) are important. The target species on the upper slope are Norway lobster (***Nephrops norvegicus***), White shrimp (***Parapenaeus longirrostris***) and Hake. The fishing on the middle slope (between 500 and 750 m, approximately) has as target species the red shrimp (***Aristeus antennatus***). Fishing in this bathymetric layer produces the least discards, both in species diversity and weight.

2.4. Other

Finally, here we report on the following invertebrates with a fishing interest:

- Squid and Platform Octopuses, respectively: while the biomass index of octopuses has not varied considerably throughout the series with a range of values between ~ 3 and 4 kg / km^2, with a decrease in the year 1999 and an increase in 2000-2001 (7.3 kg • km^2), the squid range remained above 0.4 and 0.5 kg • km2, rising in 2000-2001 (2.3 kg • km^2) and in 2006 (1.2 kg • km^2)
- Squid and Slope octopus: in this case the squid biomass has varied over ~ 0.5 and 0.8 kg / km^2, (currently 1.8 kg • km^2), while for octopuses it has remained almost non-existent over 0.01 kg / km^2 without a clear trend in biomass evolution.
- Gastropods: the biomass index varies considerably from year to year without any clear pattern; the series value range was below 0.2-0.5 kg • km^2, with an increase in 1995 (4.1 kg / km^2) and 1998 (0.6 kg • km^2)

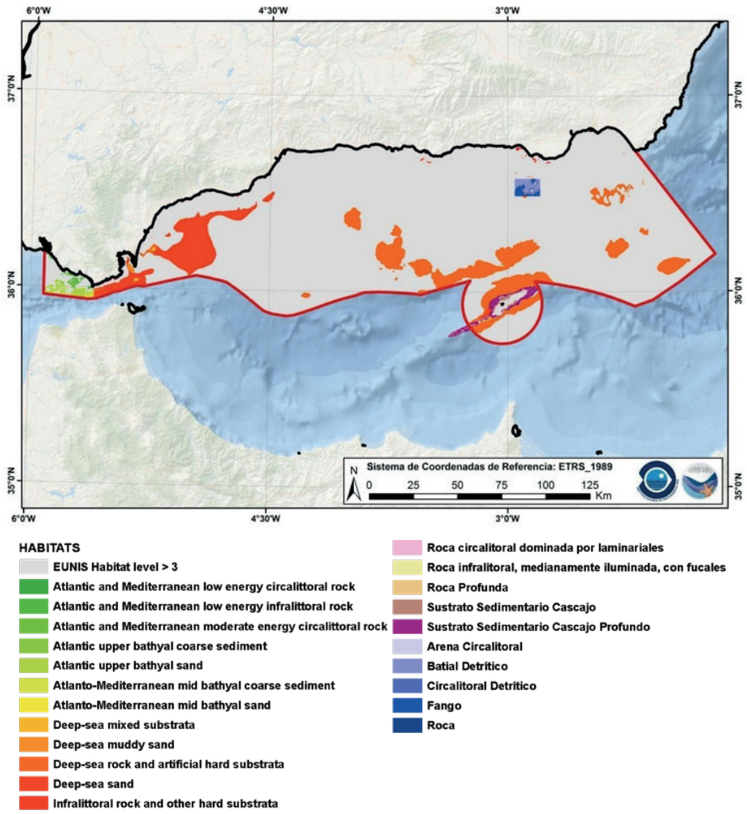
- Bivalve molluscs: the biomass index does not vary considerably from year to year within the low abundance levels. They do not have a clear pattern; the range of values of the series that was between 0.4-1.0 kg / km^2. with a peak of 0.68 kg / km^2 in 1995

2.5. MAIN HABITAT TYPES

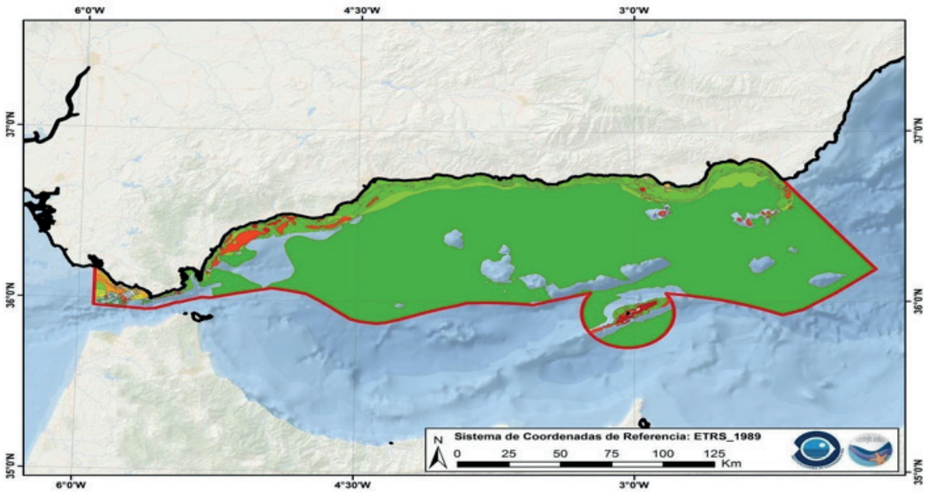
We report on the predominant marine habitats. Benthic habitats are considered in two levels: special habitats (included in conservation Directives, agreements, or of regional interest) and predominant habitats (larger scale habitats, EUNIS 3 equivalence).

The indicators used are: the percentage of area affected by physical loss of the seabed, or due to physical disturbances of the seabed. Due to the lack of habitat distribution data, the spatial extent of each habitat type adversely affected by physical disturbances, and the extent of habitat type loss resulting from anthropogenic pressures, could not be evaluated.

The following map presents the habitat types in the Alborán Sea (EUNIS 3)



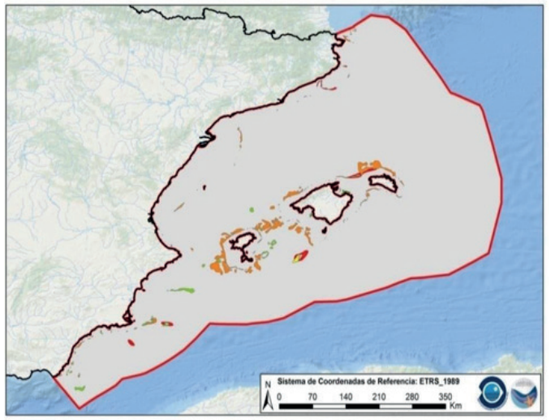
And below, the Alborán Sea *(EUNIS 4-6)*



HABITATS

- EUNIS Habitat levels < 4
- Atlantic upper bathyal rock or other hard substrata
- Mediterranean communities of bathyal muds
- [Posidonia] beds
- Mediterranean communities of shelf-edge detritic bottoms
- Mediterranean biocoenosis of coastal detritic bottoms
- Deep circalittoral mixed sediments
- Mediterranean biocoenosis of coastal terrigenous muds
- Mediterranean biocoenosis of muddy detritic bottoms
- Deep circalittoral mud
- Infralittoral fine mud
- Infralittoral sandy mud
- Deep circalittoral sand
- Circalittoral fine or muddy sand
- Infralittoral fine sands
- Infralittoral muddy sand
- Deep circalittoral coarse sediment
- Circalittoral coarse sediment
- Infralittoral coarse sediment
- Infralittoral coarse sediment
- Faunal communities on deep low energy circalittoral rock
- Faunal communities on deep moderate energy circalittoral rock
- Faunal communities on deep moderate energy circalittoral rock
- Mediterranean coralligenous communities moderately exposed to hydrodynamic action
- Roca batial colmatada de sedimentos con restos de antiguos arrecifes de corales blancos
- Arrecife de corales profundos (Lophelia pertusa, Madrepora oculata)
- Roca circalitoral con coraligeno
- Fondos de maërl / rodolitos
- Pradera de Posidonia oceanica
- Pradera de Posidonia oceanica con Cymodocea nodosa
- Pradera de Posidonia oceanica en regresión
- Roca limpia batial con grandes esponjas hexactinélidas (Asconema setubalense)
- Roca Batial con Asconema y Gorgonias
- Roca batial con corales blancos
- Roca limpia batial con Acanthogorgia hirsuta
- Roca Circalitoral con Gorgonias
- Laminares
- Rodolitos (Maerl)

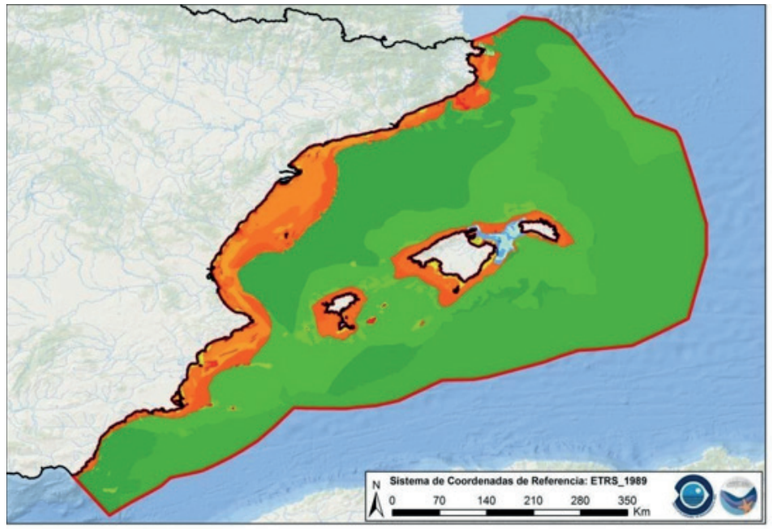
The following map presents the habitat types in the Levantino-Bal.
ear marine demarcation *(EUNIS 3)*:



HABITATS

- EUNIS Habitat levels > 3
- Infralittoral rock and other hard substrata
- Deep-sea rock and artificial hard substrata
- Deep-sea mixed substrata
- Deep-sea sand
- Deep-sea muddy sand

And the Levantino-Balear marine demarcation *(EUNIS 4-6)*



HABITATS

- EUNIS Habitat levels < 4
- Mediterranean communities of bathyal muds
- Communities of abyssal muds
- Facies of sandy muds with Thenea muricata
- Deep-sea muddy sand
- Deep-sea sand
- Deep-sea mixed substrata
- Deep-sea rock and artificial hard substrata
- Posidonia beds
- Cymodocea beds
- Infralittoral coarse sediment
- Infralittoral fine sands
- Infralittoral sandy mud
- Infralittoral fine mud
- Mediterranean biocoenosis of muddy detritic bottoms
- Mediterranean biocoenosis of coastal terrigenous muds
- Mediterranean biocoenosis of coastal detritic bottoms
- Mediterranean communities of shelf-edge detritic bottoms
- Infralittoral rock and other hard substrata
- Mediterranean coralligenous communities moderately exposed to or sheltered from hydrodynamic action
- A4.27: Faunal communities on deep moderate energy circalittoral rock
- Hábitats Golfo de León
- Fondos de Maërl / Rodolitos
- Fondos de Maërl con dominancia de Peyssonnelia
- Fondos detríticos biogenicos con Rodolitos y cascajo
- Fondos detríticos biogenicos con Phyllophora Osmundaria
- Fondos detríticos biogenicos con Laminaria
- Fondos detríticos biogenicos con Halopteris Filicina
- Fondos coraligenos sobre roca o substrato blando
- Coraligeno y roca circalitoral dominada por algas

In 2013, the elaboration of the Master List of Marine Habitats (IEHM) present in Spain was completed with the support and collaboration of scientific experts from different Spanish Public Administrations and institutions. This list offers a response to the divergence of nomenclatures and denominations in areas of reaching a common language that allows managers and technicians to have a tool for the identification and interpretation of marine habitats; as well as an Interpretive Guide to the Spanish Inventory of Marine Habitats.

Continuously, and as a complement to the list, descriptive sheets are written for each of the characteristic or singular marine habitats. It is a very extensive file which can be consulted here: (https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/biodiversidad-marina/habitats-especies-marinos/inventario-espanol-habitats-especies-marinos/fichas-inventario-habitats-marinos.aspx).

The Standard List of Marine Habitats Present in Spain and its hierarchical classification, which lists over 500 types of marine habitats for the Spanish Mediterranean, is found in: https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/Lista%20Patron_Anexo_web_tcm30-162686.pdf

In summary:

III.5. MB2.54. Posidonia oceanica meadows *(EUNIS 030512)*:

- Its dense grasslands can be found from the surface to a variable depth of up to 40 meters deep, depending on the transparency of the water. It can be considered an indicator plant for clean, well-oxygenated and pollution-free waters. It is very sensitive to eutrophication, to most pollutants, and does not tolerate high sedimentation rates either. The most extensive and best preserved meadows on our coasts are found in the Balearic islands and on the Levantine coast. Within these meadows we can distinguish two large habitats or strata: the foliar and the rhizome framework, with very different characteristics. The foliar layer constitutes an ephemeral and relatively unstable habitat (the leaves are continually renewed), subject to continuous movement by hydrodynamics and the browsing action of some species, such as salps or sea urchins. On this stratum a photophilic community of animals fixed to the surface of the leaves is installed, among which are mainly algae, cnidarians, polychaetes, bryozoa and foraminifera. The rhizome stratum is more stable and presents, in turn, greater complexity, being able to reach a considerable thickness and host a large number of ecological niches (different if the meadow is on soft or hard bottoms and by depth). A third community of swimming species that move through the prairie in search of refuge or food can be found, mainly made up of fish (very abundant wrasses, sparids and syntagids) but also various crustaceans, such as small Mysidacea, or some cephalopods, such as cuttlefish (***Sepia officinalis***). One of the most notorious and characteristic species of grasslands is the ***Pinna nobilis***. The meadows have a high primary production. This vegetal contribution can represent a considerable nutritional source for the organisms of the circalittoral floor, or even deeper in the areas where the continental shelf is narrow. Among the species associated with this habitat, the following stand out:

- Invertebrates ***Tricolia speciosa, Smaragdia viridis, Hippolyte spp., Petalifera Petalifera, Ophidiaster ophidianus, Gibbula ardens, Pal.inurus elephas, Pinna nobilis, Rissoa variabilis, Scyllarides latus, Octopus vulgaris, Antennella secundaria, Paracentrotus lividus, Asterina pancerii***.
- Fish: ***Hippocampus ramulosus, Sarpa sal.pa, Syngnathus typhle, Syngnathus acus, Hippocampus hippocampus, Dentex dentex, Sparus aurata***.

III.1. MA6.52. Mediterranean meadows of Zostera noltii (EUNIS 030504)

> *III.1.Sandy mud, sand, gravel and rocks in the euryhal.ine and eurythermal. environment* - and *III.2.3.5. Association with Zostera noltii in superficial muddy sands in protected waters.*

They are usually located in the little exposed intertidal plains, settling on muddy substrates or fine sand enriched with organic matter; they rarely exceed two meters in depth. They create a heterogeneity of habitats that does not normally exist in soft substrates, favoring that many species live here as epiphytes of ***Zostera noltii***, on rhizomes and leaves, or protected between leaves. Many mollusks, decapods, and epibenthic fish lay their eggs or develop their juvenile stages on the prairie. Among the associated species are recorded:

- Invertebrates: ***Loripes lacteus, Corophium volutator, Palaemon serratus, Jujubinus striatus***
- Algae: ***Giraudia sphacelarioides, Enteromorpha sp.***
- Phanerogams: ***Zostera noltii***

III.2.3.4. Phanerogam meadows with rhizome algae *(EUNIS 030513)*.

Formed by phanerogams such as ***Ruppia cirrhosa, Zostera noltii, Cymodocea nodosa, Zostera marina*** and rhizomatous green algae such as ***Caulerpa prolifera*** or ***Caulerpa racemosa var. cylindracea***. They can be found both in coastal lagoons or estuaries, and in open areas. They settle on sandy bottoms, muddy sand and even mud when it comes to the algae of the genus ***Caulerpa***. Within this habitat, the prairies of the green algae ***Caulerpa*** proliferate, which constitute one of the few communities formed by an algae of subtropical origin capable of settling on the sandy bottoms. They are generally found in shallow, warm waters of protected areas, such as semi-enclosed bays and coastal lagoons. Although this community is less diverse and structurally complex than that of phanerogams, the associated fauna is of special interest, since it houses singular animals that feed on it. Prairies of the invasive species ***Caulerpa racemosa*** also occur in this habitat. It often appears accompanying the phanerogams ***Cymodocea nodosa*** or ***Zostera noltii***. The meadows of the phanerogam ***Ruppia cirrhosa*** can form more or less dense lawns, which cover the bottoms of estuaries or coastal lagoons of hypersaline waters. Withstands large changes in temperature and salinity. It is found forming mixed lawns with ***Cymodocea nodosa*** and / or ***Zostera noltii*** in some (canyon) sections of the shallower bottoms of the Mar Menor. Among the common species in this habitat are:

- Invertebrates: ***Bulla striata, Oxynoe olivacea, Jujubinus striatus, Nassarius corniculum, Diogenes pugilator, Corbula gibba, Pandora inaequival.vis, Parvicardium exiguum, Loripes lacteus, Palaemon adspersus, Philocheras monacanthus, Bittium reticulatum, Smaragdia viridis, Rissoa spp., Hippolyte spp***
- Algae: ***Caulerpa prolifera***
- Phanerogams: ***Ruppia cirrhosa, Zostera marina, Cymodocea nodosa, Zostera nolti***

III.2.3. Biocenosis in superficial muddy sands in protected waters (EUNIS 030402)

Habitat characterized by fine, muddy sediments and rich in organic matter. It generally covers from shallow depths, below sandy beaches (0.5m) in the submerged area, to approximately 70m. At a first bathymetric level, in the fringe of the first 3 or 4 meters deep, the superficial fine sands appear subject to the action of the waves. In this type of bottom there are no macrophytes and the dominant species are mainly bivalve molluscs of the families Veneridae, Donacidae and Tellinidae. The gastropod ***Nassarius granum*** is also very characteristic on the coasts of the Iberian Mediterranean. Beneath these shallow well-sorted sand bottoms, where the swell ceases to have a direct effect, very homogeneous sands of terrigenous origin appear with little mud; in the Mediterranean they are called "fine, well-calibrated sands" that occupy large areas between 5 and 20 m deep. The fauna of this type of bottom is mainly made up of mollusks ***(Chamelea gallina, Acanthocardia tuberculata),*** crustaceans ***(Diogenes pugilator, Liocarcinus vernalis)***, echinoderms ***(Ophiura spp.)*** and fish, with the absence of algae and a shortage of suspensivorous organisms. On muddy sand bottoms, in protected areas with little water renewal and preferably in shallow areas, dense grasslands of the green algae ***Caulerpa*** proliferates, with preference for semi-closed bays, coastal lagoons or port areas of the Mediterranean coasts. In these vegetated lagoon environments, the most abundant animal groups are crustaceans and molluscs (gastropods and bivalves).

- Invertebrates: ***Ficopomatus enigmaticus, Nucula nitidosa Turritella communis, Nephtys hombergii, Echinocardium cordatum, Glycera rouxi.***
- Algae: ***Caulerpa prolifera, Ulva sp. , Cladophora sp., Valonia aegagropila, Avrainvillea canariensis*** and ***Penicillus capitatus***.

V.1. MB6.5 Infralittoral mud sediment *(EUNIS 040202)*.

Benthic habitat with a substratum composed predominantly of mud, which is located below the continental shelf, more than 200 meters deep in the seabed. Among the invertebrates the following are recorded:

- Protected: ***Isidella elongata,***
- Non protected: ***Funiculina quadrangularis, Pheronema carpenteri, Thenea muricata, Kophobelemnon stelliferum, Brissopsis lyrifera, Mesothuria intestinalis, Lanice conchilega.***

III.3.2. and IV.2.2. MB3.5. Rodolith/Maërl bottoms, and deep water sponge aggregations *(EUNIS 030405)*.

On sedimentary bottoms, various amounts of detrital materials accumulate, mainly limestone of organic origin. Thus, mixed sediments are formed that extend to depths of approximately 150 m or more. In this habitat we find a large accumulation of loose coral algae, the rhodolith bottoms (maërl), coastal detritic bottoms dominated by leafy algae, detrital bottoms dominated by invertebrates and muddy detrital bottoms, at depths between 30 and 150 m. The main maërl-forming species are ***Phymatolithon calcareum*** and ***Lithothamnion corallioides*** (the former dominates in the better structured bottoms and the latter in the most muddled and disturbed bottoms), although other coralinaceous species and species of the genus ***Peyssonnelia*** are found. In the detritic bottoms dominated by invertebrates there are also some areas with dominated by Sabellid polychaetes, gastropods or ophiuroid aggregations. These areas are important as a breeding refuge for many species of economic interest (fish, cephalopods and bivalves). Various soft-tallow algae, preferably rhodophyceae, and many sessile animals, especially small encrusting sponges, can also be installed on rhodoliths. All this contributes to creating a microcosm with a high diversity of species (more than 1,000 species have been cited in the rhodolith bottoms of the Spanish coasts, about 30% of algae and 70% of animal species). For example, on the island of Alborán the seabed of rodoliths combines with the kelp forests thus giving rise to a very high diversity.

III.6. Hard bottoms and rocks (EUNIS 030103).

Rocky habitat, characteristic of the Mediterranean region, located in the first levels below sea level. Found on sheltered coasts or surrounded by large rocks and / or offshore reefs, which weaken the action of the wind and waves, with moderate sedimentation. In well-lit areas, it is characterized by the presence of algae of the order Fucales (***Cystoseira spp***.) as well as by other species ***Padina pavonica, Dasycladus vermicularis, Acetabularia acetabulum, Halopithys incurva, Digenea simplex, Rytiphlaea tinctoria, Halopteris scoparia***, ***Eunicella cavolini, Eunicella verrucosa, Ellisella paraplexauroides, Corallium rubrum, Paramuricea clavata, Viminella flagellum*** etc. In the poorly lit protected rock, it is the sciaphilous algae, such as ***Peyssonnelia squamaria, Phyllophora crispa, Cladophora prolifera*** or ***Halimeda tuna***, that dominate this habitat.

MB1.52 Invertebrate-dominated Infralittoral rock *(EUNIS 0302022202 and 3030202)*

Rocky habitat of the circalittoral floor characterized by the absence of algae due to a notable decrease in light. The communities that dominate this environment are mainly made up of invertebrates, among which the following stand out: ***Astroides calycularis, Gerardia savaglia, Madrepora oculata, Leptometra celtica, Dendrophyllia cornígera, Phakellia ventilabrum, Swiftia pallida, Caryophyllia smithii, Corynactis viridis.***

IV.3.2. MC1.53 and MB1.56. Semi-dark caves (also in upper levels) *(EUNIS 030202300)*.

Semi-dark caves, permanently submerged, which are located in the extra-leads, vertical walls, cracks or entrances of caves and tunnels of the infralitoral and circalittoral floors, which occur on all types of rocky substrate, are more frequent in the karst or volcanic areas than on harder soils such as granite. This habitat presents a highly diversified population with an almost total covering and with various characteristic facies, such as that of ***Parazoanthus axinellae***, in the most illuminated areas of the entrance, of ***Corallium rubrum*** on the roof, extraplots and dark cracks, of ***Leptopsammia pruvoti***, with ***Agelas oroides*** and ***Spirastrella cunctatrix*** in the extraplots and entrance of the caves, from the polymath ***Polyhaeus muellerae, Caryophyllia inornata*** and ***Hoplangia durotrix*** in the darker areas, or the facies of large bryozoa, such as ***Sertella septentrionalis*** or ***Myriapora truncata***, in the entrance.

V.3.1. ME1.51. Coral biocenosis in deep seas *(EUNIS 040303)*.

Reefs formed by the remains of white corals: the crystal coral (***Lophelia pertusa***) and the white madrepora (***Madrepora oculata***). They are located between 200 and 1,000 meters deep, in escarpments, underwater canyons or vertical walls. These reefs can be found associated with gorgonian gardens and are strongly related to carbonate mounds, seamounts, escarpments, etc. These habitats prefer temperatures between 4ºC and 12ºC, containing a great diversity of anthozoans, sponges, hydrozoans, bryozoans, echinoderms, tunicates, nemertines, polychaetes, crustaceans, mollusks.

Structures produced under gas emissions *(EUNIS 040201)*.

Composed of block, pavement and column structures, originated by the aggregation of sands in a carbonated matrix, product of the microbial oxidation of gas emissions, mainly methane, coming from the decomposition of fossil plant deposits located in depressions of areas with sandy sediment. These crystalline gas hydrate structures form at very high depths, greater than 1,000 m and outside the continental shelf. This habitat also includes the so-called Pockmarks, "holes" or vents that form on muddy bottoms due to the escape of gases that usually appear as rows of subsidence a few meters deep, covering relatively small areas of the seabed at depths between 850 - 4,000 m. These structures formed by gas emissions at such depth, do not have plant communities, and the very specialized fauna is basically made up of invertebrates (hydrozoans, anthozoans, ophiura and gastropods). Nematodes, polychaetes, bivalves and crustaceans are present on the sandy bottoms on the environments of these ecosystems. Microbial mats form the base of the trophic structure around the vent, along with Siboglinids polychaetes as well as Solemyid and Lucinid bivalves. In general, these communities have been poorly studied in the Spanish Mediterranean waters.

2.6. Singular habitats (rather seafloor structures, oceanographic processes and organisms)

With regard to the bathymetry, the deepest zones to the south of the Balearic archipelago go down to almost 3,000 m, where there is one of the sharpest drops: the Émile Baudot escarpment. The configuration of the submarine relief is largely characterised by a narrow continental shelf along the edge of the peninsula, featuring the widening of the Ebro river platform.

Other important characteristics of the topography of the Spanish Mediterranean sea floors are the volcanic submarine mountains located around the Balearic archipelago.

In the Alboran Sea there are major upwellings with the highest primary production rates in the Mediterranean and there are also areas of permanent upwelling close to the southern coasts of the Iberian Peninsula. Alboran Sea is a singular maritime area: it is the entrance and exit to the Mediterranean Sea and the contact region between Africa and Europe. It is an obligatory passing place for numerous migratory animals (land and sea). Within the complex topography of the Alborán Sea, the most outstanding formations on the basin floor are the Alborán Ridge and Alborán Island, two sub-basins linked by channels, submarine canyons, mountains and seamounts, and submarine beds and valleys. Submarine mountains are rich in biodiversity, and canyons have an irreplaceable function, as they transport sediments and organic material from surface waters and the continental shelf to the deep abyssal plains. To a certain extent, canyons act as fertilisers for many ecosystems, both on the canyon walls and at great depths. As for seabed communities, the ecosystem is characterized by the rarity of endemic Mediterranean species and the existence of Atlantic forms that cannot be found in the rest of the Mediterranean. The latter are known as Mediterranean species of Atlantic distribution, which is the case of the order Laminariales (***Laminaria, Saccorhiza*** and ***Desmarestia***). Elsewhere in this Report there are numerous other references to the singularity of the Alborán Sea.

It is worth mentioning that ***Asterina phylactica*** lives generally associated with ***Posidonia oceanica*** and due to its reduced mobility and its type of reproduction, which lacks a pelagic larval phase, it is very sensitive to the regressions of this phanerogam. For the same reasons, its type of distribution is usually contagious, focusing on very specific areas. The best sites on the Andalusian coast are found in Almería, with El Calón being the most important in probably the entire Spanish coast. The laminarial forests formed by ***L. ochroleuca*** and ***S. polyschides*** in the Alboran Sea are the largest on the entire Spanish coast, with the Demarcation of the Strait and Alboran reaching 4 m in height. While species of the genus ***Phyllariopsis*** would form the understory.

2.7. Transboundary issues

In general terms, we need to underline the close coordination with other EU countries under the Marine Strategy Framework Directive, which recalls the Member States to coordinate through the Conventions on regional seas.

Spain and France collaborate for the best management of the cetacean corridor. Besides, Spain agreed, together with France, Italy and Monaco, to carry out an assessment on the maritime traffic pressure over cetaceans, and might, if the conclusions suggest so, propose to the IMO the establishment of a Particularly Sensitive Sea Area (PSSA) in the northwest Mediterranean area

For the Balearic Shearwater (***Puffinus mauretanicus***), a Spanish Conservation Strategy is being updated and the species working group was reactivated; an international WG meeting recently took place in coordination with other countries such as France, Portugal and the UK.

Patella ferruginea is also subject of a Conservation Strategy (MITECO 2008) whose conservation measures include monitoring the populations (monitoring controls and exhaustive censuses) of the national waters; the definition and mapping of critical and sensitive areas in relation to their distribution, as well as preparing specific methodological guides for evaluating the environmental impact on ***P. ferruginea*** and its habitat; drawing up a map of risk areas and promoting the adoption of legislative or regulatory measures. The Strategy recommends collaboration with Morocco to face the control of any activities hampering the water quality in the environments of the Chafarinas islands and the Autonomous Cities of Ceuta and Melilla.

In the area of fishing in international waters, and especially in the tuna sector, a management plan for FADs (Fish Aggregating Devices) and a strategy have been drawn up for the progressive replacement of traditional FADs by others with less impact on associated and non-fishing species (eco-FADs).

In the area of fishing in international waters many initiatives are currently on-going: In demersal species, the implementation of a Management Plan for of blackspot seabream fisheries in the Alboran Sea of the General Fisheries Commission for the Mediterranean (GFCM). Regarding the bluefin tuna fishery, Spain collaborates with the sector to develop advanced techniques to control the fishery, in application of the Bluefin Tuna Recovery Plan of the International Commission for the Conservation of Atlantic Tunas (ICCAT) and it is setting the stage for a multiannual recovery plan for Mediterranean swordfish (Regulation (EU) 2019/1154).

2.8. Identification of the country's marine and coastal biodiversity gaps needed for scientifically sound based conservation

- Biological and socioeconomic indicators need to be identified, validated and developed, to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures.
- In particular, to follow-up the Marine Strategies in the MSFD evolution of species / trophic group diversity, biomass and abundance of functional groups, changes in the indices of functional groups of plankton (life forms), biomass and species composition and distribution spatial zooplankton, changes in the mean biomass of species by trophic level, the proportion of large fish, the reproductive success of seabirds in relation to food availability, the production of phytoplankton and the analysis of ecological networks.
- Research and actions for the conservation of the Balearic Shearwater need be continued and strengthened, in particular through the monitoring programme *MWEES-ESAl..-AV-4_Interaccionpesca*, and sub-programme *MWEES-ESAl..-AV-2_Productividad*. The conservation of this endangered species requires control of predators in breeding colonies; evaluation and reduction of bycatch in longlines and other fishing gears; design and implementation of a monitoring plan that allows demographic estimates; censuses in the breeding colonies and search for potential new breeding sites.
- For Audouin's Gull, due to its great mobility, all colonies need to be monitored simultaneously.
- For demersal fish, an increase in the number of sample grids is needed, together with a new monitoring programme establishing threshold values through gradients of environmental status and of anthropic impacts on the entire fish community.
- For invasive species, the abundance and trends of different species, particularly invasive algae, and the blue crab, remains to be determined. The blue crab is already widely distributed along the Comunidad Valenciana (DGMN-Valencia 2018).
- The benthic habitats identification and cartography have been developed in some areas mostly by the IEO, but follow-up programmes are needed now to evaluate their structure, functions, and trends. Cartography needs to extend into many other unexplored areas and in some cases, particularly on coastal habitats, its resolution improved, to gradually complete the information in the Spanish Inventory of Marine Habitats (IEHM).

3.

Pressures and impacts

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3.1. Biological disturbance

3.1.1. Over the marine trophic network

Among the most outstanding pressures that may a priori affect the structure and functioning of trophic networks, we can mention eutrophication, invasive species, fishing pressure, and climate change. However, the study area and depth range are key factors when evaluating pressures. The construction of a port, for example, will only affect the coastal communities, while the fishing pressure of trawlers has an impact on the sedimentary circalitoral bottoms. Construction of indicators is currently underway, detailed in section 4. Current response measures.

3.1.2. Over the marine mammals

Spain regularly evaluates the conservation status of the cetaceans following the evaluation criteria established in the Resolution of March 6th 2017, after agreement of the Council of Ministers of February 24th, 2017, approving the criteria for the inclusion of taxons and populations into the Catalogue of Threatened Species of Spain (https://www.boe.es/eli/es/res/2017/03/06).

Accidental catches due to the use of drift nets, specially for the sword fish (***Xiphius gladius***), has caused unsustainable mortalities in different western cetacean species in the western Mediterranean since the mid-1980s. However, this practice is now illegal in Spain and no vessels are known to use it (CEPESCA ***pers.comm***). Concerning the surface longlines between 2000 and 2009, after monitoring 5,398,297 hooks, 56 incidental catches of cetaceans were recorded (López *et al.*, 2013), therefore, the impact of such fishery on cetaceans can be considered to be smaller.

After the last assessment in 2018 (MITECO 2019 - Report of Spain on the 2nd cycle for the Marine Strategies) the most serious threats to cetaceans in the Spanish Mediterranean waters can be summarized in the following table:

THREATS	Smal.l odontocets	Deep diving Odontocets	Mysticets
Chemical. substances	x	x	x
Energy generation	x		x
Fisheries			x
Species disturbance	x	x	x
Maritime transportation		x	x
Garbage and microgarbage			x
Organic pollution			x
Antropogenic noise		x	

For concrete species, the following pressures have been described in the National Report of Spain on the 2nd cycle of the Marine Strategies (MITECO 2019):

- Common bottlenose Dolphin (***Tursiops truncatus***): its diet, based on 100% commercial species, makes it a source of conflict with fishermen, in such a way that, in some parts of the basin, the dolphin and the fleet trawling can be considered sympatric species (Gonzalvo *et al.*, 2008). Predation on species of fishing interest in is highly variable in different areas of the Mediterranean; it represents 0.41% of the total income of fishermen in the Strait of Gibraltar (MITECO, MSFD 2019).

- Striped Dolphin (***Stenella coeruleoalba***): Interactions with fishing are not considered one of the main threat problems for this species in the Mediterranean, which occur in high productivity offshore areas. However, bycatch has been identified as one of the most important anthropogenic impacts for its conservation in the Mediterranean.
- Risso's Dolphin (***Grampus griseus***): between 2011-2017 there is only one record of Risso's Dolphin stranded with signs compatible with accidental capture, in Catalonia. Other pressures on the species are the ingestion of plastics and underwater noise (Bearzi *et al.*, 2011) and, like practically all odontocetes, chemical contamination. However, the limited knowledge about the species, its sensitivity to pressure, makes it difficult to assess the state of the habitat in relation to the species.
- Sperm Whale (***Physeter macrocephalus***): Ship-strikes is a special threat regarding Sperm whales along the Balearic Island waters and the Gibraltar Strait (MITECO 2019, National Report to ACCOBAMS MOP-7). In the 1990s, the moment of maximum expansion of the fishery by drift nets, sperm whale strandings related to interactions were very abundant and associated mortality was considered the main threat to the species. A stranding rate of accidental catch for sperm whales of 20% has been registered in relation to the Balearic Islands for the period 1998-2013. During 2017, 4 individuals ran aground. In the databases provided by the autonomous government of Catalonia, period between 2011-2017, there are no records of stranded sperm whales with signs compatible with accidental capture. Its habitat is exposed to numerous anthropogenic pressures, such as the increase in noise pollution linked to the high presence of boats, and a mortality associated with being run over by large ships (Brotons, 2015).
- Fin Whale (***Balaenoptera physalus***): During the full use of driftnets, its impact on the species was considered low, and later this illegal gear has decreased its presence. One of the main threats to its survival in the Mediterranean Sea are collisions with commercial vessels (Panigada *et al.*, 2006), and the affection from noise, both chronic and acute, which has been widely demonstrated that hinders different aspects of the natural life of the species (Castellote *et al.*, 2012).

Critical areas have been designated for the killer whales in the Gibraltar Strait and the Gulf of Cadiz, where active systems for underwater or underground exploration are banned, neither whale watching activities can be developed.

3.1.3. Over the marine birds

On accidental catches, we have fragmented information, although recently they have come to have a more relevant role as a cause of mortality, mainly affecting the species of Shearwaters, but also the European Shag (***Phalacrocorax aristotelis***) and Audouin's Gull (Genovart *et al.,* 2017; and recent data from the University of Barcelona and SEO / BirdLife, and CSIC). These last two, in addition, would also suffer captures related to recreational fishing. The case of the shearwaters is the most worrying, related to the demersal and surface longlines, with several hundreds of birds caught every year.

A recent demographic study over the Balearic Shearwater demonstrated this impact by estimating the annual decline of the species at 14%, and related accidental catches to 45% of adult mortality, largely influenced by low adult survival (0.81), going to be the most important threat (Genovart *et al.*, 2016). If the current scenario does not change, a recent population viability model (based on the optimistic assumption of a breeding population of ~ 7,000 pairs) predicted that the species would disappear in about 61 years. Main threats are those that cause direct adult mortality, mainly fishing by-catch at sea and predation by introduced species on land colonies. Particular concern deserves fishing by-catch, in light of new evidence that demonstrate high mortality by small-scale demersal longlines in the Iberian Mediterranean, with several hundreds of birds involved every year during the late spring. Colony monitoring has been very limited in the past, but we know about potential inter-colony differences, including some recent rat eradication campaigns.

In the Mediterranean, where many fish stocks are overexploited and / or affected by the reduction of the ecological flows of the rivers, food shortages can be a significant pressure, until now partially offset by the use of discards (Arcos *et al.* 2008). Intake of plastics is also reported as a threat.

The tourist pressure is also important, as well as pressures associated with it, both direct (nuisance) and indirect (loss or alteration of the habitat due to urban development, beach regeneration, etc.). Disturbance from light pollution are registered over the populations of Balearic procelariformes (Rodríguez *et al.,* 2015).

It is worth mentioning the risk of accidental spills, given the intense maritime traffic, which includes the transport of dangerous goods, especially in the vicinity of ports such as Barcelona, Tarragona, Castelló and Valencia, or just coincident with key concentration areas for the Balearic Shearwater.

3.1.4. Over the marine turtles

The main cause of mortality for the loggerhead turtle ***(C.caretta)*** is the accidental catch by surface longlines, followed by accidental catch by bottom trawlers, in this case only registered in the levantino-balear marine waters, not in the Alboran Sea, as here and in the Algerian basin they mainly feed on the surface, while neritic turtles in the Levantine waters may feed on the bottom, particularly along the coasts of Tarragona, Castellón y Valencia. Heavy metal levels, except for cadmium, are generally low and not considered a threat for the species.

3.1.5. Impacts from non-indigenous, including invasive, species

A complete list of exotic/invasive in the Mediterranean waters of Spain can be consulted in Annex 1.

The main entrance of non-indigenous species are known to be the biofouling and the ballast waters, specially affecting marine harbor areas, touristic marinas, and commercial ports. Other important sources are the invasive species driven by plastics and garbage, aquaculture activities, or related to water exchanges with aquaria.

The transport of propagules in ship hulls (biofouling) is also a propagation vector of sessile organisms and organisms with bicarbonate exoskeletons, mainly bryozoans, barnacles and polychaetes.

The release of species in the marine environment, such as commercial species of food interest from fish aquaculture and mariculture (mainly for decapod crustaceans and molluscs) are also vectors of introduction, as well as the exchange of species or release by aquarium fish.

Other types of invasions not directly due to human activity, but indirectly induced are the Harmful Algal Blooms, mainly of dinoflagelate algae that proliferate under specific conditions of eutrophication and stagnation of waters that affect inlets and gaps.

In the estrecho-alborán marine demarcation the Spanish MSFD first cycle assessments (MITECO 2012) concluded that neither the good environmental status nor the survival of the different types of habitats seemed to be in serious danger due to the presence of invasive species. However, an increase in new invasive species is detected, where algae represent the largest threat. In the 2018 assessment there was more evidence on the impact, distribution and extent of some invasive species; the ***Rugulopteryx okamurae***, of asiatic origin, has turned a real problem for net fishing gears and because of its accumulation in beaches in areas close to the Strait (Muñoz *et al.* 2019) (photos below). By 2020 it has quickly spread into other areas, such as Cabo de Gata, and is becoming a substantial economic problem for the fishermen.

In general, the impact of established non-native species has not been assessed, and species groups and general habitat types exposed to risks from non-native species have yet to be determined.

In the levantino-balear marine demarcation, an increase in invasive species is detected, expanding and with a potential effect on biodiversity and habitat, such as the blue crab (***Callinectes sapidus***) which in some areas begins to be very abundant and is marketed in fish markets (Mar Menor and Catalonia); also the colonization of sessile filtering organisms in ports and marinas such as the sea squirt ***Aplidium accarense***, or colonization by algae such as ***Halimeda incrasata*** on a more local basis. The tropicalization trend of the Mediterranean also produces the expansion towards the north of species more typical of the warmer areas of the South, and the introduction of species in the area from the eastern Mediterranean. The abundance and the trend in the different follow-ups by species remain to be determined.

3.1.6. Over the habitats

The Master List of Marine Habitats Present in Spain and its hierarchical classification, lists over 500 types of marine habitats for the Spanish Mediterranean. Continuously, and as a complement to the list, descriptive sheets are made for each of the characteristic or singular habitats of the marine waters of Spain. Its extension is enormous and we recommend to visit its website.

Specifically, the main disturbances on the Mediterranean habitats of Spain are:

- Infralittoral and intertidal: pipelines, infrastructure works, wiring, illegal trawling, anchoring, sand extraction, waste water and coastal development and infrastructures.
- Circalitoral and bathyal: fishing activities
- All habitats and areas: Pollution and marine litter, but with a greater incidence in punctual discharges and near urban centers in the infralittoral. As well as climate change for all habitats and areas.

In the photophilic community of the infralittoral rock, pollution can dramatically affect the habitat, causing the species that make up these communities be replaced by algae such as ***Corallina elongata***, and dominated only by ***M. galloprovinciales*** and ***B. perforatus***. The community of the upper mediolittoral rock is characterized by the presence of some species of algae (eg ***Nemalion helmintoides*** and ***Rissoella verruculosa***), molluscs (eg ***P. rustica*** and ***P. ferruginea***, ***L. punctata*** and ***L. neritoides***) and crustaceans (***C. stellatus*** and ***Pachygrapsus marmoratus***). The degradation of these communities by contamination gives rise to a substitution of species, where algae such as ***Bangia atropurpurea*** appear, and all the characteristic species of the area can disappear, being replaced by cyanophytic algae.

Among the main threats to seagrass meadows are illegal trawling, extraction of sands for beach regeneration, construction of coastal infrastructure, dredging of ports, the amount of suspended solids and discharges from plants desalination plants; in the Balearic Islands the anchoring of recreational boats is added as a threat.

The minimum seabed area of the levantino-balear marine demarcation that has suffered some type of disturbance between 2012 and 2018 is 311 million m2, which represents 0.13% of the area of the demarcation. The disturbance associated with trawling has not been assessed, but the disturbance associated with the anchoring of commercial vessels, which may have caused more disturbance of the seabed with an area of 300 million m2. The areas with a very high probability of disturbance to the seafloor are located near the ports.

In the levantino-balear marine demarcation there is concern about the impact from mooring of thousands of recreational boats over the Posidonia meadows; estimates are of a net loss of 3 ha/year, plus many more strips damaged by anchors. The impact from untreated or insuffiently treated sewage is deemed higher, accumulating up to 600 ha only in the Balearic islands (Oceana 2012 and [1]).

1 Nauta, Expansion, 02 April 2018. https://www.expansion.com/nauta360/turismo-puertos/5/02/04/2018ab9252c268e3eea688b4694.html ,

3.1.7. Over the invertebrate species

Cnidaria:

Astroides calycularis populations are regressing throughout the Mediterranean. One of the impacts is the collection carried out by aquarium hobbyists, who in many cases are unaware of its listiing as vulnerable and the prohibition of extracting colonies from the environment.

Regarding gorgonians, because of illegal collection and physical damage caused by fishing, mortality episodes have been recurring in the Mediterranean for at least the last 20 years.

The massive proliferation of jellyfish, which have increased their populations and their scope of distribution, is due to various factors such as the increase in anthropogenic pollution or the warming of the Mediterranean due to climate change. ***Rhizostoma pulmo*** and ***Cothylorhiza tuberculata*** can be seen as massive species in the Mar Menor in recent years. The species of the Cubozoa class, ***Carybdea marsupialis*** on the Mediterranean coasts, has also recently been highlighted as being responsible for multiple bites to bathers, together with the hydrozoan ***Physalia physalis***.

Molluscs:

- ***Dendropoma petraeum*** reefs are characteristic of areas of beaten rock, and in uncontaminated areas they can be 10 cm thick. The main impacts are the contamination of surface waters, the destruction of its habitat, and to a lesser extent, trampling by bathers. Furthermore, due to the type of formation they develop, it is a species that could be affected by fluctuations in sea level due to climate change.
- Regarding the ***Charonia lampas*** mollusk, medium and small specimens predominate, which would support the theory of selective extraction of large specimens by divers. Its shell is valuable for collectors and as souvenirs from shops. The conch shell is also accidentally caught by trawlers. It is marketed in the Almería fish market and in some markets in Malaga and Granada, and its shells are frequently exhibited in stores.
- The monitoring carried out on ***Patella ferruginea*** indicates that although recruitment of juveniles occurs frequently in localities in the bay of Algeciras, there is no population with an age structure that ensures the viability of the species in the area. The probable reason is the systematic and selective disappearance of large individuals (> 60 mm) due to illegal shellfishing. Despite the constant incorporation of juveniles, probably from Ceuta or Gibraltar, they never become mature reproductive individuals (mostly females). On the other hand, more isolated locations, such as the Alborán island, despite maintaining large individuals of both sexes, do not register recruitment from nearby reproductive nuclei, so there is a need to protect the areas where recruitment occurs.
- ***Pinna nobilis***: Since 2016 has suffered an unprecedented Mass Mortality Event, its populations are being affected by the presence of a new species of protozoan parasite, ***Haplosporidium pinnae***. In the Mar Menor coastal lagoon (Murcia) recent surveys point to the existence of several hundred individuals where the pathogen seems to be absent (Catanese *et al.,* 2018).

Crustaceans:

It should be noted that extinctions have occurred in recent decades, such as that of spider crab (***Maja squinado***), a coastal species that is currently undergoing a reintroduction project, or that of the carabinero (***Aristaeomorpha foliacea***), a slope species practically extinct, of which only isolated specimens are caught, when at the beginning of the slope fishery it was the most abundant species in the catches.

Echinoderms:

There are no studies on the status of sea urchin populations in the Balearic Islands, but studies carried out on the Catalan coast show that in certain areas the densities are lower than in others, these decreases being related to recreational capture. In the Balearic Islands, recreational capture seems to be of little importance, although studies to evaluate it are lacking. Among the species classified as "of special interest", ***Centrostephanus longispinus*** is a shallow water echinoderm (0-50 m), can be abundant in specific areas of the Alboran Sea, but its presence in Catalonia can be considered as occasional, while in the Levante it has practically disappeared.

3.2. Pressures from fishing activities

Pressures from fishing activities have been assessed throughout in the National Assessment of Spain on the 2nd cycle of the MSFD (MITECO 2019). The results are segregated following the two different marine demarcations in our Mediterranean sea:

Estrecho-Al..borán marine demarcation: 15 fishing stocks were assessed in coastal waters, the high seas and islands, representing the 79% of the total catch. None of the 15 stocks can be acquainted a good status; 13 of them (86.7%) remain unknown, with insufficient information for a solid assessment; while two of the (13.3%) are in a bad status. Small pelagic populations experience large fluctuations in their abundance due to the great variability in their annual recruitments. This translates into great instability in the catches, which causes fishing crises and makes the annual estimation of the resource essential. The purse-seine fleet has decreased continuously, from 230 boats in 1980 to 94 in 2008, which represents a reduction of 59%. Currently this fleet is made up of small units: 88% have less than 30 GRT, with an average GRT of 18.3 and an average power of 142 CV. Only 20% are less than 12 meters in length.

Levantino-Balear marine demarcation: 23 fishing stocks were assessed in coastal waters, the high seas and islands, representing the 70% of the total catch:

- Assessed in the whole area: ***Xiphias gladius, Thunnus thynnus , Thunnus alalunga***.
- In the northern part of the marine demarcation: ***Sardina pilchardus, Merluccius merluccius, Mullus barbatus, Parapenaeus longirostris, Aristeus antennatus.***
- Asssessed only in the Balearic Islands: ***Merluccius merluccius, Mullus surmuletus, Parapenaeus longirostris, Aristeus antennatus***.

- With unsufficient information: ***Octopus vulgaris, Scomber colias, Trachurus trachurus, Sepia officinalis, Trisopterus minutus, Eledone cirrhosa, Lophius piscatorius, Lophius budegassa, Micromesistius poutassou, Nephrops norvegicus***.

The conclusions related to the main pressure of the fishing activity, the "Extraction and/or mortality of target and non-target species" are that only one of the 23 stocks (4%) remains in a good status, while other 12 stocks (52%) are in unknown (without analytic evaluation) of uncertain (non-concluding evaluation) status.

In the case of hake (***Merluccius merluccius***), the general scheme of exploitation in the trawler fleet is characterized by a high percentage of juveniles caught, approximately 80% of the specimens of this catch have not yet reached the size of first maturity. The fishery would remain at current profitability levels thanks to a high turnover rate because a part of the spawning population would not be exposed to a high fishing mortality rate. Therefore, the resource can be considered as highly overexploited, with a very low biomass compared to virgin biomass. However, the reduction of the fishing fleet in the Mediterranean is a fact, particularly on small-scale trawlers and purse-seiners (MAPA 2020), so with the new fishing effort regime for the demersal fleet, the species is already showing some recovery.

Concerning the by-catch of non-target species (MITECO 2012, Levantino-Balear):

By-catch highly depends on the type of fisheries. Fisheries in the most superficial area produce a high by-catch, mainly due to the bogue (***Boops boops)*** and the mackarel (***Trachurus trachurus***), species which now have a productive indirect use as allowed by the Common Fisheries Policy (fish meal, fumet, etc). Most landings of demersal species come from bottom trawl fleets. The by-catch ratio is very high, up to 77% of the species and between 30-40% of the total weight caught. In the shallower coastal platform (up to 80-90 m depth) the percentage of discards is high, because this area is the most diverse. In the deepest platform (from 100 m to 200 m deep), fish represent the most important part of the discards, mainly due to being of small sizes of no commercial value, as is the case of ***Gadicus argenteus***. Important incidental catches of blue whiting (***Micromesistius poutassou***) and ***Phycis blennoides*** occur on the upper slope. The fishing on the middle slope (between 500 and 750 m, approximately) has as target species the red shrimp (***Aristeus antennatus***), catching the red crab (***Geryon longipes***), ***Phycis blennoides***, and the blackmouth catshark ***Galeus melastomus*** as accidental species. Fishing in this bathymetric layer produces the least discards, both in species diversity and weight.

Most of the discarded commercial species are crustaceans: ***Plesionika heterocarpus*** (21.2%), ***Parapenaeus longirostris*** (3.7%) and ***Liocarcinus depurator*** (3.5%). Species of high commercial value are discarded to a lesser extent, including some of the target species, such as ***M. merluccius, M. poutassou, P. blennoides, Scyliorhinus canicula, Helicolenus dactylopterus***, and ***L. budegassa***. The highest proportion of discards, considering the three strata, are crustaceans such as ***L. depurator*** (13.1% of the total discarded) and ***P. heterocarpus*** (5.8%).

Cephalopods are the most important molluscs exploited on the seabed between 50 m and 800 m deep. They are considered a bycatch of the fishery, appearing in a wide bathymetric range, but especially in coastal waters (less than 150 m). Its biomass represents between 8% and 30% of the catches retained by vessel. Depending on the species, its discard fluctuates between 1% and 40% of its weight. The most captured cephalopod species are ***Octopus vulgaris, Loligo vulgaris*** or ***Sepia officinalis***, which are captured with such varied gear as bottom trawling or octopus pot trains.

3.3. Vulnerable marine ecosystems

One of the most affected habitats has been the seagrass meadows (***Posidonia oceanica, Zostera sp.*** and ***Cymodocea nodosa***), key to the maintenance of biodiversity as important breeding and breeding areas for marine species of economic interest, and of great attractiveness to tourist. These habitats have suffered considerable degradation in the past due to pollution, trawling, proliferation of invasive species (***Caulerpa taxifolia***) and by the anchoring of pleasure boats.

As for the main impacts that affect the reefs of ***Dendropoma lebeche (petraeum)***, the contamination of surface waters stands out, with the consequent eutrophication and growth of algae on mollusks, the destruction of their habitat, and to a lesser extent, the trampling by bathers. Furthermore, due to the type of formation they develop, it is a species that could be affected by fluctuations in sea level due to climate change.

Eutrophication must be considered as a dispersed threat; the records obtained in Alboran Sea indicate that there was an excess of both ammonium and N in some areas. This is probably a consequence of external contributions, since these nutrients do not tend to accumulate in the water column by biogeochemical or hydrological processes. The area does not have rivers discharging large flows of runoff water. The high nitrate values obtained on time can only be attributed to terrestrial contributions. In the rest of the Spanish Mediterranean, there is also an excess of nutrients in the water column (area with potential eutrophication problems). The huge coastal lagoon of Mar Menor has been classified as an area with eutrophication problems.

We need to control companies that advertise prohibited activities such as diving with dolphins, feeding turtles, boats that offer whale watching without authorization, or the capture of protected species specimens, as well as other possible infractions committed on protected habitats, such as mooring on protected phanerogams. It is very necessary to reinforce our teams and capacities to be able to initiate proceedings of sanctioning files.

3.4. Emerging issues such as climatic change effects and open sea including deep-sea ecosystem concerns

3.4.1. Climate change

The warming of Alborán Sea waters is a proven and evident scientific fact. Research into historical series of temperature data in this area (Vargas *et al.*, 2002) suggests that the superficial layers have become considerably warmer in the western basin, showing positive temperature trends in the upper 200 m of the water column of the continental shelf in the Alborán Sea. The trends discovered by researchers are in the order of 0.02ºC/ year for 1992-2001,

Kersting *et al.* (2016) based on long-term data sets from the Columbretes islands MPA in Spain documents many oceanographic, physicochemical and biological changes, eg, sea warming has triggered recurrent mass mortality events in the Mediterranean during the past 15 years, affecting a high number of benthic invertebrates over hundreds of kilometres of coast, also increased mortality rates of ***Posidonia oceanica*** causing widespread changes in species distribution. Seasonality in phytoplankton cycles has been altered, spring and autumn blooms occur earlier and later in the year, respectively; sea level rise will continue throughout this century at a rate of 2-5 mm every year and sea warming is expected to continue through this century in the Mediterranean Sea at a rate of 0.2-0.3 °C every decade.

In the Spanish Mediterranean, a reduction in productivity is expected, given its characteristics as a subtropical or warm temperate sea. The changes will affect many groups of organisms, from phytoplankton and zooplankton to fish and algae. Species distribution will change, with an increase in temperate and subtropical species and a decrease in boreal species. An increase in invasive species is possible. The appearance of toxic phytoplankton species or parasites of cultivated species is expected to increase, favored by the thermal increase in coastal waters.

The areas and systems most vulnerable to climate change are the benthic communities and, among them, those that are made up of the longest-lived and slowest-growing organisms, such as red corals, cold-water corals, and seagrasses (e.g. ***Posidonia oceanica, Zostera marina***) meadows as well as coastal wetlands, and the brown seaweed meadows of the whole of the Spanish coasts

In addition, climate change implies important effects related to the rise in the mean sea level and the increasing frequency of episodes of extreme waves or natural catastrophes, which exert pressure that results in regression problems, coastal erosion and loss of biodiversity of the natural and marine ecosystems.

3.4.2. Plastics

All the information in this section is drawn from the National Report of Spain on the Marine Strategies (MITECO 2019), which segregates the issue in the two Mediterranean marine demarcations:

Estrecho-Alborán:

- The maximum number of objects accounted for among the garbage on the beaches corresponds to the autumn campaigns and the minimum to the winter ones. The average abundance of objects found per campaign and beach in the 6 years ranged from 102 to 837. Plastic objects are the most frequent and account for 70.0% of the total. In lesser proportion, remains of paper or cardboard appear (12.5%), hygienic-sanitary residues (7.0%), and metal remains (4.8%).
- Most of the garbage of known origin is related to tourist activities (26%) or maritime transport or navigation (18%), resulting in much less impact of waste from sanitary facilities (7%) or fishing activities (1%). The average concentration on the beaches has been 38.3 particles / kg sms of sand, which is equivalent to 467.8 particles / m^2.
- The abundance of marine litter in the Estrecho and Alborán marine demarcation shows an increasing trend in the time series considered, but there is still insufficient data to establish a trend in beach microplastics.

Levantino-Balear:

- During the 206 campaigns carried out, a total count of 76,139 objects was made, with an average abundance of 370 objects counted per beach and campaign, being the maximum in autumn and the minimum in summer. The most frequent objects were unidentifiable plastic pieces between 0 and 2.5 cm and between 2.5 and 50 cm, accounting for 30.5% of the total. Cigarette butts represent 12.4% of the total. To a lesser extent, plastic lids, plugs and corks were found, occupying 7.0%, plastic cables, ropes or cords with a diameter of less than 1 cm, 6.9%, or 6.8% cotton buds.
- Most of the garbage of known origin found on the beaches is related to tourist activities (29%) and then to maritime transport or navigation (10%), with less origin from sanitary facilities (9%) or fishing activities (3%).
- In conclusion, there is no clear trend in garbage on beaches, and it can be considered that garbage is not on the rise; there are unsufficient data to establish a trend in microplastics, and in the other indicators analyzed, the information is insufficient to determine a clear trend.

4.

Current response measures

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Responses are integrated into the ecosystem approach concept as required by the CBD, the Marine Strategies Framework Directive, Marine Spatial Planning Directive, the EU Biodiversity Strategy 2020, the EU Common Fisheries Policy, and by the Barcelona Convention.

Specific measures that have been adopted are the following:

4.1. Specific for threatened species

Out of the 30 components that make up the Spanish Inventory of Natural Heritage and Biodiversity (IEPNB), the eight priority ones and sixteen of those considered fundamental in Royal Decree 556/2011 have been implemented. A very important boost has been given to both the Spanish Inventory of Marine Habitats (IEHM) as well as the Spanish Inventory of Marine Species (IEEM) collecting the distribution, abundance and conservation status of wild species that spontaneously inhabit Spain, with special attention to those species that require specific conservation measures or that have been declared of community interest.

Within the framework of the MSFD Spain developed a set of programs for different functional groups of species: AV Program: seabirds, MT Program marine mammals and turtles, PC Program: fish and cephalopods. For the protection of marine species, certain marine species are included in the National Catalogue of Threatened Species, where we find different protection figures.

In Andalusia, a certain number of parameters are checked annually: ***Posidonia oceanic*** (in the inventory of seagrass species and habitats); ***Patella ferruginea, Astroides calycularis, Pinna nobilis, Dendropoma petraeum, Charonia lampas, Centrostephanus longispinus, Asterina phylactica*** (in the inventory of invertebrates). We collect here some of the most relevant species:

Posidonia oceanica: the Royal Decree 139/2011 for the development of the list in regime for special protection and the Spanish catalogue of endangered species includes ***Posidonia oceanica*** in the List of Wild Species under Special Protection Regime. The inclusion of a species, subspecies or population in this list entails a series of generic prohibitions established in state regulations, specifically in article 57 of Law 42/2007. On the other hand, the Royal Decree that includes it in the List explicitly provides that the autonomous communities may regulate the anchorage operations of boats or others. The Balearic Islands' waters present up to 50% of Posidonia coverage in Spain, a total of 650 km^2 which have been protected with a specific Decree (07/27/2018) of the Autonomous Government of the islands. About 75% of these are already within areas included in the Natura 2000 Network. This Decree aims to guarantee the conservation of ***Posidonia oceanica*** and the biological communities of which it is part, by regulating those uses and activities that they can affect the species and the habitat, and by promoting actions that actively contribute to the maintenance and achievement of its favorable state of conservation. Among others, the actions on ***Posidonia oceanica*** consisting of trawling in inland waters, extraction of aggregates, dumping of dredged materials and uncontrolled anchoring, new facilities related to non-state projects, among others, are prohibited. Aquaculture, new submarine outfalls and new works in those cases in which the corresponding

environmental procedure determines that they may have negative effects on posidonia. ***Posidonia oceanica*** monitoring is in progress also through the POSIMED programs.

Among the cnidarians, red coral (***Corallium rubrum***) is subject to fishing exploitation, regulated by Law 3/2001, of March 26, in external waters, establishing the requirements and conditions for its exercise. The regulation of fishing for this species in Catalonia in inland waters is contemplated in Decree 389/2004 of September 21.

Patella ferruginea is also subject of a Conservation Strategy (MITECO 2008) whose conservation measures include monitoring the populations (monitoring controls and exhaustive censuses) of the national waters; the definition and mapping of critical and sensitive areas in relation to their distribution, as well as preparing specific methodological guides for evaluating the environmental impact on ***P. ferrugínea*** and its habitat; drawing up a map of risk areas and promoting the adoption of legislative or regulatory measures; investigation of unnatural mortality cases. Identify, locate, monitor and, where appropriate, modify the impacts that cause mortality due to coastal works or infrastructure and pollution. The unprecedented decline in its populations has led to the species being re-listed in Spain, going from "vulnerable" to "critically endangered" given its risk of extinction (Order TEC / 1078/2018).

The Mediterranean populations of 18 species of elasmobranchs (sharks and rays, angelfish, sawfish and guitar) are also included in the list of wild species under Special Protection Regime.

Marine turtles:

Are protected by the Spanish Law 42/2007 on Natural heritage and biodiversity, and also by the Autonomous legislation: Resolution of 12 February 2011 of the Environment General Management Directorate of the Autonomous Community of Valencia, adopting a programme of actions for the conservation of cetaceans and sea turtles. The MITECO is about to start the formal approvement of the Spanish Strategy for Marine Turtles Conservation, after a wide debate with most relevant experts. Also the Order AAA / 658/2014 of 22th April, regulates fishing with surface longline gear to catch highly migratory species. It includes measures to prevent the accidental capture of seabirds and turtles. We are carrying out a programme of tagging, and several satellite tracking projects, and the Programmes of Measures for marine strategies include the risk analysis of the by-catches of turtles, cetaceans and marine birds.

Related to marine birds, to date 128 regional and local recovery initiatives have been developed for the main bird species in danger of extinction, and there is a Strategy for the Conservation of the Balearic Shearwater (***Puffinus mauretanicus***) in Spain. In the framework of the LIFE IP INTEMARES project, several conservation plans or Strategies are foreseen.

Marine birds:

Of the seabird species, ***P. mauretanicus, S. albifrons, S. hirundo, S. sandvicensis, P. aristotelis, L. genei, L. melanocephalus, C. diomedea, P. yelkouan*** and ***H. pelagicus*** are included in Annex I of the Bird Directive, as species that require special conservation measures regarding their habitat. In addition, the Balearic shearwater (***P. mauretanicus***) and Audouin's gull (***L. audouidii***) appear in the Spanish catalogue of threatened species, as "endangered" and "vulnerable", respectively.

Rescue centres for marine turtles were established; Valencia has three Wildlife Recovery Centres (Castellón, Valencia and Alicante) with the frequent presence of ***Caretta caretta*** specimens that have swallowed the fishhook of a longline. SPAMI Cabo de Gata-Níjar, the Carboneras Endangered Species Centre provides assistance and captive breeding of endangered marine species, such as the program for re-introduction and nesting of the loggerhead turtle. The CRAM Foundation in Barcelona has over 20 years experience in turtle saving activities.

Marine mammals

Until 2024, Spain will be developing the LIFE-IP INTEMARES Project for marine conservation, through which the Ministry will develop several projects to avoid ship strikes. The project is focused on sperm whales and will be developed in both the Balearic and Canary Island with a duration of 2 years in which several actions will be taken: 1)regarding monitoring of high risk areas, both an analysis of maritime traffic and the use of the habitat (active and passive monitoring, photo id and on board monitoring) by sperm whale will be done in order to develop a Collision risk model 2) Mitigation measures will be defined, which include a proposal to the IMO (speed limitation, restriction areas)

Within the framework of the LIFE IP INTEMARES project, the approval of cetacean conservation plans included in the Spanish Catalogue of Threatened Species (CEEA) is foreseen.

Whale watching activity is reguled by the Royal Decree 1727/2007 of 21/12/2007, for the conservation of cetaceans; also regarding the detection of potential adverse impacts on individual cetaceans and on populations, in the framework of INTEMARES project will implement a carrying capacity of the activity in Tenerife.This assessment will include data collection of the whale watching vessels, noise generated, visual and acoustic assessment of the response of individuals to the activity, stress assessments.

Besides, the Spanish Ministry will develop three conservation plans: for misticetes, deep water cetaceans and small cetaceans in the framework of the Integrated Project LIFE INTEMARES (by 2023).

Order APM / 427/2017, of 4/5/2017, approves the protection measures, and the Conservation Plan of the Killer Whale of the Strait and Gulf of Cádiz

Regarding the sperm whale, it will benefit from the critical areas designated for the killer whales, where active systems for underwater or underground exploration cannot be used, neither whale watching activities developed (either commercial, private or scientific) during the critical period for the species, which takes place from March 1st to August 31th.

The Blue Whale (***Balaenoptera musculus***) will also benefit from measures taken for other cetaceans in the Gibraltar Strait and Alboran, to avoid impacts from recreational activities in the Sites of Community Importance. Under IMO, and due to the seasonal presence of sperm whales in the Strait of Gibraltar, a conservation zone was defined by four coordinates: a) 36 ° 00.6'N 5 ° 28.8'W b) 35 ° 55.2'N 5 ° 27.0'W. c) 35 ° 51.6'N 5 ° 38.4'W d) 35 ° 57.0'N 5 ° 40.2'W. In order to avoid collision risks, it recommends to

reduce the maximum speed to '13 knots (merchants, and navigate in a state of maximum surveillance.

Some regional governments are developing their own stranding networks, which follow strict protocols established by experts. Spain is to establish a national stranding network, which will help gathering the information that all these regional stranding networks provide regularly. The national stranding network will be based on a warning system that will enable the country to proceed properly in case of unusual events like mass stranding.

We still lack enough logistic capacity to manage the urgent stranding situations of marine species. The Ministry's role is to coordinate the stranding network and in order to conserve the species, take biometric data and tissue samples as well as transporting, analyzing, and conserving these samples in tissue banks. In addition, the Ministry takes the clinical care of the species when there is an impact on the conservation of the species. In order to achieve effective coordination, efforts are being made to sign collaboration agreements with rescue associations, Port Authorities. The maintenance of the updated Spanish cetacean stranding database (BEVACET), is done through an agreement between the Ministry and the University of Valencia.

Monitoring provides valuable information about the possible increase in strandings as a result of the occurrence of epizootics caused by ***Morbillivirus sp***. On the other hand, the trend analysis of stranding incidents increases the responsiveness of public administration by providing, if necessary, quick and effective planning of emergency measures. Some regional governments have developed their own emergency plans or at least working protocols to avoid animal suffering and to prevent citizens' damage and social alarm.

Related to ACCOBAMS, a national advisory panel for rescue activities (rooster of contact persons and experts from the scientific and conservation communities and from governmental environment and natural resource administrations) exists in order to contribute to a coordinated cetacean stranding response and the ACCOBAMS task force for marine mammal mortality and special events. Spain also asked the ACCOBAMS MOP-7 for an amendment to Annex 2 of the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Adjacent Atlantic Area on the use of driftnets.

Rescue centres have been established in:

- Valencia: Recovery Centres of Santa Faz (Alicante), La Granja (Valencia) and Forn del Vidre (Castellón) (Environmental Department of the Government of Valencia) - ARC A del Mar, Oceanogràc (Rehabilitation and Conservation Area of Marine Species, City of Arts and Sciences).
- Andalucia: Almeria: Asociación para la protección y rescate de fauna Equinac - Andalucia: CEGMA del Estrecho (Centre for the Management of the Andalusian Marine Environment of the Strait of Gibraltar).
- Balearic Islands: COFIB (Centro de recuperación de la Fauna de las Islas Baleares, y la Fundación Palma Acuarium).
- Catalonia: CRAM Foundation, Foundation for the Conservation and Recovery of Marine Animals
- Murcia: Recovery Centre for Wildlife "El Valle" -

As per conservation plans, the following are scheduled for the period 2021-2022

- Preparation and approval of the conservation plans for: the small shearwaters manx shearwater ***(P. puffinus***), and the harbour porpoise.
- Preparation and approval of conservation strategies for: sea turtles, shag cormorants, ashy shearwater
- Updating of conservation strategies for the Balearic shearwater.
- Preparation and approval of recovery plans for ***Pinna nobilis*** *(if so decided in the Working Group).*
- Preparation and approval of conservation plans for all cetaceans present in our waters.

The monk seal is included considered extinct in the Spanish waters.

Habitats:

The Spanish Inventory of Marine Habitats (IEHM) has been developed, laying the foundation for designing in the short-medium term plans for the conservation of marine habitats in danger of extinction. It consists of three main elements: the standard list of the types of marine habitats present in Spain, totaling 886 identified and described habitats, their hierarchical classification, and their spatial distribution. All this is included in the Resolution of March 22, 2013, of the General Directorate for Sustainability of the Coast and the Sea.

Regarding the implementation of the Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive, Spain developed monitoring programs for Benthic Habitats (HB program), pelagic habitats (HP program) and Non-indigenous species (EAI Program). It also includes a number of subactivities and pressures on these functional groups that will get information related to underwater noise and pressure, the presence of litter in stomach committed or by catch resulting from fishing activities.

Since 2009, the Report of the Spanish Inventory of Natural Heritage and Biodiversity has been published annually, with information on the status and trends of natural heritage and biodiversity in the Spanish territory, and its most relevant changes are compiled and analyzed. The report also includes recommendations to facilitate measures for the recovery of natural heritage and biodiversity by the competent authorities, especially when the values of the indicators cross defined thresholds. As for today, the habitats are monitored by the IEO in the declared SCIs and SACs.

Restoration of species and habitats

Some restoration projects are under way, for example for the Spider crab (***Maja squinado***), and most particularly for marine meadows, such as for ***Zostera marina*** in Alboran Sea, and for Posidonia where a pilot restoration project (2 ha) is under way in Mallorca (CSIC - Univ.Baleares – REE).

4.2. Marine protected areas and other area based conservation measures

Spain's protected area continues to grow. Only in 2015, it grew by some 6.3% to reach a total of 24,954,269 hectares, of which 8,524,416 hectares are marine. This meant that 7.99% of the marine surface of the country enjoyed some degree of protection. But it particularly grew in 2018 with the extensión of the Cabrera National Park up to 90,800 ha, and the establishment of the SPAMI Spanish Mediterranean Cetacean Migration Corridor of 46,262 ha between the Peninsula and the Balearic islands (see maps ahead). Spanish jurisdictional waters extend to aprox. 257.951 Km^2 in the Mediterranean Sea, of which a **28,82%** are protected (17,82% belong to the Cetacean Corridor SPAMI, and 11,0% to other conservation categories).

The full list of the Spanish marine protected areas in Mediterranean waters is found in Annex 2a and 2b and displayed for the Levantino Balear demarcation https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/parteimarcogeneraldmleba_tcm30-498347.pdf and for the Estrecho-Alborán demarcation can be found in https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/parteimarcogeneraldmesal_tcm30-498339.pdf.

Recently (MITECO 2020) the Council of Ministers of Spain approved a declaration commiting to protect a 30% of the Spanish marine waters by 2030. Scientific evidence (Graham *et al.* 2014; Bethan *et al.* 2016; Sala *et al.* 2019) suggests that to secure a healthy, productive, and resilient marine environment, at least 30% of the world's ocean must be safeguarded in a network of well managed MPAs and other effective area-based conservation measures (OECM). The recommendation to the target of 30% marine protection by 2030 was adopted by the World Conservation Congress (2016), being already claimed by scientific teams and strategies of most of the international NGOs specialized in marine issues, included in the EU Biodiversity Strategy to 2030 (https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_886) and expected for adoption in 2021 during the next COP15 of the CBD. The stretch of MPAs to 30% of the world seas would reverse existing adverse impacts, increase resilience to climate change, and sustain long-term ocean health, including MPA networks representative enough to deliver outcomes for biodiversity, ecosystem services, food security and livelihoods. The proposal is in line with the Ecosystem Approach (EcAP) and with the SD Goal-14 under the theme ***"Ensuring food security on a safe planet by 2030.*** The UN Biodiversity Summit was held on September 30th 2020 and nearly 30 Heads of State from around the world expressed their commitment to protecting at least 30% of the global ocean by 2030.

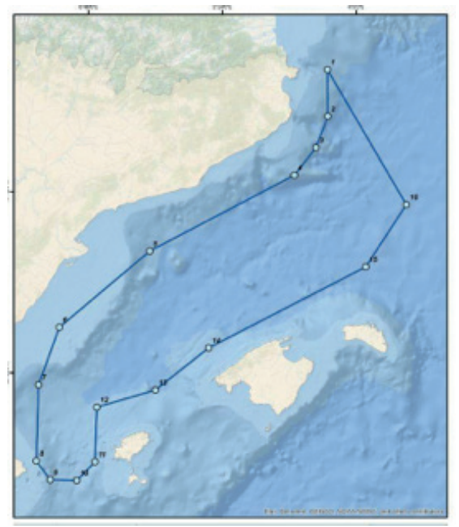
Within the different types of protected natural areas existing in Spain, the surface area comprising the Natura 2000 Network represents almost 20% of the total EU surface area, making Spain the EU country with the most surface area within this Network. One of the goals related to the protection of marine areas consists of expanding and managing the Marine Natura 2000 Network, which includes the declaration of Special Areas of Conservation (SAC) and Special Marine Bird Protection Areas (SPAs), as well as approval of their respective management plans. Approval has been granted for 8 SAC in the Mediterranean (2018)[1] plus by Order AAA/1260/2014, of 9 July, declaring 39 Special Bird Protection Areas in Spanish marine waters, all of them governed by the State. Management plans for these areas will be approved within two years.

The list of Mediterranean Special Bird Protection Areas declared, and the list of sites dedicated to the protection and maintenance of biological diversity, geodiversity and natural resources and associated cultures are presented in **Annex 2**.

Furthermore, 10 new State-governed marine SAC have been proposed to the European Commission: 5 of them in the Mediterranean area: "System of western submarine canyons of the Gulf of León" (Catalonia-France), "Menorca Channel" (Balearic Islands), "South Almería-Seco de los Olivos", "Marine space of Alboran" (transition space between the Mediterranean Sea and the Atlantic Ocean), "Marine Space of Illes Columbretes" (Valencian Autonomous Community).

Concerning these Natura 2000 Network sites, the Ministry, together with some of the most important marine research, fishermen organizations, and specialized NGOs, has launched the LIFE-INTEMARES Integrated Project "Gestión integrada, innovadora y participativa de la Red Natura 2000 en el medio marino español". It is the largest project for the conservation of the marine environment in Europe, and the first initiative at the national level that integrates various funds, policies and actors for the management of a whole network of protected areas. Its main objective is to achieve a network of marine spaces of the Natura 2000 Network, managed effectively, with the active participation of the sectors involved and with research as basic tools for decision-making. Since launched in 2017, this broad programme has directly involved more than 13.000 people and 800 organizations in actions within the fields of research, conservation, surveillance, governance, capacity building and awareness-raising

Recently, the Royal Decree 699/2018, of June 29, declares the Cetacean Migration Corridor as a Marine Protected Area, approves a preventive protection regime, and proposes it to be included in the List of Specially Protected Areas of Importance for the Mediterranean (SPAMI) under the Barcelona Convention. This huge marine protected area with about 85 Km mean width, encompasses 46,385 Km^2 between the coasts of Catalonia and Valencia and the Balearic islands. It builds over the EBSA proposed by the CBD. Article 2 establishes that the use of active systems for underground geological research will not be allowed, both by means of probes, compressed air or controlled explosions such as by underground drilling, except

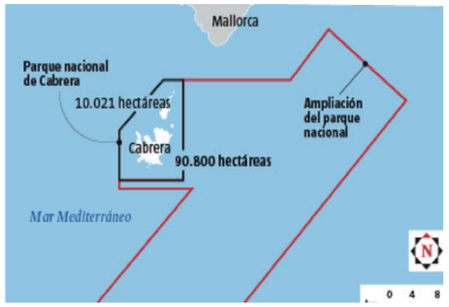


The Cetacean Migration Corridor (46,262 Km^2), established in 2018 as a marine protected area

1 https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/biodiversidad-marina/espacios-marinos-protegidos/red-natura-2000-ambito-marino/espacios-red-natura-competencia-ministerio.aspx

those related to research or exploitation permits in force. Any type of extractive activity of hydrocarbons shall be prohibited, except those related to research or exploitation permits in force. After COP21 of the Barcelona Convention, held in Naples (Italy) in December 2019, this MPA was included in the SPAMI List.

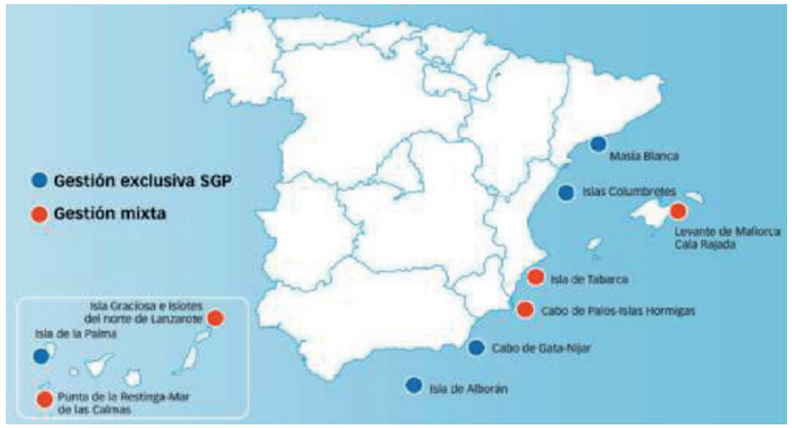
Today, almost 7 million ha (6,993,558 ha), the 30,02% of the Levantino-Balear marine demarcation surface, are protected through different area-based protection categories, either under national or regional competence. As much as an 11.29% of the surface (2,630,417 ha) is covered by Natura 2000 marine sites. In this area (2019[2]) we can highlight the Cabrera Archipelago National Park, which has recently multiplied its x10 marine area to 90,800 ha (see map).



Extension of the Cabrera National Park up to 90,800 ha in 2018

A particular conservation figure in Spain are the Marine Reserves of Fishing Interest, generally aimed at protecting fishing stocks for traditional fisheries practices, and which in most cases also include the conservation of biodiversity, and the regulation of tourism activities between their objectives.

This conservation figure was created by Ministerial Order in 1982, and at present there are 22 Marine Reserves declared. In the map, those with a blue dot are managed by the State, those with the red dot are managed jointly by the State and the Autonomous Communities. More detailed information on each of them is found in https://www.mapa.gob.es/app/reservas-marinas-espana/rmarinas-intro.asp

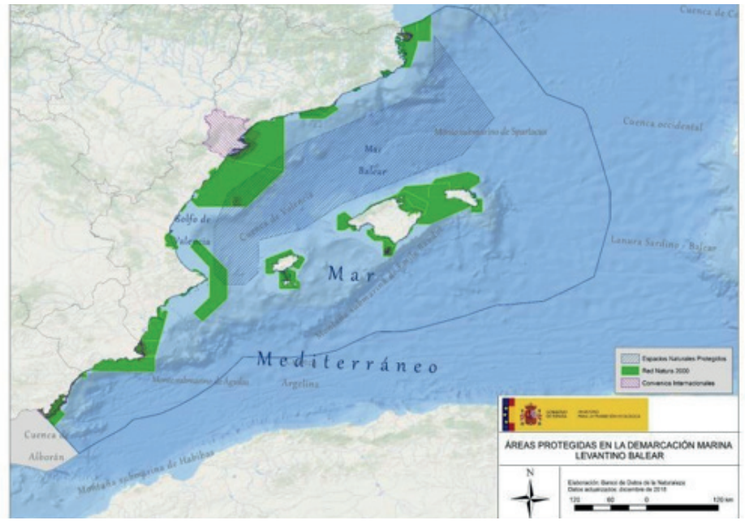


Fishing Reserves add 103,468 ha of which 10,507 ha are strictly protected zones where on use is allowed other than scientific research under special allowance.

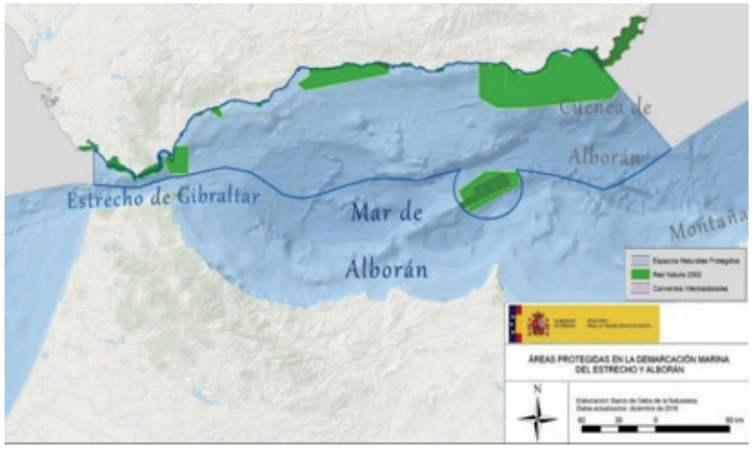
2 MITECO. 2019. Marco General: Características de la demarcación Levantino-Balear. 2019. Dirección General de Sostenibilidad de la Costa y del Mar. Ministerio para la Transición Ecológica, MITECO. Madrid. Catálogo de Publicaciones de la Administración General del Estado: https://cpage.mpr.gob.es

The Marine Protected Areas Network of Spain (RAMPE), created by Law 41/2010, to protect the Marine Environment, is being developed to include the protected spaces located in the Spanish marine environment, which are representative of the marine natural heritage, regardless of that its declaration and management are regulated by international, community, state or regional regulations.

The sites must meet a series of criteria established in Royal Decree 1599/2011, among which the following should be highlighted: representativeness; unique character or rarity; significance for threatened, endangered, declining or regression habitats or species; degree of naturalness; biological productivity; vulnerability or fragility; contribution to connectivity. Work is currently underway to integrate the different marine protected areas that meet these criteria in RAMPE. At present, the governance body to coordinate the RAMPE is being discussed.



Marine protected areas in the Levantino-Balear marine demarcation



Marine protected areas in the Strait and Alboran marine demarcation

Of the total space belonging to RAMPE, more than half (57%) are Special Protection Areas for Birds (SPAs). The Special Areas for Conservation (SACs) account for 30% of the network. In total 87% of the RAMPE is made up of the Natura 2000 network figures. The Levantino Balear demarcation houses 33% of the marine protected areas.

Recent EU policies (MSP-Marine Spatial Planning Directive, Blue Growth Strategy, Common Fisheries Policy) would benefit from MPAs as field demonstration sites; particularly considering that member states are in obligation to draw up maritime spatial plans - which may include nature and species conservation sites and protected areas- as soon as possible (March 2021 at the latest). The EBSA from the CBD also provide basis for the future EU MSP. The EU countries also need to adopt the necessary fishery management measures for MPAs under Natura 2000 in accordance with the new CFP provisions. Additional opportunities are offered by the mechanisms set by GFCM Resolution in 2013 to streamline actions with UNEP/MAP (eg. for the adoption of fisheries measures supporting SPAMIs).

4.3. Legal and institutional frameworks governing the conservation and sustainable use of marine and coastal biodiversity

4.3.1. Institutional actors in relation to marine and coastal biodiversity

- Directorate General of Biodiversity, Forest and Desertification (Ministry for Ecological Transition and Demographic Challenge) .
- Directorate General of Sustainable Fisheries (Ministry of Agriculture, Fisheries and Food)
- Regional Governments (Environment and Fisheries authorities).
- Commission of the Spanish Inventory of Natural Heritage and Biodiversity, as an inter-administrative coordinating body on the matter, has 7 working groups that carry out their activity to coordinate and optimize the exchange of information. Autonomous cities and communities are represented in it, as well as MITECO, the former Ministry of Economy, Industry and Competitiveness and the Ministry of Environment (MITECO).
- SEPRONA (Nature Protection Service of the Civil Guard) collaborates with the agents of the authority of the Autonomous Communities and complements their activities of surveillance and prosecution of illegal acts.
- The National Advisory Board for Marine Cultures (JACUMAR), under the Ministry of Agriculture, Fisheries and Food; its mission, among others, is the elaboration of the National Plans for Marine Cultures in agreement with the autonomous communities.

Some of the main scientific and academic Institutions:

- CSIC-EBD - Doñana Biological Estation, Spanish National Research Council (Ministry of Economy and Competitiveness)
- CSIC-ICM – Insitituto de Ciencias del Mar, Barcelona. Spanish National Research Council (Ministry of Economy and Competitiveness)
- CSIC-IMEDEA in Balearic Islands – Instituto Mediterráneo de Estudios Avanzados. Spanish National Research Council (Ministry of Economy and Competitiveness)
- IEO - Spanish Institute of Oceanography (Ministry of Economy and Competitiveness).
- University of Málaga, Grupo de Ecología Marina y Limnología (GEML)
- University of Murcia, Departamento de Ecología e Hidrología
- University of Alicante, Departamento de Ciencias del Mar
- University of Valencia. Cavanilles Institute of Biodiversity and Evolutionary Biology
- University of Barcelona. Department of Biology
- University Autónoma of Madrid
- University of Cádiz
- University of Islas Baleares
- University of Sevilla
- University Complutense of Madrid. Group for the Study of Animal and Human Behaviour (GECAH).

Some of the main non-governmental organizations

- AlNITAK (Marine Environment Research and Education Centre)
- SEC Sociedad española de cetáceos (Spanish Cetacean Society)
- GREENPEACE Spain
- WWF Spain
- SEO/Birdlife
- CRAM Foundation, Conservation and Recovery of Marine Animals Foundation
- AULA DEL MAR Málaga – Andalucia (The voice of the sea, Sea Lecture Room)
- OCEANA (Regional Oceana for Europe)
- MUSEO DEL MAR DE CEUTA (Sea Museum of Ceuta)
- SOC Cádiz (Oceanic Cetacean Society)
- SUBMON (Conservation, study and awareness of the marine environment)
- ESPARTE Andalusian Society for the Study of Cetaceans
- ANSE Association of Sutheastern Naturalists, Región de Murcia
- BAIAENA Association for the study, conservation and research
- CIRCE Conservation, Information and Research on Cetaceans
- LA ISLA DE LOS DELFINES, Comunidad Valenciana (The Isle of Dolphins)

- CEPESMA Coordinating Committee for the Study and Protection of Marine Species
- AlNILAM (Research and Conservation Ltd.)
- AMBAR Society for the Study and Conservation of Marine Fauna

4.3.2. Legal texts of relevance to marine and coastal biodiversity (conservation, management of uses (fisheries, tourism, etc)

Laws and other Legal measures related to the conservation of biodiversity

- Law 42/2007, of December 13, on Natural Heritage and Biodiversity creates the Spanish Inventory of Natural Heritage and Biodiversity.
- In application of Law 42/2007, of December 13, the Strategic Plan for Natural Heritage and Biodiversity 2011-2020 (PEPNB), was approved by Royal Decree 1274/2011, of September 16, establishing the general framework planning for the conservation and sustainable use of natural heritage and biodiversity and incorporating the international and community commitments of Spain in the field of biodiversity, in particular those derived from the Strategic Plan 2011-2020 of the United Nations Convention on Biological Diversity and the European Biodiversity Strategy "Our life insurance, our natural capital: an EU biodiversity strategy for 2020", while establishing the general framework for biodiversity conservation in Spain.
- Law 42/2007, of December 13, on Natural Heritage and Biodiversity, stipulates the preparation of recovery plans and conservation plans for threatened marine species, with a áximum term of three years for taxa with category "endangered"and five years for the "vulnerable"category.
- Law 41/2010 for the Protection of the Marine Environment.
- Royal Decree 1599/2011 for the development of the Marine Protected Areas Network of Spain (RAMPE)
- Since 2009, the Report of the Spanish Inventory of Natural Heritage and Biodiversity has been published annually, where information on the status and trends of natural heritage and biodiversity in the Spanish territory and its most relevant changes is compiled and analyzed. The report also includes recommendations with the aim of facilitating the competent authorities to adopt measures for the recovery of natural heritage and biodiversity, especially when the values of the indicators cross defined thresholds.
- The standard lists of terrestrial species, marine species and terrestrial habitats present in Spain were approved by means of the Resolution of February 17, 2017, of the Secretary of State for the Environment. The standard list of the types of marine habitats present in Spain and their hierarchical classification have been established by the Resolution of March 22, 2013, of the General Directorate for Sustainability of the Coast and the Sea.

- The Royal Decree 1727/2007, of December 21st, establishing the measures for the protection of cetaceans,
- Ministerial. Order APM/427/2017, of May 4th, by which the measures for the protection, and the Conservation Plan for killer whal.es in the Strait and Gulf of Cadiz, are approved.
- Law 21/2013, of December 9, on environmental evaluation, which has a high degree of detail, so it has not been necessary to approve the regulations for the development of state environmental evaluation regulations, as had been foreseen in PEPNB. This Law groups in a single standard the environmental evaluation of plans and programs and the environmental impact evaluation of projects and, in turn, integrates the evaluation of repercussions on the Natura 2000 Network in the environmental impact evaluation, thereby anticipating the mandate of integration of evaluations contained in Directive 2014/52 / EU.
- Spanish Catalogue of Invasive Exotic Species, regulated by Royal Decree 630/2013, of August 2 • Order TEC / 1078/2018, of September 28, declaring the critical situation of ***Pinna nobilis*** in Spain (together with other land species).
- Law 2/2013, of May 29, on the protection and sustainable use of the coastline, deals with the protection of coastal ecosystems. Important measures are also being taken for the recovery and conservation of seagrass meadows (***Posidonia oceanica, Zostera sp., Cymodocea nodosa***) that have suffered considerable degradation in the past due to pollution, trawling, proliferation of invasive species (***Caulerpa taxifolia***) and the anchoring of pleasure boats.
- Law 30/2014, of 3rd December, on National Parks.
- Decree 25/2018 of July 27, on the conservation of ***Posidonia oceanica*** in the Balearic Islands
- Royal Decree 630/2013, of August 2, which regulates the Spanish Catalogue of Invasive Exotic Species.
- Royal Decree 817/2015, of September 11, for Protection and conservation of marine and coastal biodiversity is part of the Party's NSSD and other relevant sectoral development policies such as fisheries, industry, energy, agriculture, etc. by giving due regard to priority objectives, actions targets of the SAP BIO and the respective NAPs.

The legal and institutional background for marine conservation in Spain is reasonably complete, and complying with the provisions in the Barcelona Convention; the Biodiversity Protocol was ratified by Spain in 1999.

Measures regulating fishing activities

There is an increasing trend with regard to the fishing industry participation in initiatives to improve selectivity, reduce by-catch and improve management plans.

The General Secretariat of Fisheries has been promoting a mapping program for 16 years with the aim of knowing better the bottom and the hydrographic column of the platform and the continental slope. Following the increase in knowledge of this biodiversity, an important part of this objective has focused on making efforts to include an ecosystem and legal approach in fishing activities.

In order to achieve a balance between exploitation and conservation of marine natural resources, work is being carried out on the application of Council Regulation (EC) No. 1005/2008 of September 29, 2008, establishing a community system to prevent, discourage and eliminate illegal, unreported and unregulated fishing; and of Council Regulation (EC) No. 1967/2006 of December 21, 2006, on management measures for the sustainable exploitation of fisheries resources in the Mediterranean Sea. Actions are carried out to minimize discards, accidental catches of cetaceans, seabirds and turtles, and the effects on marine habitats and ecosystems, with the participation of the sectors and groups involved.

Order AAA/658/2014 of 22th April, regulates fishing with surface longline gear to catch highly migratory species. It includes measures to prevent the accidental capture of seabirds and turtles. It bans fishing of ***Lamna nasus, Phyrna lewini, S. mokarran, S. zygaena***. Some experts recall that this Order was not properly informed to users and so is being weakly implemented by those concerned, however, being likely unnecessary and mandatory for a large section of the fleet.

In the Marine Reserve Network, fishing pressure (exerted by the artisanal fleet) is within sustainable limits through the census of professional fishermen and recreational fishing authorizations.

In the framework of a project financed by the European Union (LIFE + INDEMARES), studies have been carried out to determine the fishing footprint in marine areas of the Natura 2000 Network and a proposal for measures to make traditional fishing activity compatible with conservation in these areas, with the collaboration and agreement of the fishing guilds that operate in them. These actions continue to be developed with the LIFE IP INTEMARES project (2017-2024).

In the area of fishing in international waters, and especially in the tuna sector, a management plan for FADs (Fish Aggregating Devices) and a strategy have been drawn up for the progressive replacement of traditional FADs by others with less impact on associated and non-fishing species (eco-FADs).

In the area of the bluefin tuna fishery, it has collaborated with the sector to develop advanced techniques for controlling the fishery, in application of the Bluefin Tuna Recovery Plan of the International Commission for the Conservation of Atlantic Tunas (ICCAT), which promotes a sensible reduction of effort and a rigorous control of fishing activity, with excellent results on the state of the stock. In this sense, the control measures by means of stereoscopic cameras guarantee a strict control of the catches of the species. Likewise, the establishment of electronic documents for traceability of specimens for marketing also contributes to making this fishery the most controlled in the world, with the consequent results on improving the stock and reducing scientific uncertainties. The introduction of binding resolutions and recommendations that establish management measures for the different stocks regulated by Regional Fisheries Organizations and the preparation of recovery plans for certain species in vulnerable situations are supported.

With the appropriate scientific advice, restricted activity areas or temporary closures have been determined based on the identification of vulnerable habitats or those areas that may be decisive for reproduction and / or fry.

On minimizing the by-catch of non-target species, studies are being carried out to improve the selectivity of fishing gears in order to avoid unwanted catches in order to comply with community and international regulations on birds, marine turtles, and cetaceans. The control of fishing activity is being strengthened through the implementation of the electronic logbook system, and a fisheries training plan has started in order to minimize injuries and reduce mortality from accidental capture of sea turtles. The results of these actions confirm the decrease in interactions, as monitored by scientific observers from the Spanish Institute of Oceanography (IEO). Projects have been developed to treat the reduction of discards -minimizing discards would provide small fish as food to threatened predators like turtles and seabirds- and the reduction of accidental catches of cetaceans, birds and sea turtles. The Spanish fleet is gradually incorporating scientific observer programs on board ships, in application of the different regional plans and recommendations.

The development of a strategy to reduce accidental catches of seabirds in Spanish fisheries is envisaged, in compliance with obligations arising from the EU, ACAP, OSPAR and Barcelona, and strategies and plans for threatened seabird species.

Measures on aquaculture

The "Guidelines for the Sustainable Development of Mediterranean Aquaculture" have been prepared through an agreement with the IUCN - International Union for the Conservation of Nature, and the General Secretariat for Fisheries, to serve as support for managers, producers and users of aquaculture in the Mediterranean region. These works have resulted in the publication of five guides: Interactions between aquaculture and the environment; Selection and management of sites for aquaculture; Responsible practices and certification in aquaculture; Aquaculture diversification: a tool for sustainability; and Aquaculture in continental waters.

Within the framework of the Strategic Plan for Spanish Aquaculture 2014-2020, approved at the Fisheries Sector Conference on April 16, 2015, projects related to the environment are being focused on mitigation and reduction of environmental impact, efficiency in use sustainable resources, and new methods of sustainable production.

Environmental Impact Assessment

There are regulations regarding environmental impact assessment Art. 46 and Art. 57 of amended Law 42/2007 on Natural Heritage. Also, Law 21/2013, of 9 December, on environmental assessment, implementing this Directive 2011/92/UE. This Law establishes rules governing the environmental assessment of projects, plans and programs that may have significant effects on the environment. The environmental assessment of plans and programs (Strategic Environmental Assessment) does not exclude the environmental impact assessment of the projects derived from them. With regard natural protected areas, art. 35 states that if a project may, directly or indirectly, affect the Red Natura 2000 spaces, a specific section must be included in the environmental impact study, in order to properly evaluate repercussions in these spaces, taking into account their conservation objectives.

Since the promulgation of the Law 21/2013 on Environmental Assessment, it is compulsory that seismic surveys to be developed within Spanish marine waters are subject to a formal environmental impact assessment. In this context, even though we do not have a specific legislation that obliges vessels to have MMO and PAM operative onboard, they may be required to be on the project as a result of the environmental assessment process in order

to mitigate the impact to marine mammals from seismic surveys and thus, observers should be trained, dedicated and/or experienced.

Other

The Royal Decree 416/2014, of June 6th, approves the Sectorial Plan for Nature and Biodiversity Tourism for the period 2014-2020.

Application of the precuationary principle: Law 11/2014 revising Law 26/2007 of 3 July on Environmental Liability Act 14/2014, dated 24th July, on Maritime Navigation Regulation (EU) No 1143/2014 of 22 October on the prevention and management of the introduction and spread of invasive alien species

Integrated Coastal management: Royal Decree 876/2014 of 10 October on General Regulation of Coastal Areas, for the Promotion of integrated planning and management of coastal areas, including áreas of ecological and landscape interest and rational use of natural resources.

4.3.3. Other regulations or plans, such as National plan for species

Related to the EU Marine Strategies

Given the importance that Spain poses on the binding UE Directive MSFD (on Marine Strategies), we need to bring here a short summary of those aspects related to biodiversity. In 2018 Spain approved its Marine Strategies, as reference tools to acquire the Good Environental Status by 2020; two of these strategies pertain the Mediterranean Sea (Levantino-balear and Estrecho y Alborán). The marine strategies published in 2018 are planning instruments and constitute the general framework to which the different sectoral policies and administrative actions with an impact on the marine environment must necessarily comply. To do this, they apply an ecosystem approach to the management of human activities

Within the framework of the Marine Strategies, the effectiveness of the 315 existing measures to achieve good environmental status of the marine environment has been analyzed. After evaluating and modifying them, and carrying out a gap analysis, 97 new measures have been proposed to be included, of which 25 are specifically aimed at improving marine biodiversity. The proposed program of measures was submitted to public consultation in the period from December 23, 2015 to March 15, 2016. For each of these new measures, a descriptive file has been drawn up with the demarcations in which it will be applied, the pressures on which it acts, the expected environmental effect, dates of implementation and indicators for its monitoring, among other characteristics. The mid-term report on the application of the measures, recently carried out, shows that 84 of the new measures are already underway, of which 64 are fully implemented.

It is worth noting the positive assessment of the European Commission on the assessment of the environmental status of the marine environment by Spain, being the best rated country in the field of the Member States of the Mediterranean and the second in the field of Member States of the Atlantic. Likewise, the European Commission places Spain as the country with the highest rating regarding the degree of adequacy of monitoring programs. Regarding the program of measures to achieve the good environmental status of the marine environment, new measures have been included with the aim of reducing the pressures to which biological communities and ecosystems are affected, as well as underwater noise.

Related to protected species

Following legislation in force, "It is forbidden to deliberately kill, injure, annoy or disturb wild animals, regardless of the method used or the phase of their biological cycle. This prohibition includes their retention and live capture, destruction, damage, collection and retention of their nests, their offspring or their eggs, the latter even when empty, as well as the possession, transport, trade and trade of live specimens or dead or their remains, including foreign trade".

Currently there are conservation strategies for the Balearic Shearwater (***Puffinus mauretanicus***), the most endangered seabird of Europe and for the Ribbed Mediterranean Limpet (***Patella ferruginea***), endemic gastropod mollusk in the western Mediterranean.

Spain has prepared a strategy for marine turtles, today under final review from the MITECO Ministry, as the loggerhead turtle (***Caretta caretta***), the green turtle (***Chelonia mydas***), the Leatherback turtle (***Dermochelys coriacea***), and all other turtle species that may ocassionaly occur in our waters,

Regarding the management species in Annexes II and III to the Protocol are automatically included in the Spanish List of Wildlife Species in Special Protection Scheme, approved by Royal Decree 139/2011, of 4 February, which develops some of the contents of Chapters I and II of Title III of the amended Law 42/2007 of 13 December, on Natural Heritage and Biodiversity, such as the guidelines for the periodic assessment of the conservation status of the species included in the List and in the Catalogue of Endangered Species.

On sharks and rays, by 10 July, 2012, the European Member States voted in favour of listing ten species of threatened under Annex II (List of Endangered and Threatened Species) of the Protocol concerning Specially Protected Areas and Biological Diversity: ***Gal.eorhinus Galeus***, (Tope); ***Isurus oxyrinchus*** (Shortfin mako); ***Lamna nasus*** (Porbeagle); ***Leucoraja circularis*** (Sandy skate); ***Leucoraja melitensi***s (Maltese skate); ***Rhinobatos cemiculus, R. rhinobatos*** (Blackchin guitarfish, Common guitarfish); ***Sphyrna lewini*** (Scalloped hammerhead); ***S. mokarran*** (Great hammerhead); ***S. zygaena*** (Smooth hammerhead). The best available data show that these species - including hammerhead sharks, shortfin makos, and tope - have undergone severe population declines (> 99%) and/or vanished from parts of the Mediterranean where they were once common. All ten species were previously listed under Annex III, which requires exploitation to be regulated - yet they remained threatened by overfishing and required stronger protection.

<u>Action Plans for species in the Annexes</u>:

- For the Balearic Searwater (***Puffinus mauretanicus***) in Spain, a conservation strategy is recently being updated and the species working group reactivated in 2016. International coordination is also necessary with neighbouring countries.
- A Recovery Plan for Audouin's gull (***Larus audouinii***) in the Autonomous Community of Valencia was also launched.

- On Cetaceans the Programmes of Measures for marine strategies actions for the Marine Strategies include Risk analysis of the by-catches of turtles, cetaceans and marine birds and a Conservation plan for the killer whale in the Strait of Gibraltar and Gulf of Cadiz.
- Order APM / 427/2017, of 4/5/2017, approves the protection measures and the Conservation Plan of the Killer Whale of the Strait and Gulf of Cádiz. Two critical areas for this species are designated as defined on the annex II, "Ensenada de Barbate, Conil y Banco Majuan" and "Estrecho central". In the critical area "Ensenada de Barbate, Conil y Banco Majuan" both the active systems for underwater or underground exploration, and whale watching activity (neither commercial, private or scientific type) are banned during the critical period for the species, which takes place from 1 th March to 31th August. 3.

Related to exotic/invasive species:

Spain approved in 2013 the Spanish Catalogue of Invasive Exotic Species (CEEEI) in order to establish mechanisms for the prevention of entry, detection, eradication and control of these species. The Catalogue's main objective is to provide information regarding the distribution and abundance of all these species, allowing the design of the necessary measures to prevent the introduction and spread of invasive alien species into the natural environment, as well as their monitoring. A Working Group has been launched to promote coordination between administrations, promote the exchange of information, as well as the evaluation and diagnosis of control strategies for the most problematic species. This goal has been developed from objective: 2.4 of the Strategic Plan for Natural Heritage and Biodiversity.

The Ministry has set up offcial working groups on Invasive Alien Species to promote co-ordination between administrations and encourage the exchange of information, as well as assessment and diagnosis control strategies for the most problematic species. In addition, Law 33/2015 of 21 September, improves the protection and conservation of species under threat, by regulating the importation of species likely to damage biodiversity and ensuring that the reintroduction of species that have disappeared is done with all guarantees. In September 2019 a specific working group was set up by the Ministry, with representation of all regional goverments, to cope with the impact from the invasive alga ***Rugulopteryx okamurae***, which to date is possibly the most disturbing invasive species on the coasts of Andalucia.

There is a prohibition of ***Caulerpa taxifolia*** importation; code of conduct for net fishers to get ride of ***Caulerpa cylindracea*** putting the nets to rest under black cover. The Annual Aquaculture Strategic Plan (2015) proposes the creation of a group of experts under the coordination of the Ministry to monitor the effective implementation of the legislation on exotic species, taking into account the interactions between exotic aquatic species introduced for reasons beyond the aquaculture activity and the activity itself, and the possible damage that these species may cause to the sector. The ultimate goal of this proposal of action is to avoid legal uncertainty in the sector due to legislation in force, proposing the necessary modifications.

Also a campaign for the prevention, minimization and elimination of Invasive Alien Species (IAS), promoted by the Spanish Federation of Municipalities and Provinces, through the Network of Local Governments plus biodiversity authorities, in collaboration with the Ministry and with the assistance of a technical working group composed of representatives of local governments. The aim of this campaign is first, to inform, educate and sensitize local governments about the publication of the Royal Decree 630/2013, of 2 August, approving the Spanish Catalogue of IAS, and second, the need to incorporate into their daily actions, programs that help to eliminate or to reduce the presence of IAS in urban areas and to prevent the introduction of new IAS and that, precisely, because the cities are a major gateway and trade of alien species.

The creation, coordination and follow-up of working groups on exotic and invasive species, with the Autonomous Governments and advisory groups, has been acomplished.

4.3.4. List the relevant International Agreements to which the country is a Party

- Ramsar Convention, relating to Wetlands of International Importance especially as Waterfowl Habitat. Instrument of Adhesion BOE 20.08.1982. Instrument of Ratification of the Paris Protocol BOE 07/14/1987.
- Convention on the Protection of World, Cultural and Natural Heritage. Paris on 11/23/1972. BOE ratification instrument 1.07.1982. (section 1, b), "Natural sites on the World Heritage List, of the Convention on the Protection of the World Cultural and Natural Heritage".
- OSPAR: Oslo and Paris Convention for the Protection of the Marine Environment inthe Northeast Atlantic, 1998. Instrument of ratification BOE 21.02.2001 (section 1, c) "Protected areas, of the Convention for the protection of the Atlantic marine environment of the Northeast (OSPAR)".
- Barcelona Convention: Convention for the Protection of the Marine Environment and the Mediterranean Coastal Region. Barcelona, 1976. Instrument of ratification BOE 21.2.1978. Reforms that include remuneration of articles in 1995 (section d) "Specially Protected Areas of Importance for the Mediterranean (SPAMI), - of the Convention for the Protection of the Marine Environment and the Mediterranean Coastal Region).
- ACCOBAMS: Intergovernmental agreemen on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area.
- ACAP. Agreement on the Conservation of Albatrosses and Petrels.
- International Whaling Commission: with. a current membership of 89 Governments from countries around the World.. In 1986 the Commission introduced zero catch limits for commercial whaling. This provision is still in place today,
- Global Geoparks Network. UNESCO Executive Decision in June 2001 (161 EX / Decisions, 3.3.1) (section e) "Geoparks, declared by UNESCO" 2.
- Biosphere Reserves Network, according to the UNESCO "Man and Biosphere" Program of 1971 (section f) "The Biosphere Reserves, declared by UNESCO".
- Biogenetic Reserves Network created according to Resolution 76/17 of the Committee of Ministers of the Council of Europe (03/15/1976) (section g) "The biogenetic Reserves of the Council of Europe".

- GFCM: General Fisheries Commission for the Mediterranean 19/10/1953 GFCM; and ICCAT Tuna fishing agreements:
- Convention on Biological Diversity (Rio, 1992) 13/06/1992 21/12/1993 29/12/1993
- Convention on International Trade in Endangered Species of Fauna and Flora (CITES - Washington, 1973) 16/05/1986 28/08/1986
- Convention on the Conservation of European Wildlife and Natural Habitats (Berne, 1979) 19/09/1979 13/05/1986 01/10/1986
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979) 22/01/1985 01/05/1985
- Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention)
- International Commission for Scientic Exploration of the Mediterranean International
- Convention for the Regulation of Whaling (Washington, 1946) 06/07/1979 OSPAR

United Nations Convention on the Law of the Sea (Montego Bay, 1982) 04/12/1984 15/01/1997 19/10/1953.

Related official websites in Spain:

- Inventary: http://wms.magrama.es/sig/Biodiversidad/INENP/wms.aspx
- LIC: http://wms.magrama.es/sig/Biodiversidad/LICS/wms.aspx
- ZEPA: http://wms.magrama.es/sig/Biodiversidad/ZEPA/wms.aspx
- LIC and ZEPA: http://wms.magrama.es/sig/Biodiversidad/RedNatura/wms.aspx
- OSPAR: http://wms.magrama.es/sig/Biodiversidad/OSPAR/wms.aspx
- Ramsar: http://wms.magrama.es/sig/Biodiversidad/RAMSAR/wms.aspx
- MaB: http://wms.magrama.es/sig/Biodiversidad/MAB/wms.aspx
- ZEPIM: http://wms.magrama.es/sig/Biodiversidad/ZEPIM/wms.aspx
- National Parks of Spain: Annual reports on the management of National Parks in
- Spain: http://reddeparquesnacionales.mma.es/parques/index.htm
- Natura 2000 Network. http://www.magrama.gob.es/es/biodiversidad/temas/espacios-protegidos/red-natura-2000/default.aspx where cartography, coordinates and boundaries of ZEPA and LIC are found.
- Marine monitoring programmes from the Junta de Andalucía: http://www.juntadeandal.ucia.es/medioambiente/site/portal.web/menuitem.220de8226575045b25f09a105510e1ca/?vgnextoid=f51bb2c42f207310VgnVCM2000000624e50aRCRD
- Other non-official information on proitected áreas by EUROPARC-Spain http://www.redeuroparc.org/observatorio_espacios_protegidos.jsp

4.4. Transboundary issues and existing, planned or needed coordination / harmonisation at subregional or regional level

In general terms, we need to underline the close coordination with other EU countries under the Marine Strategy Framework Directive, which recalls the Member States to coordinate through the Conventions on regional seas.

Spain and France collaborate for the best management of the cetacean corridor. Besides, Spain agreed, together with France, Italy and Monaco, to carry out an assessment on the maritime traffic pressure over cetaceans, and might, if the conclusions suggest so, propose to the IMO the establishment of a Particularly Sensitive Sea Area (PSSA) in the northwest Mediterranean area.

For the Balearic Shearwater (***Puffinus mauretanicus***), a Spanish Conservation Strategy is being updated and the species working group was reactivated; an international WG meeting recently took place in coordination with other countries such as France, Portugal and the UK.

Patella ferruginea is also subject of a Conservation Strategy (MITECO 2008) whose conservation measures include monitoring the populations (monitoring controls and exhaustive censuses) of the national waters; the definition and mapping of critical and sensitive areas in relation to their distribution, as well as preparing specific methodological guides for evaluating the environmental impact on the ***Lapa ferrugínea*** and its habitat; drawing up a map of risk areas and promoting the adoption of legislative or regulatory measures. The Strategy recommends collaboration with Morocco to face the control of any activities hampering the water quality in the environments of the Chafarinas islands and the Cities of Ceuta and Melilla.

The fast spreading of the ***Rugulopteryx*** alga in the Strait and the Alboran Sea recommends specific coordination with Morocco and Algeria; this collaboration may be enlarged to cope with the conservation needs of some other threatened species such as cetaceans and elasmobranchs (sharks and rays).

General collaboration with other Mediterranean countries is faciltated through the active participation of Spain on biodiversity concerns through the Barcelona Convention and on fisheries and stock assessment within the GFCM and ICCAT.

In the area of fishing in international waters, and especially in the tuna sector, a management plan for Fish Aggregating Devices, and a strategy have been drawn up for the progressive replacement of traditional FADs by others with less impact on associated and non-fishing species (eco-FADs). In the area of the bluefin tuna fishery, it has collaborated with the sector to develop advanced techniques for controlling the fishery, in application of the Bluefin Tuna Recovery Plan of the International Commission for the Conservation of Atlantic Tunas (ICCAT).

5.

Asessment of marine and coastal status and pressures on marine and coastal areas

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5.1. Marine and coastal status with relevant pressures for marine and coastal areas

Limitations

Nowadays, we must consider a general knowledge delay about marine ecology, as related to terrestrial research. Many marine research projects are still developing methodologies, while others offer preliminary diagnosis on partial or local aspects of marine ecology, biodiversity, and its complex relations to geographical diversity and to human uses.

The situation is still hampered by the fact that the extense marine waters in Spain hold the highest marine species and habitat diversity in the Mediterranean region. Researchers also underline the existence of marked year-to-year fluctuations in the Mediterranean oceanographic conditions, so the historial data series, around 10 years old, may be too short to conclude about some robust trends.

Spain has recently developed (MITECO 2019) a wide assessment on marine and coastal biodiversity, complying with the binding commitments related to the EU MSFD and by both Habitats and Birds Directives,. As a result, and on strict scientific terms, the biodiversity status can not yet be accurately assessed throughout, given the insufficient information on many of the detailed indicators related to species, marine bottom habitats, trophic network, water quality and pollution issues, in such an extensive marine territory. However, we can report considerable advancement on all of these fields.

In respect to Order AAA/658/2014 of 22th of April, regulating fishing with surface longline,it should be properly informed to concerned users.The implementatipon of the electronic logbook needs to be strengthened to properly document bycatch, including information on species and number of individuals involved, together with the necessary training to fishermen users.

Finally, within the network of marine protected areas, there is a need to increase the surface of no-take, no-entry, strictly protected zones. Recent literature (e.g. Lester *et al.* 2009; Marshall *et al.* 2019) suggests that MPA buffer zones, even subject to more strictly regulated fisheries, do not guarantee the conservation for many species, and that even small no-take zones can provide more benefits to external fished areas (i.e. spillover, larval export) than large buffer zones. MPAs are expected to replenish nearby exploited populations through the natural dispersal of young, but also, larger fish have disproportionately higher reproductive outputs. One hectare of ocean in which fishing is not allowed produces at least five times the amount of fish as an equivalent unprotected hectare. That means that doubling a fish's mass more than doubles its reproductive output. This, coupled with higher fish populations because of the no-take rule means that MPAs produce between 5 and 200 times (depending on the species) more offspring per unit area than unprotected areas (Marshall *et al.* 2019). At present in the Mediterranean region, the coverage of no-take/no-entry zones is just of 0,04%; while in Spain, it remains even lower (0,019%). The Mediterranean MPA Forum (2016) agreed to raise these low percentages to at least a 2% of the Mediterranean Sea by 2020. The EU Biodiversity Strategy to 2030 considers raising the coverage of "strictly protected", concept not yet defined, to 10% .

Progress

During the period 2010-2020 there has been a significant progress from which some conclusions can be drawn, most of them based on the prominent efforts done through the Ministerial Report on the Law on the Natural Heritage and Biodiversity of Spain (MITECO 2018), the extense Spanish Inventories on marine species and habitats, the most and recent national reports to the EU MSFD (2019), the CBD (2019), ACCOBAMS (2019), the Barcelona Convention (2016), OECD (2015), the contribution from over 20 NGOs specialized in the conservation of marine biodiversity, plus an extense list of scientific papers, all of them detailed in **Annex 3**.

Species inventories: the work is mostly completed, as compiled in the extense and detailed Spanish Inventory of Natural Heritage and Biodiversity (IEPNB)[1], and the Spanish Inventory of Marine Species (IEEM), with special attention to species that require specific conservation measures or have been declared of EU interest.

Information on marine species: The distribution and relative abundance of most of the common and protected marine species is described in the Spanish Inventory of Marine Species (IEEM).

Exotic and invasive species: The invasive macrophyte algae species group is expanding; also the blue crab (***Callinectes sapidus***) and the spider crab (***Percnon gibbesi***) expansion seems to be accelerating in recent years.

The Spanish Catalogue of Exotic and Invasive Species (CEEEI), established under the Royal Decree 630/2013 sets the mechanisms to prevent their introduction and to facilitate their detection, eradication and control. There is a prohibition of ***Caulerpa taxifolia*** importation, and a code of conduct for net fishers to get rid of ***Caulerpa cylindracea*** putting the nets to rest under black cover. The Ministry has set up an official Working Group on Invasive Alien Species to promote coordination between administrations and to encourage the exchange of information, as well as for assessment and control strategies for the most problematic species. A campaign for the prevention, minimization and elimination of Invasive Alien Species has been promoted by the Spanish Federation of Municipalities and Provinces, through the Network of Local Governments + Biodiversity authorities in collaboration with the Ministry, and with the assistance of a technical working group composed of representatives of local governments.

Information on marine habitats: The Spanish Inventory of Marine Habitats (IEHM) includes 886 habitat types. It lays the foundation for designing short to medium term conservation plans for endangered marine habitats, consisting of three main elements: the standard list of the types of marine habitats present in Spain, the description of habitats, their hierarchical classification, and their spatial distribution. Descriptive sheets are been gradually developed for each of the characteristic or singular habitats of Spain's marine waters. Its extension is enormous so we recommend visiting the website[2]. Protocols to harmonize cartography are being developed.

1 https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacional.es/inventario-espanol-patrimonio-natural.-biodiv/default.aspx

2 https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/biodiversidad-marina/habitats-especies-marinos/inventario-espanol-habitats-especies-marinos/fichas-inventario-habitats-marinos.aspx).

In general terms, the benthic habitats identification and cartography have been developed in some areas mostly by the IEO, but follow-up programmes are needed now to evaluate their structure, functions, and trends. In some cases, particularly in coastal habitats, the cartography was performed at low resolution and this should be improved; there is also a need to extend the cartography into other unexplored areas, and to gradually complete the information in the Spanish Inventory of Marine Habitats (IEHM). As for today, most habitats are monitored by the IEO in the declared SCIs and SACs, and also by the autonomous governments and other academic insititutions. In general, there is not enough information, to date, to conclude on their condition and conservation status, other than for the reefs, submarine structures linked to gas emissions, and underwater caves.

Indicators: Progress has been made in developing the IEPNB Indicator System, although it is not yet completed. A battery of indicators / descriptors has been identified and documented, and the data updated in the annual reports. The Ministry's Biodiversity Foundation has been developing since 2011 over 200 marine conservation projects, from which over 60% have developed indicators and in some cases proposed follow-up systems to monitor species demographic patterns and threats.

Protected areas: Spain's protected area continues to grow in coverage and representativity. Only in 2015, it raised from a coverage of 6.3% to reach 7.99% of the marine surface, a total 8,524,416 ha. But it particularly grew in 2018 to reach the 28,8% of the Spanish jurisdictional waters in the Mediterranean with the extension of the Cabrera National Park up to 90,000 ha, and the establishment of the SPAMI Cetacean Migration Corridor of 4,600,000 ha between the Peninsula and the Balearic islands.

Institutional capacity: The legal and institutional background for marine conservation in Spain is reasonably complete. Perhaps the most remarkable point is coherence and complementarity between the different actors at the National level, particularly 5 Ministries in charge of Environment (MITECO), Fisheries (Ministry of Agriculture, Fisheries and Food), Science (IEO and CSIC on marine research), Economy (through Industry), and the enforcement of marine regulations (SEPRONA and the Maritime Service of the Guardia Civil, Ministry of the Interior). Also, the seven Autonomous Communities riberine of the Mediterranean Sea (Andalucia, Baleares, Catalonia, Murcia and Valencia, plus the autonomous cities of Ceuta and Melilla) all have their own environment, fisheries, and marine enforcement institutions.

All these institutions coordinate and hold shared activities, for example the Marine Reserves, or the centres for wildlife and the stranding of cetaceans. The Commission of the Spanish Inventory of Natural Heritage and Biodiversity, as an inter-administrative coordinating body on the subject, makes part of the European Environment Agency through the EIONET Network. At least 10 Universities are collaborating in the study of marine biodiversity.

To avoid duplication of efforts and to ensure that the information is made available, the MITECO has developed the "InfoMar" platform including data needed for the Marine Strategies descriptors, for the MSP needs, data and metadata from other administrative sources outside the Ministry, or the references to find it.

We estimate that the institutional capacity can be strengthened with more human and financial resources as the present commitments are new and strongly demanding, and will be ever growing as challenges in the future. However, to date only 5 civil servants are appointed in the central offices related to marine conservation.

Participation of the economic sectors and the public: The Ministry for Ecological Transition and Demographic Challenge (MITECO) together with the IEO, the Spanish Fishing Confederation (CEPESCA)., and specialized NGOs as WWF and SEO/Birdlife, are partners in the INTEMARES project, the broadest marine conservation Project in Europe (deemed until 2024); together with the Biodiversity Foundation of the MITECO, who has launched to date over 200 marine conservation projects all of them under the basis of active participation in their design and development. As a result, there is an enormous wealth of information on fundamental topics to be applied in planning and management processes, but most importantly, it gained a strong legitimacy and trust among the main actors in the conservation and management of the marine natural resources.

The integration of biodiversity conservation objectives in other sectoral policies (rural development, agriculture, forestry, fishing, tourism, hydrology, etc.) is one of the goals of the Strategic Plan for Natural Heritage and Biodiversity, which seeks to encourage consideration of the biodiversity and ecosystem services, including their economic value, in public and private activities. Regarding the tourism sector, it is worth highlighting the preparation of the Nature and Biodiversity Tourism Sector Plan.

5.2. Critical impacts and effects on marine and coastal biodiversity

Remarkable issues on groups of species: Four autochthonous species of angiosperms (*Zostera marina, Zostera noltii, Posidonia oceanica* and *Cymodocea nodosa*) are considered in clear regression, except in specific areas such as the Cabo de Gata. The situation of ***Zostera marina*** is particularly Critical The status of ***Posidonia*** meadows in Andalucía is deemed good, particularly in Almeria where the most extensive meadows occur (83 Km^2). In the Balearic islands, which holds the 50% of all the ***Posidonia*** coverage in Spain (650 Km^2), up to 6 km^2 of ***Posidonia*** meadows are estimated lost every year due to wáter pollution and mooring; the habitat has been strongly protected through a specific Decree (27/07/2018), and the 75% of meadows have been included into protected Natura 2000 sites. The general trends in Posidonia meadows, their impacts from invasive species, trawling, pollution, mooring, and sand extraction, will be assessed in the Atlas for marine meadows of Spain expected in 2021.

Invertebrates: On protected molluscs, the status of ***Patella ferruginea*** is deemed critical given the intensive recollection of the bigger sized individuals. and the low recruitment rates. ***Pinna nobilis*** has suffered an unprecedented mortality event since 2016 due to the appearance of the parasitic protozoon ***Haplosporidium pinnae***. Crustaceans under serious threat are the spider crab (***Maja squinado***), today under a reintroduction Project, or ***Aristaeomorpha foliácea*** of which only isolated individuals are captured from time to time. The red shrimp (***Aristeus antennatus***) is also overexploited.

Vertebrates: On the cetaceans, after 61 scientific papers (2011-2018) and monitoring 5,398,297 long-line hooks, only 56 accidental captures and 15 stranding events were registered. However, the bottlenose dolphin (***Tursiops truncatus***), because of its diet, in some places in the basin can be considered a sympatric "species" with trawling activities.

- Ship-strikes are a special threat regarding sperm whales along the Balearic Island waters and the Gibraltar Strait.
- Regarding whale watching activity, critical areas have been designated for the killer whales in the Strait and the Gulf of Cadiz, which will benefit other cetacean species, because active systems for underwater or underground exploration are banned, neither whale watching activities allowed six months of the year.
- Regional governments in Andalucia, Baleares, Catalonia, Murcia, and Valencia, have established stranding centres following strict protocols established by experts. Spain is about to establish a national stranding network, to gather the information that all these regional centres generate and take care of tissue samples.

On marine birds, the information has improved sharply during the last years but it is still fragmented. The most worrying situation is over the Balearic Shearwater with an annual decline of the species at 14%, and related accidental catches to 45% of adult mortality; its low adult survival (0.81) predicts that, based on the optimistic assumption of a breeding population of ~7,000 pairs, the species may disappear in about 61 years. Audouin's Gull populations are also decreasing.

Economic activities:

- The main pressure of the fishing activity is the extraction and/or mortality of target and non-target species; only one of the 23 stocks (4%) remains in a good status, while the status of other 12 stocks (52%) is either unknown (without analytic evaluation) or uncertain (non-concluding evaluation).
- Control of the fishing activity was strengthened through the implementation of the electronic logbook system, and a fisheries training plan has been carried out to minimize injuries and reduce mortality from accidental catch of sea turtles. The Spanish fleet is gradually incorporating scientific observer programs on board ships.
- Guidelines for the Sustainable Development of Mediterranean Aquaculture have been prepared through an agreement between IUCN and the Spanish General Secretariat of Fisheries.
- Tourist pressure is also important, both direct (nuisance) and indirect (loss or alteration of the habitat due to urban development, beach regeneration, waste water, etc.). Besides, annoyances due to light pollution are registered as affecting the populations of Balearic Shearwaters.
- Recreational activities also cause relevant impacts over protected species in coastal waters, mainly the mooring from recreational vessels over Posidonia meadows, particularly during the summer season, and the acummulated preassure effect of recreational fishing (legal and illegal) which in some parts of the Levantino-Balear Demarcation can exceed that of the professional artisanal fisheries.

6.

Assessment of National priority needs and response actions

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6.1. National priority needs

Related to marine biodiversity:

- The benthic habitats identification and cartography need be extended to many other sites, particularly infralittoral and bathyal, their resolution improved in coastal habitats, and follow-up programmes are needed to evaluate their structure, functions and trends, so to gradually complete the information in the Spanish Inventory of Marine Habitats (IEHM).
- Following the ecosystem approach, some experts claim for the recovery of "forage fish" (mainly small pelagic fish), which show severe declines and hence affect the viability of some top predators such as seabirds, today to some extent depending on diminishing discards.Many biological indicators have been identified, but now need to be developed, providing information on the ecology-biology and resilience of vulnerable and habitat-forming species is desirable in order to improve the indicators to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures.
- The extension of some marine protected areas needs to adapt following recent research to protect threatened elasmobranch species.
- In particular, indicators to be developed relate to the follow-up of the Marine Strategies, such as for the changes in trophic levels of predators, biomass and abundance of functional groups; changes in the indices of functional groups of plankton, biomass and species composition and spatio-temporal distribution of zooplankton; changes in the reproductive success of seabirds in relation to food availability.
- The development of a strategy / action plan to reduce accidental catches of seabirds in Spanish fisheries is envisaged (in compliance with obligations arising from the EU, ACAP, OSPAR and Barcelona, and strategies and plans for threatened seabird species).
- Also the research and actions for the conservation of the Balearic Shearwater need be continued and strengthened, in particular through the monitoring programme *MWEES ESAI AV 4_Interaccionpesca*, and sub-programme *MWEES-ESAI -AV-2_ Productividad*, which will be open to public consultation process during the summer of 2020. The species requires control of predators in breeding colonies; evaluation and reduction of bycatch in longlines and other fishing gears; design and implementation of a monitoring plan that allows demographic estimates; censuses in the breeding colonies and search for potential new breeding sites.
- As per conservation plans and strategies, the following are scheduled for the period 2021-2022: sea turtles, shag cormorant, balearic shearwater, manx shearwater (***P. puffinus***), the harbour porpoise, and all cetaceans present in our waters.
- For Audouin's Gull, due to its great mobility, all colonies need to be monitored simultaneously.
- There is a need for a global analysis of the abundance and distribution of cetacean populations in the Spanish Mediterranean, to update and compare with the information obtained 20 years ago, also providing a basis to adapt conservation measures in MPAs.

- The networks following stranded cetaceans, need to be strengthened. We still lack enough logistic capacity to manage the urgent stranding situations of marine species. The Ministry's role is to coordinate the stranding network and in order to conserve the species, to take biometric data and tissue samples in stranded animals as well as transporting, analyzing, and conserving these samples in tissue banks. In addition, the Ministry takes the clinical care of the species when there is an impact on the conservation of the species. In order to achieve effective coordination, efforts are being made to sign collaboration agreements with rescue associations and port authorities. The maintenance of the updated Spanish cetacean stranding database (BEVACET) is done through an agreement between the Ministry and the University of Valencia.
- For invasive species, the abundance and trends of different species, particularly invasive algae such as ***Rugulopteryx*** is an urgent need given its fast spreading and economic impact, and the highly expanded blue crab, remains to be determined. The creation, coordination and follow-up of Working Groups on exotic and invasive species, with the Autonomous Governments and advisory groups, is foreseen.
- The fast spreading of the ***Rugulopteryx*** alga in the Strait and the Alboran Sea recommends specific coordination with Morocco and Algeria; a collaboration that may be enlarged to cope with the conservation needs of threatened species such as cetaceans and elasmobranchs (sharks and rays).
- In general, programs for restoration of habitats, communities and vulnerable species populations should start to be implemented, as well as to increase research on techniques and gears for minimizing some human impacts due to trawling, coastal infrastructures, etc.

Data access and sharing:

- Scattered information from many projects on cartography, species distribution and populations, improvements in tourism and fisheries management, good practices, establishment of indicators, monitoring protocols, among many others, deserve to be synthesized and communicated to researchers, managers and users, in order to be applied to the conservation of species, habitats, and protected sites. This is crucial to avoid duplication of efforts and to ensure that the information is made available; the MITECO "InfoMar" platform is planned for this objective and should be strengthened.
- Researchers ask for harmonized bathymetric information of common access to all scientific needs specially for sample points, including data obtained by the different insitutions involved in all categories of marine protected areas.
- A flow of information and data is needed accross institutions and government levels (regional to national). There is a large ammount of data in different institutions that may improve habitat mapping, but its access needs to be facilitated to researchers.
- MITECO's platform INFOMAR and protocols to harmonize cartography need be strengthened and widely used.
- Cartographycal methodologies should be harmonized with other Mediterranean countries
- Access to information to be facilitated for managers, experts, and decision-makers, as well as to stakeholders and the general public.

Related to marine protected areas:

- Enforcement in MPAs needs to be strengthened, mostly through the adoption of new remote technologies, and easing sanction and juridical procedures.
- Recently (MITECO 2020) the Council of Ministers of Spain approved a declaration commiting to protect a 30% of the Spanish marine waters by 2030, in advance of the new international biodiversity framework to come, calling for new protected areas and OECMs to be identified, declared and developed.
- A sharp increase is needed in the declaration of strictly no-take/no-entry marine protected zones (today only a 0.019% of the Spanish Mediterranean waters).
- A harmonized monitoring system should be developed to follow-up the effectiveness of marine and coastal protected areas.
- However, there is also a shortage of human resources at the IEO, other research institutions, and marine protected areas, to carry out and maintain monitoring programmes.
- The recently and widely expanded marine N2000 network in Spain faces several challenges: to conclude the development of participated management plans, to guarantee the effective protection and management of the sites, to trascend their borders for the integration of marine sectorial policies, and to consolidate integrated governance and collaboration within the main institutional and economic actors in the marine environment.
- There is also need to strengthen coordination with other Administrations operating in the marine environment: DGMM, DGGC, Defense, SGPesca (Fisheries), both at national and autonomous levels, in order to optimize surveillance, control and sanctions, not only related to protected areas.
- The National MPA Network of Spain (RAMPE) needs to develop its Master Plan, consolidating a national MPA system under a governance structure ensuring coordination between all the dedicated administrations, optimising the use of resources, and the sharing of information and experience between the different levels of administration and with the sectors involved.
- The progress expected on marine cartography, and the large extension of marine protected areas in Spain, should provide important information to draw up maritime spatial plans as soon as possible, to comply in date with the MSP Marine Spatial Planning UE Directive and the Ecosystem Approach (EcAp) commitments.
- As provided in Article 46 of Law 42/2007, the national authorities need to evaluate the repercussions of all plans, programs or projects in protected areas under state competences. This responsability is hampered by the serious shortage of human resources in the Ministry, 5 civil servants who also need processing the authorizations of all the activities subject to regulation, and need the design and application of a sanctioning procedure that, today, has not yet been articulated.

Other:

- In coastal areas, eco-and-soft tourism should be promoted, and the impact of recreational activities controlled and mitigated, including recreational fisheries (both legal and ilegal), which in parts of Catalonia and the Balearic islands may produce higher biomass catches than professional artisanal fisheries.
- Develop additional programs for the restoration of habitats, communities and vulnerable species populations
- Increase research on techniques and gears to minimize some human impacts from trawling, coastal infrastructures, etc...
- Control companies that advertise prohibited activities such as diving with dolphins, feeding turtles, boats that offer whale watching without authorization, or the capture of specimens of protected species, as well as other possible infractions committed on protected habitats, such as mooring on protected phanerogams. It is also very necessary to strengthen our capacities to be able to initiate proceedings and sanctioning processes.
- Capacity building (Gill *et al.* 2017), specifically for marine conservation objectives, targeting managers and field technicians, local environmental, fisheries, and enforcement authorities, needs to be strengthened and motivated. Recently, marine turtles are starting to nest in some Mediterranean beaches, and specific training is needed (beach cleaning staff, local police and civil protection, stranding and recovery center's network staff, volunteer networks).
- We also need further training in contracting and processing agreements, in sanctioning procedures, and legal support.
- The potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity should be continuously assessed.
- Financial resource mobilisation, stronger financial means, are needed given the weak means, both human or material, for the existing and ever growing demands of marine conservation.
- Stronger communications, with new messages, new media including social media, professionalized management and new alliances, are all needed to prevent biodiversity impacts, invasive species, and so that marine conservation is gradually perceived by decision makers, economic sectors and the general public, as an urgent need and a sound investment, rather than a cost.

6.2. Urgent actions proposed

- Enforcement in MPAs needs to be strengthened, mostly through effective complementarity and coordination of all related authorities (Defence, Interior, Transportation, Fisheries, Environment), both at national and autonomous levels, through the adoption of new remote technologies, and easing sanction and juridical procedures.
- The recently and widely expanded marine N2000 network in Spain faces several challenges, mainly to conclude the development of participated management plans, to guarantee the effective protection and management of the sites, to consolidate integrated governance and collaboration with the main institutional and economic actors in the marine environment.
- 39 SPAs (for birds) have been declared, their management plans have been drafted but need to go through their participatory process and be approved. The same process is needed for the Sites of Community Interest (SCI) before been declared as Special Areas for Conservation (SACs). Participatory processes, both in their phase of preparation as well as in their implementation, are a solid methodoly but very time-consuming for area officials.
- A sharp increase is needed in the declaration of strictly no-take/no-entry marine protected zones (today only a 0.019% of the Spanish Mediterranean waters).
- The National MPA Network of Spain (RAMPE) needs to develop its Master Plan, consolidating a national MPA system under a governance structure ensuring coordination between all the dedicated administrations, optimising the use of resources, and the sharing of information and experience between the different levels of administration and with the sectors involved.
- A harmonized monitoring system should be developed to follow-up the effectiveness of marine and coastal protected areas.
- The biodiversity officers in the Ministry headquarters, only 6 civil servants following all aspects related to marine biodiversity, habitats, and protected areas, for all the national and international commitments, drastically need more human resources and financial support to face the growing commitments and needs of marine conservation at national and international levels.
- Human resources should be reinforced to assess the 52% of the fishing stocks (25 out of 48) which today present largely insufficient data, and to cope with the growing needs on marine monitoring and follow-up.

Related to marine biodiversity:

- Marine habitat cartography needs to be completed at a convenient resolution, and follow-up programmes for benthic habitats are needed to evaluate their structure, functions and trends, together with increased information on the ecology-biology-resilience on key species such as vulnerable, threatened, endemic, habitat-forming and invasive species.

- Indicators need be developed to follow-up of the Marine Strategies, such as for the changes in trophic levels of predators, biomass and abundance of functional groups; biomass and species composition and distribution; spatial zooplankton; changes in the reproductive success of seabirds in relation to food availability.
- The national network following stranded cetaceans, need to be strengthened with human resources and financial support.
- The development of a strategy/action plan to reduce accidental catches of turtles, seabirds, and cetaceans in Spanish fisheries, and the conservation plans and strategies for turtles, shearwaters, shags, and harbor porpoise should be concluded by the end of 2022.
- There is a need for a global analysis on the abundance and distribution of cetacean populations in the Spanish Mediterranean, in order to update and compare with the information obtained 20 years ago, also providing a basis to adapt and implement conservation measures in MPAs and beyond their borders.
- For invasive species, the abundance and trends of different species, particularly planktonic allien species at the base of the food chain, invasive algae such as ***Rugulopteryx*** given its fast spreading and economic impact, and the blue crab, remains to be assessed. The recently created working group on exotic and invasive species, with the Autonomous Governments and advisory groups, needs to consolidate its job.

Other:

- In coastal areas, the impact of recreational activities needs to be controlled and mitigated, including illegal and recreational fisheries, and companies that advertise prohibited recreational activities in protected areas or with protected species.
- Capacity building, specifically for marine conservation objectives, targeting managers and field technicians, local environmental, fisheries, and enforcement authorities, needs to be strengthened and motivated. We also need further training in contracting agreements**,** in sanctioning procedures, and legal support.
- Financial resource mobilisation, stronger financial means, are needed given the weak means, both human or material, for the existing and ever growing demands of marine conservation.

7.

Funding problems and opportunities

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7.1. Regular national sources, potential co-financing for international funding

The regular National sources belong to the appropriate budget lines from:

Ministerio para la Transición Ecológica y el Reto Demográfico:

- Secretaría de Estado de Medio Ambiente, Dirección General de la Costa y el Mar, Subdirección General para la Protección del Mar.
- Dirección General de Biodiversidad, Bosques y Desertificación, Subdirección General de Biodiversidad Terrestre y Marina

Ministerio de Agricultura, Pesca y Alimentación

- Secretaría General de Pesca, Dirección General de Pesca Sostenible, Subdirección General de Investigación Científica y Reservas Marinas
- Dirección General de Recursos Pesqueros y Acuicultura.

Additionally, the continuous support from:

- Ministerio de Ciencia e Innovación: through the Instituto Español de Oceanografía (IEO)
- Ministerio de Universidades: Secretaría General de Investigación and the Consejo Superior de Investigaciones Científicas (CSIC).
- The Dirección General de la Costa y el Mar, allocates a budget of around 60 million euros a year to control coastline erosion and degradation processes, protect and restore coastal ecosystems, regenerate and restore damaged coastal areas.

Additionally, the regular financial support from the environment and fisheries authorities in the Autonomous Governments of Andalucía, Baleares, Catalonia, Murcia, Valencia, Ceuta and Melilla.

The present funding and human resources conditions for marine conservation in the central government premises are deemed too weak to face the present demands of marine conservation and the foreseen growth in this field.

7.2. Other sources (private, public, partnership)

The Strategic Plan of Natural Heritage and Biodiversity 2011-2017 approved by the Royal Decree 1724/2011, deals with the development and the application of innovative mechanisms of funding, as well as other initiatives to involve the private sector and other actors, to call up new resources intended for the conservation and the sustainable use of biodiversity.

In order to improve the financing of the biodiversity conservation policy, various initiatives have been launched, particularly the Priority Action Framework (MAP) for the financing of the Natura 2000 Network for the period 2014-2020[1]. Five strategic conservation priorities of the Natura 2000 Network in Spain and 193 priority measures have been developed. Special interest was posed on integrated LIFE projects, e.g. INTEMARES coordinated by the Fundación Biodiversidad, which have succesfully mobilized funds from the European Maritime and Fisheries Fund EFFM and the European Social Fund.

Regarding the consideration of biodiversity in private activities, it is worth highlighting the "Spanish Business and Biodiversity Initiative (IEEB)", launched in May 2013 by the former Ministry of Agriculture, Food and Environment through the Biodiversity Foundation. The IEEB provides a framework for cooperation between large companies, NGOs, associations and the General State Administration, joining efforts to improve and maintain natural capital in Spain. This initiative seeks to promote economic development compatible with the conservation of biodiversity, integrating natural capital into business management, highlighting the contribution of large companies to conservation and channeling private financing towards the conservation of biodiversity in order to meet the objectives of the Convention on Biological Diversity.

The companies adhered to the IEEB sign a 'Pact for Biodiversity' where they undertake to evaluate the impact of their activity on biodiversity and natural capital, include the protection of biodiversity in their management manuals, define realistic and measurable objectives for conserve biodiversity, publish biodiversity conservation activities and achievements in its annual reports, inform its suppliers of the company's objectives in the field of biodiversity and support them to progressively integrate these objectives and explore possibilities for cooperation with scientific institutions, non-governmental organizations (NGOs) or government institutions.

Currently, the IEEB has 22 large companies representing different sectors and 4 partners. In turn, it is part of the European Business and Biodiversity Platform, the CBD World Business and Biodiversity Alliance and the Natural Capital Coalition.

As for the positive incentives, it is worth mentioning Law 49/2002 on the tax regime of non-profit entities and tax incentives for patronage in Spain, which establishes deductions to non-profit entities, exemption from Real Estate Tax or the Transfer of Assets for the acquisition of land for conservation, the deduction of 25% on the Personal Income Tax or the 35% on the Corporation Tax in donations to conservation entities, or the exemption from the Property Transfer Tax to exchange land between a conservation entity and an individual.

1 https://www.miteco.gob.es/es/biodiversidad/temas/espacios-protegidos/red-natura-2000/rn_cons_marco_accion_prioritaria.aspx

7.3. International funds, projects, programmes, national eligibility for international programmes/funds (e.g. green funds) identified.

As a member of the Organisation for Economic Co-operation and Development (OECD), Spain is not eligible for international cooperation and AID funds.

As a member of the EU, Spain receives funds that can be applied to marine conservation purposes. In this sense, the Biodiversity Foundation of the Ministry (MITECO) acts as an intermediary body of the EU Funds.

The Biodiversity Foundation has developed over other 200 marine conservation projects during the period 2011-2019, investing 14,512,477 € of which 5,113,974 € come from EU sources, mainly the European Fund for Fisheries and Maritime affairs (EFFM) as a complementary support to 69 marine conservation projects. A specific mention deserves the INTEMARES LIFE-IP Project, the largest marine conservation Project in Europe to date, with a total of 49.8 million Euros for the period 2017-2024.

The Biodiversity Foundation also develops the Empleaverde Program (2014-2020) to promote and improve employment, entrepreneurship and the environment, co-financed by the European Social Fund (ESF, 2014-2020); it promotes environment and sustainability as the bases for better jobs and more competitive companies.

In response to the commitments made with the Convention on Biological Diversity, an evaluation of the expenditure on biodiversity for the period 2006-2016 has been carried out, and information included on the application in Spain of the information framework on the Strategy for Resource mobilization.

8.

Conclusions and recommendations

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During the period 2010-2020 there has been a significant progress in the knowledge of marine biodiversity in Spain. It is documented through the Ministerial Report on the Law on the Natural Heritage and Bioversity (MITECO 2018), the extense Spanish Inventories on marine species, on exotic and invasive species (over 200 spp listed), and over 500 habitats in the Mediterranean waters. We also drew information from the MSFD National Assessment reports (MITECO 2012 and 2019), through the 11 descriptors of the Good Environmental Status, which includes a wide assessment on marine and coastal biodiversity; also the Habitats and the Birds Directives Reports (2019), and reports to the CBD (2019), ACCOBAMS (2019), the Barcelona Convention (2016), OECD (2015), and from the contribution from over 20 NGOs specialized in marine biodiversity, plus an extensive list of scientific papers. The state of knowledge is 55%, rising to 61% if we refer exclusively to the priority conservation components (Report from Spain to the CBD 2019).

Some conclusions (ahead) can be drawn from all this research efforts, however, always considering the serious limitations of a general knowledge delay about marine ecology. Many marine research projects are still developing methodologies, while others offer preliminary diagnosis on partial or local aspects of marine ecology, biodiversity, and its complex relations to bio-geographical diversity and to human uses. The situation is still hampered by the fact that the extense marine waters in Spain hold the highest marine species and habitat diversity in the Mediterranean region. Researchers also underline the existence of marked year-to-year fluctuations so the historical data series, around 10 years old, may be too short to conclude about trends.

Species inventories: the work is mostly completed, as compiled in the extense and detailed Spanish Inventories of: Natural Heritage and Biodiversity (IEPNB); of Marine Species (IEEM; updated by experts in May 2020); of Marine Habitats (IEHM); and the Spanish Catalogue of Exotic and Invasive Species (CEEEI).

Information on marine species, including invasive species: The distribution and relative abundance of most of the common and protected marine species is described in the IEEM, with special attention to those species that require specific conservation measures. The invasive macrophyte algae species group is expanding, being particularly disturbing in the Strait and Alboran Sea environments the ***Rugulopteryx*** alga of Asian origin; also the blue crab (***Callinectes sapidus***), the spider crab (***Percnon gibbesi***) and ***Callinectes sapidus*** crab. Most detailed is the Spanish CEEEI, setting the mechanisms to prevent species introductions and to facilitate their detection, eradication and control; e.g., banning of ***Caulerpa taxifolia*** import, and a code of conduct for net fishers to get rid of ***Caulerpa racemosa***. The Ministry has established a specific working group on Invasive Alien Species, to promote coordination between administrations, the exchange of information, and assessing control strategies for the most problematic species; a campaign for the prevention and elimination of Invasive Alien Species has been promoted by the Spanish Federation of Municipalities and Provinces, together with all the biodiversity authorities in the National and Autonomous governments.

Information on marine habitats: The Spanish Inventory of Marine Habitats lays the foundation to design short to medium term conservation plans for endangered marine habitats; it includes the standard list of over 500 types of marine habitats in the Spanish Mediterranean Sea, gradually being described together with their hierarchical

classification, and their spatial distribution[1]. However, the distribution and cartography of the main habitats coverage and resolution are in many cases limited, their structure and ecological functions are not always known, so for the most of them there is not enough information, to date, to conclude on their condition and conservation status. As for today, the habitats are monitored by the IEO in the declared SCIs and SACs.

Monitoring: The IMAP (Integrated monitoring and assessment programme of the Mediterranean sea and coast and related assessment criteria of UNEP/MAP) is being developed through a large number of national programmes. The IEPNB Indicator System is being developed, but not yet completed. A battery of indicators / descriptors has been identified and documented, and the data are updated in the annual reports. Since 2011 the Ministry's Biodiversity Foundation has funded over 200 marine conservation projects, of which +60% have developed indicators and in some cases proposed protocols to follow-up species demographic patterns and threats. The mid-term report on the application of measures for the Marine Strategies shows that 84 of the new measures are already underway, of which 64 are fully implemented. It is worth noting the positive assessment of the European Commission on the assessment of the environmental status of the marine environment by Spain, being the best rated country in the Mediterranean. Likewise, the European Commission places Spain as the country with the highest rating regarding the degree of adequacy of monitoring programs.

Protected areas: Spain's protected area continues to grow in coverage and representativity, particularly in 2018 with the extension of the Cabrera National Park up to 90,000 ha, and the establishment of the SPAMI Cetacean Migration Corridor of 4,600,000 ha between the Peninsula and the Balearic islands. Marine protected areas now cover 28,8 % of the Mediterranean Spanish waters. This also includes 22 Marine Reserves (103,468 ha of which 10,507 ha are strict no-take zones).

Institutional capacity: The legal and institutional background for marine conservation in Spain is reasonably complete, and complying with the provisions in the Barcelona Convention. Perhaps the most remarkable point is coherence and complementarity between the different actors at the National level, particularly 5 Ministries in charge of Environment (MITECO), Fisheries (MAPA), Science (IEO and CSIC on marine research), Economy (through Industry), and the enforcement of marine regulations (SEPRONA and the Maritime Service of the Guardia Civil, Ministry of the Interior). Also, the five Autonomous Communities and 2 Autonomous Cities riberine of the Mediterranean Sea have their own environment, fisheries, and marine enforcement institutions. All these institutions coordinate and hold shared activities, for example the Marine Reserves, the Master Plan for the National MPA network (RAMPE), or the centres for wildlife and the stranding of cetaceans. At least 10 Universities are collaborating in the study of marine biodiversity. A Committee for the Spanish Inventory of Natural Heritage and Biodiversity includes cenrtak and autonomous administrations and makes part of the European EIONET Network. However, the institutional capacity should be strengthened with more human and financial resources, especially in central headquarters where only 6 civil servants have to deal with the present commitments, which are new and strongly demanding, and are expected to steadily grow as challenges in the future, together with the human capacity in marine research centres to face the growing monitoring needs and commitments.

1 https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/biodiversidad-marina/habitats-especies-marinos/inventario-espanol-habitats-especies-marinos/fichas-inventario-habitats-marinos.aspx).

Participation of the economic sectors and the public: The Ministry for Ecological Transition and Demographic Challenge (MITECO) develops together with the IEO, the **Spanish Fishing Confederation (CEPESCA)**, and specialized NGOs the INTEMARES Project (2017-2024), the broadest marine conservation Project in Europe (49.8 million €). It is strongly participative, it has resulted in an enormous wealth of information on fundamental topics to be applied in planning and management processes, but most importantly, has gained a strong legitimacy and trust among the main actors in the conservation and management of the marine natural resources. The integration of biodiversity conservation objectives in other sectorial policies (rural development, agriculture, forestry, fishing, tourism, hydrology) is one of the goals of the Strategic Plan (SPNHB), which seeks to encourage consideration of the biodiversity and ecosystem services, including their economic value, in public and private activities. Regarding the tourism sector, it is worth highlighting the preparation of the Nature and Biodiversity Tourism Sector Plan.

Transboundary issues:

- In general terms, we need to underline the close coordination with other EU countries under the Marine Strategy Framework Directive, which recalls the Member States to coordinate through the Conventions on regional seas.
- Spain and France collaborate for the best management of the cetacean corridor. Besides, Spain agreed, together with France, Italy and Monaco, to carry out an assessment on the maritime traffic pressure over cetaceans, and might, if the conclusions suggest so, propose to the IMO the establishment of a Particularly Sensitive Sea Area (PSSA) in the northwest Mediterranean area.
- The cartographycal methodology needs to be harmonized with other Mediterranean countries.
- For the Balearic Shearwater (***Puffinus mauretanicus***), a Spanish Conservation Strategy is being updated and the species working group was reactivated; an international working group meeting recently took place in coordination with other countries such as France, Portugal and the UK.
- The Balearic Searwater (***Puffinus mauretanicus***) conservation strategy in Spain needs to coordinate with the neighbouring countries.
- The fast spreading of the ***Rugulopteryx*** alga in the Strait and the Alboran Sea recommends specific coordination with Morocco and Algeria; a collaboration that may be enlarged to cope with the conservation needs of elasmobranch (sharks and rays).
- Collaboration with other Mediterranean countries is guaranteed through the active participation of Spain on biodiversity concerns through the Barcelona Convention, and on fisheries and stock assessment within the GFCM, and tuna with ICCAT.

8.2. Critical impacts and effects on marine and coastal biodiversity

Angiosperms: Four species (*Zostera marina, Zostera noltii, Posidonia oceanica* and *Cymodocea nodosa*) are considered in clear regression, except in specific and protected areas. The situation of *Z.marina* is critical, entering a deep regression in the past 3-4 years leading to its almost complete disappearance, probably due to illegal trawling; restoration activities for this species are under way. *Posidonia* meadows in Andalucía are deemed in a good general status. In the Balearic islands, holding the 50% of all the *Posidonia* coverage in Spain (650 Km2), every year 6 Km2 are estimated lost due to pollution and mooring; here the habitat has been strongly protected through a specific Decree (27/07/2018), and also including the 75% of them into protected N2000 sites. The general trends in *Posidonia* meadows, their impacts from invasive species, trawling, mooring, pollution, and sand extraction, will be assessed in the Atlas for marine meadows of Spain deemed for 2021.

Invertebrates: the status of *Patella ferruginea* is critical given the intensive recollection of the bigger sized individuals and the low recruitment rates. *Pinna nobilis* has suffered an unprecedented mortality since 2016 due to the parasitic protozoon *Haplosporidium pinnae*, of which only a few populations remain free. Crustaceans under serious threat are the spider crab (*Maja squinado*), today under a reintroduction Project, or *Aristaeomorpha foliácea* of which only seldom, isolated individuals are captured. The red shrimp (*Aristeus antennatus*) is also overexploited.

Vertebrates: On cetaceans, after 61 scientific papers (2011-2018) and monitoring 5,398,297 long-line hooks, only 56 accidental captures and 15 stranding events have been registered. However, the common bottlenose dolphin (*Tursiops truncatus*), because of its diet, in some places can be considered as sympatric with trawling activities. Ship-strikes is a special threat regarding sperm whales along the Balearic Island waters and the Gibraltar Strait. The whale-watching activity is regulated by the Royal Decree 1727/2007. Critical areas for the killer whales were designated in the Strait and Gulf of Cadiz, from which other cetaceans will benefit, as active systems for underwater or underground exploration, and whale watching activities, are banned. The Regional governments in Andalucia, Baleares, Catalonia, Murcia, and Valencia, have established stranding centres following strict protocols established by experts, which in a short time will be coordinated through a national stranding network

On marine birds, the information has improved sharply but is still fragmented. The worrying situation of the Balearic Shearwater (*Puffinus mauretanicus*) with a 14% annual decline, accidental catches accounting for 45% of adult mortality, and low adult survival (0.81) predicts the species may disappear in about 60 years. Audouin's Gull populations are also decreasing.

Economic activities: The main pressure of the fishing activity is the extraction of target and non-target species; only one of the 23 stocks (4%) remains in a good status, while other 12 stocks (52%) are either in unknown or uncertain status. Control of the fishing activity was strengthened through the implementation of the electronic logbook system, and a fisheries training plan was carried out to reduce mortality from accidental catch of sea turtles. The Spanish fleet is gradually incorporating scientific observer programs on board ships. Guidelines for the Sustainable Development of Mediterranean Aquaculture have been prepared through an agreement between IUCN and the General Secretariat for Fisheries of Spain. Tourism and recreational activities also pose problems to biodiversity, particularly through coastal infrastuctures, vessel mooring, and recreational fisheries.

At this point **the main needs** related to marine conservation may be:

- For invasive species, the abundance and trends of different species, particularly invasive algae, and the blue crab, remains to be determined.
- The benthic habitats identification and cartography coverage and resolution are in many cases limited, their structure and ecological functions are not always known, so follow-up programmes are needed to evaluate their trends, to gradually complete the information in the IEHM.
- The need to follow-up the changes in trophic levels, the spatial distribution and functional groups of phyto and zoo-plankton, and the reproductive success of seabirds in relation to food availability; to establish threshold values for good environmental status and for anthropic impacts on the demersal fish; and finally, to develop a harmonized monitoring system for MPA management to evaluate the effectiveness of management measures.
- The need to invest in a monitoring system on the distribution and density population of the main groups of marine vertebrates, as well as the main (actual and future) threats over them, in order to define conservation measures to mitigate the impact
- The MPA network needs to conclude participating management planning, and to strengthen the enforcement means in MPAs through the adoption of new remote technologies, and easing sanction and juridical procedures. Also, in light of the Declaration of the Spanish Council of Ministers (MITECO 2020), and the new biodiversity framework to come (CBD COP15; and EU Biodiversity Strategy to 2030), we need to prepare for the identification and protection of 30% of the sea by 2030, and certainly, for a sharp increase in the declaration of strictly no-take/no-entry zones. MPAs also need to transcend their borders for the integration of other marine sectorial policies. Finally, the National MPA Network of Spain (RAMPE), for which a draft Master Plan has been prepared together with the Autonomous Communities and other relevant administrations, needs to be developed, ensuring complementarity and coordination, optimizing resources and information sharing.
- Other needs relate to the mitigation of impacts from recreational activities, including recreational fisheries. Simultaneously, the potential impact of climate change on coastal and marine biodiversity needs to be continuously assessed.
- Capacity building, targeting managers and field technicians, local environmental, fisheries, and enforcement authorities, needs to be strengthened and motivated. Appropriate local and national networks should be developed, e.g. on phanerogam meadows, selective fishing gears, harmonized monitoring systems, enforcement procedures, and/or MPA management.
- Financial resource mobilisation, stronger financial means, are needed particularly in the central administration, given the weak means, either human or material, for the growing demands of marine conservation. Stronger collaboration and communications, with new messages, new media including social media, professionalized management and new communication alliances, are all needed to prevent biodiversity impacts, invasive species, and so that marine conservation is gradually perceived by decision makers, economic sectors and the general public, as an urgent need and an sound investment, rather than a cost.

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Detailed description of the physical, chemical, and biological characteristics of the

Levantino-Balear marine demarcation (2012): https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/I_Marco%20General_Levantino-Balear_tcm30-130914.pdf

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Inventaries: http://wms.magrama.es/sig/Biodiversidad/INENP/wms.aspx?

LIC: http://wms.magrama.es/sig/Biodiversidad/LICS/wms.aspx?

ZEPA: http://wms.magrama.es/sig/Biodiversidad/ZEPA/wms.aspx?

LIC and ZEPA: http://wms.magrama.es/sig/Biodiversidad/RedNatura/wms.aspx?

OSPAR: http://wms.magrama.es/sig/Biodiversidad/OSPAR/wms.aspx?

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http://www.redeuroparc.org/observatorio_espacios_protegidos.jsp

Annexes

Annexe I.

LIST OF EXOTIC AND INVASIVE SPECIES IN THE SPANISH MEDITERRANEAN WATERS

ESTRECHO-ALBORÁN 2020	LEVANTINO-BALEAR, 2020
Acantharctus posteli	*Acrothamnion preissii*
Acanthurus monroviae	*Anotrichium furcellatum*
Antithamnion amphigeneum	*Antithamnion amphigeneum*
Antithamnionella elegans	*Antithamnionella boergesenii*
Antithamnionella spirographidis	*Antithamnionella elegans*
Asparagopsis armata	*Antithamnionella spirographidis*
Asparagopsis taxiformis	*Apoglossum gregarium*
Bonnemaisonia hamifera	*Asparagopsis armata*
Bryopsis plumosa	*Asparagopsis taxiformis*
Caulerpa cylindracea	*Bonnemaisonia hamifera*
Chondria coerulescens	*Bryopsis plumosa*
Chondria dasyphylla	*Caulerpa cylindracea*
Botryocladia wrightii	*Caulerpa taxifolia*
Codium fragile subsp. *fragile*	*Chondria coerulescens*
Colpomenia peregrina	*Chondria dasyphylla*
Colpomenia sinuosa	*Codium fragile* subsp. *fragile*
Corynophlaea cystophorae	*Colaconema codicola*
Desmarestia viridis	*Colpomenia peregrina*
Dictyota pinnatifida	*Colpomenia sinuosa*
	Desmarestia viridis
	Dictyota cyanoloma
Fucus spiralis	*Ganonema farinosum*
Grateloupia filicina	*Goniotrichopsis sublittoralis*
Grateloupia turuturu	*Grateloupia filicina*
Hypnea musciformis	*Halimeda incrassata*
Hypnea spinella	*Hypnea spinella*

ESTRECHO-ALBORÁN 2020	LEVANTINO-BALEAR, 2020
Hypnea valentiae	*Laurencia chondrioides*
Lophocladia lallemandii	*Lomentaria hakodatensis*
Mastocarpus stellatus	*Lophocladia lallemandii*
Melanothamus (Neosiphonia) harveyi	*Melanothamnus (Neosiphonia) harveyi*
Palisada maris-rubri	*Plocamium secundatum*
Spongioclonium (Pleonosporium) caribaeum	*Spongioclonium (Pleonosporium) caribaeum*
Vertebrata (Polysiphonia) fucoides	*Polysiphonia atlantica*
Pylaiella littoralis	*Vertebrata (Polysiphonia) fucoides*
Pyropia suborbiculata	*Pyropia suborbiculata*
Rugulopteryx okamurae	*Sarconema filiforme*
Spongoclonium caribaeum	*Sargassum muticum*
Tricleocarpa fragilis	*Tricleocarpa fragilis*
Ulva australis	*Womersleyella setacea*
Womersleyella setacea	
Paracartia grani	*Abudefduf vaigiensis*
	Dicologlossa hexophthalma
Calappa pelii	*Epinephelus aeneus*
Callinectes sapidus	*Fistularia commersonii*
Cryptosoma cristatum	*Fundulus heteroclitus heteroclitus*
Merhippolyte ancistrota	*Parablennius pilicornis*
Necora puber	*Pomadasys incisus*
Pagurus mbizi	*Pontinus kuhlii*
Percnon gibbesi	*Psenes pellucidus*
Procambarus clarkii	*Pseudupeneus prayensis*
Processa macrodactyla	*Schedophilus ovalis*
	Schedophilus medusophagus
Acartia danae	*Scorpaena maderensis*
Euterpina acutifrons	*Scorpaena stephanica*
Oithona similis	*Zebrasoma flavescens*
Pteriacartia josephinae	
Subeucalanus subcrassus	*Branchiomma luctuosum*
	Fauveliopsis glabra
Brachynotus atlanticus	*Ficopomatus enigmaticus*
Charybdis feriata	*Hesionura serrata*
Palaemon macrodactylus	*Hydroides dianthus*
Plesionika ensis	*Hydroides dirampha*
Caprella scaura	*Hydroides elegans*

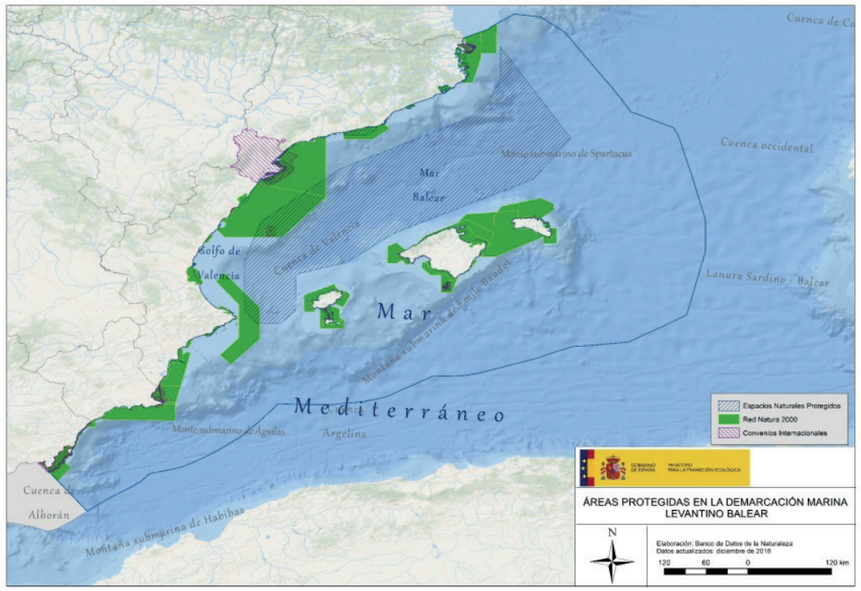
ESTRECHO-ALBORÁN 2020	LEVANTINO-BALEAR, 2020
Paracaprella pusilla	*Leiochrides australis*
Stenothoe georgiana	*Lysidice collaris*
Paradella dianae	*Mediomastus capensis*
Neomysis integer	*Metasychis gotoi*
Chilomycterus spinosus mauretanicus	*Kirkegaardia (Monticellina) dorsobranchialis*
Dicologlossa hexophthalma	*Neanthes agulhana*
Fistularia commersonii	*Neopseudocapitella brasiliensis*
Hyporhamphus picarti	*Notomastus aberans*
Parablennius pilicornis	*Novafabricia infratorquata*
Polymixia nobilis	*Perinereis linea*
Pomadasys incisus	*Pista unibranchia*
Pseudupeneus prayensis	*Polydora cornuta*
Solea senegalensis	*Sigambra parva*
Zenopsis conchifer	*Magallana (Crassostrea) gigas*
Magallana (Crassostrea) gigas	*Fulvia fragilis*
Fulvia fragilis	*Pinctada imbricata radiata*
Bursatella leachii	*Ruditapes philippinarum*
Calma gobioophaga	
Cymbula safiana (nigra	*Biuve fulvipunctata*
Godiva quadricolor	*Bursatella leachii*
Marginella glabella	*Calma gobioophaga*
Neverita josephinia	*Caprella scaura*
Hydroides dianthus	*Paracaprella pusilla*
Kirkegaardia dorsobranchialis	*Paracartia grani*
Lysidice collaris	*Callinectes sapidus*
Mediomastus capensis	*Charybdis feriata*
Metasychis gotoi	*Dyspanopeus sayi*
Neanthes agulhana	*Eriocheir sinensis*
Neopseudocapitella brasiliensis	*Necora puber*
Notomastus aberans	*Palaemon macrodactylus*
Sigambra parva	*Penaeus japonicus*
	Percnon gibbesi
Antithamnionella elegans	*Caprella scaura*
Botrylloides leachii	*Processa macrodactyla*
Microchirus boscanion	*Sphaeroma walkeri*
Microcosmus squamiger	*Neomysis integer*
Styela plicata	*Cephalothrix simula*

ESTRECHO-ALBORÁN 2020	LEVANTINO-BALEAR, 2020
Luidia atlantidea	
Amathia verticillata	*Aplidium accarense*
Bugula neritina	*Ascidiella scabra*
Watersipora arcuata	*Clavelina oblonga*
Clytia linearis	*Ciona robusta*
Eucheilota paradoxica	*Cystodytes philippinensis*
Eudendrium carneum	*Distaplia bermudensis*
Heterotentacula mirabilis	*Ecteinascidia turbinata*
Oculina patagonica	*Microcosmus squamiger*
Phyllorhiza punctata	*Polyandrocarpa zorritensis*
	Amathia verticillata
Alexandrium catenella	*Bugula neritina*
Gymnodinium catenatum	*Clytia hummelincki*
Paraleucilla magna	*Clytia linearis*
Filellum serratum	*Eudendrium carneum*
Alexandrium catenella	*Haliscera bigelowi*
Gymnodinium catenatum	*Oculina patagonica*
	Phyllorhiza punctata
	Filellum serratum
	Protoreaster nodosus
	Paraleucilla magna
	Photobacterium damsela
	Skeletonema tropicum
	Marteilia refringens
	Perkinsus olsenii
	Alexandrium catenella
	Alexandrium taylori
	Karenia mikimotoi
	Mnemiopsis leidyi

Annexe II.

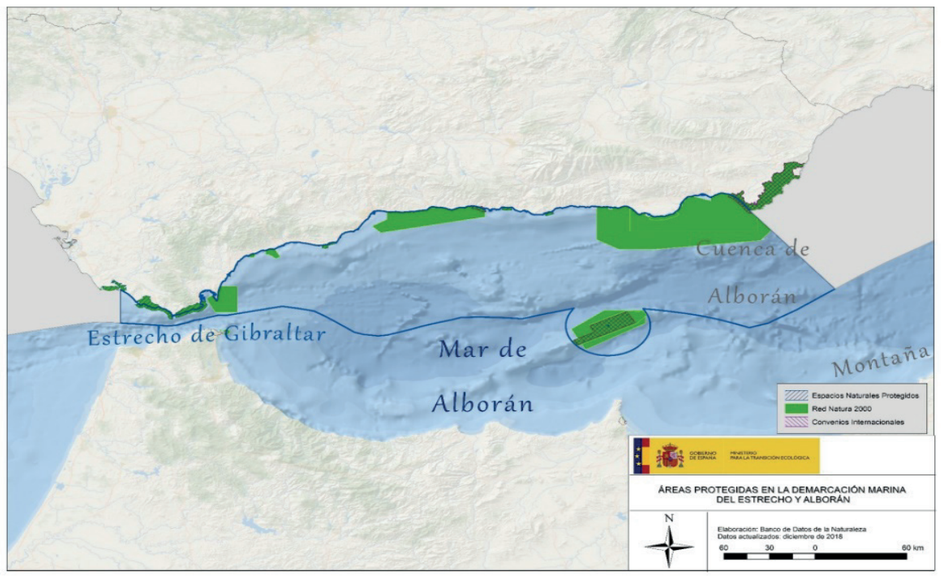
The full list of the Spanish marine protected areas in Mediterranean waters is displayed in Annex 2b (Excel file).

Levantino-Balear demarcation:
https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/parteimarcogeneraldmleba_tcm30-498347.pdf



For the Estrecho-Alborán Demarcation:

https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/parteimarcogeneraldmesal_tcm30-498339.pdf



*The list of **Marine Reserves of Fishing Interest** and more detailed information on each of them can be consulted in https://www.mapa.gob.es/app/reservas-marinas-espana/rmarinas-intro.asp*

*The list of **Mediterranean Special Bird Protection Areas** declared is:*

- *ES0000504 Málaga-Cerro Gordo Bay.*
- *ES0000505 Marine area of Alboran Island.*
- *ES0000506 Almería Bay.*
- *ES0000507 Marine area of Littoral Islets of Murcia y Almería.*
- *ES0000508 Marine area of Tabarca-Cabo de Palos.*
- *ES0000510 Platform-marine slope of Cabo de la Nao.*
- *ES0000512 Marine area of Delta de l'Ebre-Illes Columbretes.*

*The list of sites dedicated to the **protection and maintenance of biological diversity, geodiversity and natural resources and associated cultures:***

- *ES0000513 Marine space of Baix Llobregat-Garraf.*
- *ES0000514 Marine space of e l'Empordà.*
- *ES0000515 Marine space of Formentera and the South of Ibiza.*
- *ES0000516 Marine space of North Ibiza.*
- *ES0000517 Marine space of East Ibiza.*
- *ES0000518 Marine space of South Mallorca and Cabrera.*
- *ES0000519 Marine space of Western Mallorca.*
- *ES0000520 Marine space of North Mallorca.*
- *ES0000521 Marine space of l North and West Menorca.*
- *ES0000522 Marine space of south east Menorca.*

Título/*Title*	World Database on Protected Areas
Identificador/*Identifer*	WDPA
Autor/*Creator*	Banco de Datos de la Naturaleza
Fecha/*Date*	Diciembre de 2019
Tema/*Subject*	World Database on Protected Areas
Estado/*Status*	Actualizado
Editor/Publisher	Inventario Español del Patrimonio Natural y de la Biodiversidad
Descripción/Description	Península y Baleares. EPSG: http://www.opengis.net/def/crs/EPSG/0/25830 Canarias. EPSG: http://www.opengis.net/def/crs/EPSG/0/32628 Escala 1:50.000
Contribuciones/*Contributors*	Inventario Español del Patrimonio Natural y de la Biodiversidad
Fuente/*Source*	WDPA: Administraciones competentes Demarcaciones Marinas: línea exterior de las Regiones Marinas con fecha de actualización Julio de 2018, proporcionada por la Subdirección General para la Protección del Mar y ajustada a las líneas de costa consensuadas con las CCAA en el año 2008 para Península; para Baleares su procedencia es de SITIBSA en 2013 y para las Islas Canarias los límites proceden de GRAFCAN, marzo 2014.
Difusión/*Rights*	Público
Idioma/*Language*	Español (Es)
Documentos Relacionados/*Relations*	Cartografía
Período de validez/*Coverage*	Hasta nuevas actualizaciones
Fecha modificación del diccionario	16 de junio de 2020

Realizadas las siguientes modificaciones:

La Cueva Marina de San Juan, ES7020117 ZEC, es un espacio competencia de la AGE. Según los criterios para la codificación del ámbito, el espacio tras el cruce es "T", se debe modificar a "MT"

El LIC Alborán ES6110015 nos fue entregado como espacio competencia AUTONÓMICA. Según correo electrónico del pasado 22/04/2020, Jorge Alonso, nos indica que la parte marina de dicho LIC debe pasar a competencia ESTATAL. (La parte terrestre sigue con competencia AUTONÓMICA)

Criterio para definir el ámbito del espacio:

Especificar si el perímetro del espacio es M = Marino = 2; T = Terrestre = 0 o MT = Marítimo-Terrestre = 1. Campo que se rellena en función de los campos: AREA TERRESTRE GIS / AREA MARINA GIS, siguiendo los siguientes criterios; T: Cuando su superficie terrestre representa más de un 95% de la superficie total del espacio; M: Cuando su superficie marina representa más de un 95% de la superficie total del espacio y MT: Cuando la superficie terrestre o marina es mayor o igual al 5% de la superficie total del espacio

Annexe III.

LIST OF THE MARINE PROTECTED AREAS IN THE MEDITERRANEAN SEA OF SPAIN

November 2020

Designation (Original)	*NUT_N2*
Humedal de Importancia Internacional (Convenio de Ramsar)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*62*
Espacios Naturales Protegidos (ENP)	*62*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*53*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Reserva de la Biosfera	*61*
Reserva de la Biosfera	*61*
Reserva de la Biosfera	*61*
Reserva de la Biosfera	*61*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*61*

Designation (Original)	*NUT_N2*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*61*
Espacios Naturales Protegidos (ENP)	*52*
Espacios Naturales Protegidos (ENP)	*52*
Reserva de la Biosfera	*53*
Reserva de la Biosfera	*53*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*51*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*51*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*53*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*53*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*51*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*51*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*52*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*52*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*62*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*62*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Zona Especialmente Protegida de Importancia para el Mediterráneo (ZEPIM) Convenio de Barcelona	*61*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*
Espacios Naturales Protegidos (ENP)	*51*

Designation (Original)	NUT_N2
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Reserva de la Biosfera	51
Reserva de la Biosfera	51
Humedal de Importancia Internacional (Convenio de Ramsar)	61
Humedal de Importancia Internacional (Convenio de Ramsar)	52
Humedal de Importancia Internacional (Convenio de Ramsar)	52
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	51
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61

Designation (Original)	NUT_N2
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	61
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	90
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	53
Espacios Naturales Protegidos (ENP)	53
Humedal de Importancia Internacional (Convenio de Ramsar)	51
Humedal de Importancia Internacional (Convenio de Ramsar)	51
Humedal de Importancia Internacional (Convenio de Ramsar)	53
Humedal de Importancia Internacional (Convenio de Ramsar)	53
Humedal de Importancia Internacional (Convenio de Ramsar)	62
Humedal de Importancia Internacional (Convenio de Ramsar)	62
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61

Designation (Original)	NUT_N2
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53

Designation (Original)	NUT_N2
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Protección para las Aves (Directiva Aves)	62
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	52
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90

Designation (Original)	NUT_N2
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Protección para las Aves (Directiva Aves)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Zonas de Especial Conservación (Directiva Habitat)	51
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	52
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53

Designation (Original)	NUT_N2
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Zonas de Especial Protección para las Aves (Directiva Aves)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53

Designation (Original)	NUT_N2
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Lugar de Interés Comunitario (Directiva Habitat)	53
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	6190
Lugar de Interés Comunitario (Directiva Habitat)	6190
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Lugar de Interés Comunitario (Directiva Habitat)	61
Lugar de Interés Comunitario (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Lugar de Interés Comunitario (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Protección para las Aves (Directiva Aves)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	61
Zonas de Especial Conservación (Directiva Habitat)	90

Designation (Original)	NUT_N2
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Conservación (Directiva Habitat)	62
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Conservación (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Lugar de Interés Comunitario (Directiva Habitat)	63
Lugar de Interés Comunitario (Directiva Habitat)	63
Zonas de Especial Conservación (Directiva Habitat)	64
Zonas de Especial Conservación (Directiva Habitat)	64
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90
Lugar de Interés Comunitario (Directiva Habitat)	90
Zonas de Especial Protección para las Aves (Directiva Aves)	90

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunidad Autónoma de Andalucía	1265_RAMSAR
Comunidad Autónoma de Andalucía	142805_CDDA
Comunidad Autónoma de Andalucía	142809_CDDA
Comunidad Autónoma de Andalucía	142820_CDDA
Comunidad Autónoma de Cataluña	151248_CDDA
Comunidad Autónoma de Cataluña	151248_CDDA
Comunidad Autónoma de Cataluña	151292_CDDA
Comunidad Autónoma de Cataluña	151292_CDDA
Comunidad Autónoma de la Región de Murcia	15509_CDDA
Comunidad Autónoma de la Región de Murcia	15509_CDDA
Comunidad Autónoma de Cataluña	195974_CDDA
Comunidad Autónoma de Cataluña	195974_CDDA
Comunidad Autónoma de Illes Balears	196045_CDDA
Comunidad Autónoma de Illes Balears	196045_CDDA
Comunidad Autónoma de Illes Balears	196166_CDDA
Comunidad Autónoma de Illes Balears	196166_CDDA
Comunidad Autónoma de Cataluña	196213_CDDA
Comunidad Autónoma de Cataluña	196213_CDDA
Comunidad Autónoma de Andalucía	196284_CDDA
Comunidad Autónoma de Andalucía	196284_CDDA
Comunidad Autónoma de Andalucía	196284_CDDA
Comunidad Autónoma de Illes Balears	196293_CDDA
Comunidad Autónoma de Andalucía	196284_CDDA
Comunidad Autónoma de Illes Balears	196293_CDDA
Comunidad Autónoma de Illes Balears	196293_CDDA
Comunidad Autónoma de Andalucía	196457_CDDA
Comunidad Autónoma de Andalucía	20934_CDDA
Comunidad Autónoma de Andalucía	20934_CDDA
Comunidad Autónoma de Andalucía	20955_CDDA
Comunidad Autónoma de Andalucía	20955_CDDA
Comunidad Autónoma de Andalucía	30_MAB
Comunidad Autónoma de Andalucía	34_MAB
Comunidad Autónoma de Andalucía	34_MAB
Comunidad Autónoma de Andalucía	34_MAB
Comunitat Valenciana	348792_CDDA
Comunitat Valenciana	348802_CDDA
Comunitat Valenciana	348802_CDDA
Comunidad Autónoma de Andalucía	348804_CDDA
Comunidad Autónoma de Andalucía	348804_CDDA
Comunidad Autónoma de Andalucía	348851_CDDA
Comunidad Autónoma de Andalucía	348851_CDDA
Comunitat Valenciana	348860_CDDA
Comunitat Valenciana	348860_CDDA
Comunidad Autónoma de Cataluña	349119_CDDA
Comunidad Autónoma de Cataluña	349123_CDDA
Comunidad Autónoma de Cataluña	349123_CDDA
Comunidad Autónoma de Cataluña	349127_CDDA
Comunidad Autónoma de Cataluña	349127_CDDA
Comunidad Autónoma de Andalucía	349166_CDDA

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunidad Autónoma de Andalucía	349166_CDDA
Comunidad Autónoma de Andalucía	349187_CDDA
Comunidad Autónoma de Andalucía	349187_CDDA
Comunidad Autónoma de Andalucía	349370_CDDA
Comunitat Valenciana	349430_CDDA
Comunitat Valenciana	349430_CDDA
Comunidad Autónoma de Illes Balears	35_MAB
Comunidad Autónoma de Illes Balears	35_MAB
Comunidad Autónoma de Andalucía	365006_ZEPIM
Comunidad Autónoma de Andalucía	365006_ZEPIM
Comunidad Autónoma de Cataluña	365007_ZEPIM
Comunidad Autónoma de Cataluña	365007_ZEPIM
Comunidad Autónoma de Illes Balears	365008_ZEPIM
Comunidad Autónoma de Illes Balears	365008_ZEPIM
Comunidad Autónoma de Andalucía	365009_ZEPIM
Comunidad Autónoma de Andalucía	365009_ZEPIM
Comunidad Autónoma de Andalucía	365009_ZEPIM
Comunidad Autónoma de Cataluña	365010_ZEPIM
Comunidad Autónoma de Cataluña	365010_ZEPIM
Comunitat Valenciana	365011_ZEPIM
Comunitat Valenciana	365011_ZEPIM
Comunidad Autónoma de Andalucía	365013_ZEPIM
Comunidad Autónoma de Andalucía	365013_ZEPIM
Comunidad Autónoma de la Región de Murcia	365014_ZEPIM
Comunidad Autónoma de la Región de Murcia	365014_ZEPIM
Comunidad Autónoma de Andalucía	365022_ZEPIM
Comunidad Autónoma de Andalucía	365022_ZEPIM
Comunidad Autónoma de Cataluña	389004_CDDA
Comunidad Autónoma de Cataluña	389004_CDDA
Comunidad Autónoma de Cataluña	389077_CDDA
Comunidad Autónoma de Cataluña	389077_CDDA
Comunidad Autónoma de Cataluña	389087_CDDA
Comunidad Autónoma de Cataluña	389087_CDDA

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunidad Autónoma de Cataluña	389088_CDDA
Comunidad Autónoma de Cataluña	389088_CDDA
Comunidad Autónoma de Cataluña	389097_CDDA
Comunidad Autónoma de Cataluña	389097_CDDA
Comunidad Autónoma de Cataluña	389123_CDDA
Comunidad Autónoma de Cataluña	389123_CDDA
Comunidad Autónoma de Cataluña	389127_CDDA
Comunidad Autónoma de Cataluña	389127_CDDA
Comunidad Autónoma de Cataluña	389140_CDDA
Comunidad Autónoma de Cataluña	389140_CDDA
Comunidad Autónoma de Cataluña	389150_CDDA
Comunidad Autónoma de Cataluña	389150_CDDA
Comunidad Autónoma de Cataluña	389221_CDDA
Comunidad Autónoma de Cataluña	389221_CDDA
Comunidad Autónoma de Cataluña	389228_CDDA
Comunidad Autónoma de Cataluña	389228_CDDA
Comunidad Autónoma de Cataluña	43_MAB
Comunidad Autónoma de Cataluña	43_MAB
Comunidad Autónoma de Andalucía	447_RAMSAR
Comunitat Valenciana	458_RAMSAR
Comunitat Valenciana	458_RAMSAR
Comunidad Autónoma de Cataluña	555546001_CDDA
Comunidad Autónoma de Cataluña	555546001_CDDA
Comunidad Autónoma de Cataluña	555546014_CDDA
Comunidad Autónoma de Cataluña	555546014_CDDA
Comunidad Autónoma de Illes Balears	555546019_CDDA
Comunidad Autónoma de Illes Balears	555546020_CDDA
Comunidad Autónoma de Illes Balears	555546020_CDDA
Administración General del Estado (AGE)	555552483_CDDA
Administración General del Estado (AGE)	555552484_CDDA
Administración General del Estado (AGE)	555552485_CDDA
Administración General del Estado (AGE)	555552486_CDDA
Administración General del Estado (AGE)	555552486_CDDA
Administración General del Estado (AGE)	555552486_CDDA
Administración General del Estado (AGE)	555552487_CDDA
Administración General del Estado (AGE)	555552487_CDDA
Administración General del Estado (AGE)	555552488_CDDA
Administración General del Estado (AGE)	555552489_CDDA
Administración General del Estado (AGE)	555552489_CDDA
Comunidad Autónoma de Cataluña	555562410_CDDA
Comunidad Autónoma de Cataluña	555562410_CDDA
Comunidad Autónoma de Andalucía	555588793_CDDA
Comunidad Autónoma de Andalucía	555588805_CDDA
Comunidad Autónoma de Andalucía	555588805_CDDA
Comunidad Autónoma de Andalucía	555588805_CDDA
Comunidad Autónoma de Andalucía	555588813_CDDA
Comunidad Autónoma de Andalucía	555588820_CDDA
Comunidad Autónoma de Andalucía	555588820_CDDA
Comunidad Autónoma de Andalucía	555588831_CDDA
Comunidad Autónoma de Andalucía	555588831_CDDA
Comunidad Autónoma de Andalucía	555588835_CDDA

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunidad Autónoma de Andalucía	555588835_CDDA
Comunidad Autónoma de Andalucía	555588840_CDDA
Comunidad Autónoma de Andalucía	555588841_CDDA
Comunidad Autónoma de Andalucía	555588857_CDDA
Comunidad Autónoma de Andalucía	555588857_CDDA
Comunidad Autónoma de Andalucía	555588858_CDDA
Comunidad Autónoma de Andalucía	555588858_CDDA
Comunidad Autónoma de Andalucía	555588883_CDDA
Comunidad Autónoma de Andalucía	555588883_CDDA
Comunidad Autónoma de Andalucía	555588884_CDDA
Comunidad Autónoma de Andalucía	555588884_CDDA
Comunidad Autónoma de Andalucía	555588886_CDDA
Comunidad Autónoma de Andalucía	555588886_CDDA
Comunidad Autónoma de Andalucía	555588903_CDDA
Comunidad Autónoma de Andalucía	555588918_CDDA
Comunidad Autónoma de Andalucía	555588918_CDDA
Comunidad Autónoma de Andalucía	555588945_CDDA
Comunidad Autónoma de Andalucía	555588945_CDDA
Administración General del Estado (AGE)	555596224_CDDA
Administración General del Estado (AGE)	555596224_CDDA
Administración General del Estado (AGE)	555596226_CDDA
Administración General del Estado (AGE)	555596226_CDDA
Comunidad Autónoma de Illes Balears	555638694_CDDA
Comunidad Autónoma de Illes Balears	555638694_CDDA
Comunidad Autónoma de Cataluña	593_RAMSAR
Comunidad Autónoma de Cataluña	593_RAMSAR
Comunidad Autónoma de Illes Balears	641_RAMSAR
Comunidad Autónoma de Illes Balears	641_RAMSAR
Comunidad Autónoma de la Región de Murcia	706_RAMSAR
Comunidad Autónoma de la Región de Murcia	706_RAMSAR
Comunidad Autónoma de Cataluña	ES0000019_ZEC
Comunidad Autónoma de Cataluña	ES0000019_ZEC
Comunidad Autónoma de Cataluña	ES0000019_ZEPA
Comunidad Autónoma de Cataluña	ES0000019_ZEPA
Comunidad Autónoma de Cataluña	ES0000020_ZEC
Comunidad Autónoma de Cataluña	ES0000020_ZEC
Comunidad Autónoma de Cataluña	ES0000020_ZEPA
Comunidad Autónoma de Cataluña	ES0000020_ZEPA
Comunitat Valenciana	ES0000023_LIC
Comunitat Valenciana	ES0000023_LIC
Comunidad Autónoma de Andalucía	ES0000025_LIC
Comunidad Autónoma de Andalucía	ES0000025_ZEPA
Comunidad Autónoma de Andalucía	ES0000046_ZEC
Comunidad Autónoma de Andalucía	ES0000046_ZEC
Comunidad Autónoma de Andalucía	ES0000046_ZEC
Comunidad Autónoma de Andalucía	ES0000046_ZEPA
Comunidad Autónoma de Andalucía	ES0000046_ZEPA
Comunidad Autónoma de Andalucía	ES0000046_ZEPA

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunitat Valenciana	ES0000060_LIC
Comunitat Valenciana	ES0000060_LIC
Comunidad Autónoma de Illes Balears	ES0000078_LIC
Comunidad Autónoma de Illes Balears	ES0000078_LIC
Comunidad Autónoma de Illes Balears	ES0000078_ZEPA
Comunidad Autónoma de Illes Balears	ES0000078_ZEPA
Comunidad Autónoma de Illes Balears	ES0000081_ZEPA
Comunidad Autónoma de Illes Balears	ES0000081_ZEPA
Comunidad Autónoma de Illes Balears	ES0000082_LIC
Comunidad Autónoma de Illes Balears	ES0000082_LIC
Comunidad Autónoma de Illes Balears	ES0000082_ZEPA
Comunidad Autónoma de Illes Balears	ES0000082_ZEPA
Comunidad Autónoma de Illes Balears	ES0000083_ZEC
Comunidad Autónoma de Illes Balears	ES0000083_ZEC
Comunidad Autónoma de Illes Balears	ES0000083_ZEPA
Comunidad Autónoma de Illes Balears	ES0000083_ZEPA
Comunidad Autónoma de Illes Balears	ES0000084_ZEC
Comunidad Autónoma de Illes Balears	ES0000084_ZEC
Comunidad Autónoma de Illes Balears	ES0000084_ZEPA
Comunidad Autónoma de Illes Balears	ES0000084_ZEPA
Comunitat Valenciana	ES0000121_ZEPA
Comunitat Valenciana	ES0000121_ZEPA
Comunidad Autónoma de Andalucía	ES0000140_ZEC
Comunidad Autónoma de Andalucía	ES0000140_ZEPA
Comunidad Autónoma de la Región de Murcia	ES0000175_ZEC
Comunidad Autónoma de la Región de Murcia	ES0000175_ZEC
Comunidad Autónoma de la Región de Murcia	ES0000175_ZEPA
Comunidad Autónoma de la Región de Murcia	ES0000175_ZEPA
Comunidad Autónoma de la Región de Murcia	ES0000175_ZEPA
Administración General del Estado (AGE)	ES0000214_LIC
Administración General del Estado (AGE)	ES0000214_LIC
Administración General del Estado (AGE)	ES0000214_ZEPA
Administración General del Estado (AGE)	ES0000214_ZEPA
Comunidad Autónoma de Illes Balears	ES0000221_LIC
Comunidad Autónoma de Illes Balears	ES0000221_LIC
Comunidad Autónoma de Illes Balears	ES0000221_ZEPA
Comunidad Autónoma de Illes Balears	ES0000221_ZEPA
Comunidad Autónoma de Illes Balears	ES0000227_LIC
Comunidad Autónoma de Illes Balears	ES0000227_LIC
Comunidad Autónoma de Illes Balears	ES0000227_ZEPA
Comunidad Autónoma de Illes Balears	ES0000227_ZEPA
Comunidad Autónoma de Illes Balears	ES0000233_LIC
Comunidad Autónoma de Illes Balears	ES0000233_LIC
Comunidad Autónoma de Illes Balears	ES0000233_ZEPA
Comunidad Autónoma de Illes Balears	ES0000233_ZEPA
Comunidad Autónoma de Illes Balears	ES0000234_LIC
Comunidad Autónoma de Illes Balears	ES0000234_LIC
Comunidad Autónoma de Illes Balears	ES0000234_ZEPA
Comunidad Autónoma de Illes Balears	ES0000234_ZEPA
Comunidad Autónoma de Illes Balears	ES0000242_LIC
Comunidad Autónoma de Illes Balears	ES0000242_LIC
Comunidad Autónoma de Illes Balears	ES0000242_ZEPA
Comunidad Autónoma de Illes Balears	ES0000242_ZEPA

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Comunidad Autónoma de Illes Balears	ES5310024_LIC
Comunidad Autónoma de Illes Balears	ES5310024_LIC
Comunidad Autónoma de Illes Balears	ES5310024_ZEPA
Comunidad Autónoma de Illes Balears	ES5310024_ZEPA
Comunidad Autónoma de Illes Balears	ES5310025_LIC
Comunidad Autónoma de Illes Balears	ES5310025_LIC
Comunidad Autónoma de Illes Balears	ES5310025_ZEPA
Comunidad Autónoma de Illes Balears	ES5310025_ZEPA
Comunidad Autónoma de Illes Balears	ES5310030_LIC
Comunidad Autónoma de Illes Balears	ES5310030_LIC
Comunidad Autónoma de Illes Balears	ES5310035_LIC
Comunidad Autónoma de Illes Balears	ES5310035_LIC
Comunidad Autónoma de Illes Balears	ES5310036_LIC
Comunidad Autónoma de Illes Balears	ES5310036_LIC
Comunidad Autónoma de Illes Balears	ES5310068_LIC
Comunidad Autónoma de Illes Balears	ES5310068_LIC
Comunidad Autónoma de Illes Balears	ES5310069_LIC
Comunidad Autónoma de Illes Balears	ES5310069_LIC
Comunidad Autónoma de Illes Balears	ES5310070_LIC
Comunidad Autónoma de Illes Balears	ES5310070_LIC
Comunidad Autónoma de Illes Balears	ES5310071_LIC
Comunidad Autónoma de Illes Balears	ES5310071_LIC
Comunidad Autónoma de Illes Balears	ES5310072_LIC
Comunidad Autónoma de Illes Balears	ES5310072_LIC
Comunidad Autónoma de Illes Balears	ES5310073_LIC
Comunidad Autónoma de Illes Balears	ES5310073_LIC
Comunidad Autónoma de Illes Balears	ES5310074_LIC
Comunidad Autónoma de Illes Balears	ES5310074_LIC
Comunidad Autónoma de Illes Balears	ES5310074_LIC
Comunidad Autónoma de Illes Balears	ES5310075_LIC
Comunidad Autónoma de Illes Balears	ES5310075_LIC
Comunidad Autónoma de Illes Balears	ES5310077_ZEC
Comunidad Autónoma de Illes Balears	ES5310077_ZEC
Comunidad Autónoma de Illes Balears	ES5310081_ZEC
Comunidad Autónoma de Illes Balears	ES5310081_ZEC
Comunidad Autónoma de Illes Balears	ES5310082_ZEC
Comunidad Autónoma de Illes Balears	ES5310082_ZEC
Comunidad Autónoma de Illes Balears	ES5310094_ZEC
Comunidad Autónoma de Illes Balears	ES5310094_ZEC
Comunidad Autónoma de Illes Balears	ES5310096_LIC
Comunidad Autónoma de Illes Balears	ES5310096_LIC
Comunidad Autónoma de Illes Balears	ES5310097_LIC
Comunidad Autónoma de Illes Balears	ES5310099_LIC
Comunidad Autónoma de Illes Balears	ES5310099_LIC
Comunidad Autónoma de Illes Balears	ES5310103_LIC
Comunidad Autónoma de Illes Balears	ES5310103_LIC
Comunidad Autónoma de Illes Balears	ES5310104_LIC
Comunidad Autónoma de Illes Balears	ES5310104_LIC
Comunidad Autónoma de Illes Balears	ES5310105_LIC
Comunidad Autónoma de Illes Balears	ES5310105_LIC
Comunidad Autónoma de Illes Balears	ES5310106_LIC
Comunidad Autónoma de Illes Balears	ES5310107_LIC
Comunidad Autónoma de Illes Balears	ES5310107_LIC

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Administración General del Estado (AGE)	ES5310108_ZEC
Administración General del Estado (AGE)	ES5310108_ZEC
Comunidad Autónoma de Illes Balears	ES5310109_LIC
Comunidad Autónoma de Illes Balears	ES5310109_LIC
Comunidad Autónoma de Illes Balears	ES5310110_LIC
Comunidad Autónoma de Illes Balears	ES5310110_LIC
Comunidad Autónoma de Illes Balears	ES5310111_LIC
Comunidad Autónoma de Illes Balears	ES5310111_LIC
Comunidad Autónoma de Illes Balears	ES5310112_LIC
Comunidad Autónoma de Illes Balears	ES5310112_LIC
Comunidad Autónoma de Illes Balears	ES5310128_LIC
Comunidad Autónoma de Illes Balears	ES5310128_LIC
Administración General del Estado (AGE)	ES6110009_ZEC
Administración General del Estado (AGE)	ES6110009_ZEC
Administración General del Estado (AGE)	ES6110010_ZEC
Administración General del Estado (AGE)	ES6110010_ZEC
Comunidad Autónoma de Andalucía y Administración General del Estado (AGE)	ES6110015_LIC
Comunidad Autónoma de Andalucía y Administración General del Estado (AGE)	ES6110015_LIC
Administración General del Estado (AGE)	ES6110019_ZEC
Administración General del Estado (AGE)	ES6110019_ZEC
Comunidad Autónoma de Andalucía	ES6110020_ZEC
Comunidad Autónoma de Andalucía	ES6110020_ZEC
Comunidad Autónoma de Andalucía	ES6120008_ZEC
Comunidad Autónoma de Andalucía	ES6120008_ZEPA
Comunidad Autónoma de Andalucía	ES6120008_ZEC
Comunidad Autónoma de Andalucía	ES6120008_ZEPA
Comunidad Autónoma de Andalucía	ES6120009_ZEC
Comunidad Autónoma de Andalucía	ES6120017_LIC
Comunidad Autónoma de Andalucía	ES6120023_LIC
Administración General del Estado (AGE)	ES6120032_ZEC
Administración General del Estado (AGE)	ES6120032_ZEC
Comunidad Autónoma de Andalucía	ES6120033_ZEC
Comunidad Autónoma de Andalucía	ES6120033_ZEC
Comunidad Autónoma de Andalucía	ES6120034_ZEC
Comunidad Autónoma de Andalucía	ES6120034_ZEC
Comunidad Autónoma de Andalucía	ES6140013_ZEC
Comunidad Autónoma de Andalucía	ES6140013_ZEC
Comunidad Autónoma de Andalucía	ES6140014_ZEC
Comunidad Autónoma de Andalucía	ES6140014_ZEC
Comunidad Autónoma de Andalucía	ES6140016_ZEC
Comunidad Autónoma de Andalucía	ES6140016_ZEC
Comunidad Autónoma de Andalucía	ES6150002_LIC
Comunidad Autónoma de Andalucía	ES6150029_ZEC
Comunidad Autónoma de Andalucía	ES6170002_ZEC
Comunidad Autónoma de Andalucía	ES6170002_ZEC
Comunidad Autónoma de Andalucía	ES6170002_ZEPA
Comunidad Autónoma de Andalucía	ES6170002_ZEPA
Comunidad Autónoma de Andalucía	ES6170030_ZEC
Comunidad Autónoma de Andalucía	ES6170030_ZEC
Administración General del Estado (AGE)	ES6170036_ZEC

NOMBRE_ISO 3166-2:ES	WDPA_CODE
Administración General del Estado (AGE)	ES6170037_ZEC
Administración General del Estado (AGE)	ES6170037_ZEC
Comunidad Autónoma de la Región de Murcia	ES6200029_ZEC
Comunidad Autónoma de la Región de Murcia	ES6200029_ZEC
Comunidad Autónoma de la Región de Murcia	ES6200030_ZEC
Comunidad Autónoma de la Región de Murcia	ES6200030_ZEC
Administración General del Estado (AGE)	ES6200048_ZEC
Administración General del Estado (AGE)	ES6200048_ZEC
Administración General del Estado (AGE)	ES6300001_ZEC
Administración General del Estado (AGE)	ES6300001_ZEC
Administración General del Estado (AGE)	ES6300001_ZEPA
Administración General del Estado (AGE)	ES6300001_ZEPA
Ciudad de Ceuta	ES6310002_LIC
Ciudad de Ceuta	ES6310002_LIC
Ciudad de Melilla	ES6320001_ZEC
Ciudad de Melilla	ES6320001_ZEC
Administración General del Estado (AGE)	ESZZ16001_LIC
Administración General del Estado (AGE)	ESZZ16002_LIC
Administración General del Estado (AGE)	ESZZ16002_LIC
Administración General del Estado (AGE)	ESZZ16003_LIC
Administración General del Estado (AGE)	ESZZ16003_LIC
Administración General del Estado (AGE)	ESZZ16004_LIC
Administración General del Estado (AGE)	ESZZ16005_LIC
Administración General del Estado (AGE)	ESZZ16006_LIC
Administración General del Estado (AGE)	ESZZ16006_LIC
Administración General del Estado (AGE)	ESZZ16007_LIC
Administración General del Estado (AGE)	ESZZ16007_LIC
Administración General del Estado (AGE)	ESZZ16007_ZEPA
Administración General del Estado (AGE)	ESZZ16007_ZEPA
Administración General del Estado (AGE)	ESZZ16008_LIC
Administración General del Estado (AGE)	ESZZ16008_LIC
Administración General del Estado (AGE)	ESZZ16009_LIC
Administración General del Estado (AGE)	ESZZ16009_LIC
Administración General del Estado (AGE)	ESZZ16009_ZEPA
Administración General del Estado (AGE)	ESZZ16009_ZEPA
Administración General del Estado (AGE)	ESZZ16010_LIC
Administración General del Estado (AGE)	ESZZ16010_ZEPA

Name	Marine	DEMARCACION	REGION
Bahia de Cadiz	MT	MED	MED
Bahía de Cádiz	MT	MED	MED
La Breña y Marismas del Barbate	MT	MED	MED
Isla del Trocadero	MT	MED	MED
Cap de Norfeu	M	LEBA	MMED
Cap de Norfeu	M	MED	MED
Punta del Fangar	MT	LEBA	MMED
Punta del Fangar	MT	MED	MED
Salinas y Arenales de San Pedro del Pinatar	MT	LEBA	MMED
Salinas y Arenales de San Pedro del Pinatar	MT	MED	MED
Ricarda-Ca l`Arana	MT	LEBA	MMED
Ricarda-Ca l`Arana	MT	MED	MED
Archipielago de Cabrera	M	LEBA	MMED
Archipielago de Cabrera	M	MED	MED
Ses Salines d Eivissa i Formentera	MT	LEBA	MMED
Ses Salines d Eivissa i Formentera	MT	MED	MED
Delta de l`Ebre	MT	LEBA	MMED
Delta de l`Ebre	MT	MED	MED
Cabo de Gata-Níjar	MT	ESAL	MMED
Cabo de Gata-Níjar	MT	LEBA	MMED
Cabo de Gata-Níjar	MT	MED	MED
S Albufera des Grau	MT	LEBA	MMED
S Albufera des Grau	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Arrecife Barrera de Posidonia	MT	ESAL	MMED
Arrecife Barrera de Posidonia	MT	MED	MED
Peñones de San Cristóbal	MT	ESAL	MMED
Peñones de San Cristóbal	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Cabo de Gata-Nijar	MT	ESAL	MMED
Cabo de Gata-Nijar	MT	LEBA	MMED
Cabo de Gata-Nijar	MT	MED	MED
Illa de Tabarca	M	LEBA	MMED
Irta	M	LEBA	MMED
Irta	M	MED	MED
Isla de Terreros e Islas Negra	MT	LEBA	MMED
Isla de Terreros e Islas Negra	MT	MED	MED
Estrecho	MT	ESAL	MMED
Estrecho	MT	MED	MED
Fons Marins del Cap de Sant Antoni	M	LEBA	MMED
Fons Marins del Cap de Sant Antoni	M	MED	MED
Costes del Maresme	M	LEBA	MMED
Grapissar de Masia Blanca	M	LEBA	MMED
Grapissar de Masia Blanca	M	MED	MED
Cap de Creus	MT	LEBA	MMED
Cap de Creus	MT	MED	MED
Alborán	M	ESAL	MMED

Name	Marine	DEMARCACION	REGION
Alborán	M	MED	MED
Acantilados de Maro-Cerro Gordo	MT	ESAL	MMED
Acantilados de Maro-Cerro Gordo	MT	MED	MED
Corrales de Rota	M	MED	MED
Serra Gelada	MT	LEBA	MMED
Serra Gelada	MT	MED	MED
Menorca	MT	LEBA	MMED
Menorca	MT	MED	MED
Isla de Alboran	M	ESAL	MMED
Isla de Alboran	M	MED	MED
Cap de Creus	MT	LEBA	MMED
Cap de Creus	MT	MED	MED
Archipielago de Cabrera	MT	LEBA	MMED
Archipielago de Cabrera	MT	MED	MED
Cabo de Gata Nijar	MT	ESAL	MMED
Cabo de Gata Nijar	MT	LEBA	MMED
Cabo de Gata Nijar	MT	MED	MED
Islas Medas	M	LEBA	MMED
Islas Medas	M	MED	MED
Islas Columbretes	M	LEBA	MMED
Islas Columbretes	M	MED	MED
Fondos Marinos del Levante Almeriense	M	LEBA	MMED
Fondos Marinos del Levante Almeriense	M	MED	MED
Mar Menor y Costa Oriental de la Region de Murcia	MT	LEBA	MMED
Mar Menor y Costa Oriental de la Region de Murcia	MT	MED	MED
Acantilados de Maro-Cerro Gordo	MT	ESAL	MMED
Acantilados de Maro-Cerro Gordo	MT	MED	MED
Cap Gros-Cap de Creus	MT	LEBA	MMED
Cap Gros-Cap de Creus	MT	MED	MED
Aiguamolls de l`Alt Empordà	MT	LEBA	MMED
Aiguamolls de l`Alt Empordà	MT	MED	MED
Cap de Creus	MT	LEBA	MMED
Cap de Creus	MT	MED	MED

Name	Marine	DEMARCACION	REGION
Cap de Santes Creus-Litoral meridional tarragoní	M	LEBA	MMED
Cap de Santes Creus-Litoral meridional tarragoní	M	MED	MED
Delta de l`Ebre	MT	LEBA	MMED
Delta de l`Ebre	MT	MED	MED
Illes Medes	MT	LEBA	MMED
Illes Medes	MT	MED	MED
Massís de les Cadiretes	MT	LEBA	MMED
Massís de les Cadiretes	MT	MED	MED
Muntanyes de Begur	MT	LEBA	MMED
Muntanyes de Begur	MT	MED	MED
Pinya de Rosa	MT	LEBA	MMED
Pinya de Rosa	MT	MED	MED
Castell-Cap Roig	MT	LEBA	MMED
Castell-Cap Roig	MT	MED	MED
Costes del Garraf	M	LEBA	MMED
Costes del Garraf	M	MED	MED
Terres de l Ebre	MT	LEBA	MMED
Terres de l Ebre	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Prat de Cabanes-Torreblanca	MT	LEBA	MMED
Prat de Cabanes-Torreblanca	MT	MED	MED
Del Montgrí, les Illes Medes i el Baix Ter	MT	LEBA	MMED
Del Montgrí, les Illes Medes i el Baix Ter	MT	MED	MED
Marina de Les Medes	MT	LEBA	MMED
Marina de Les Medes	MT	MED	MED
Ses Salines d Eivissa i Formentera	MT	LEBA	MMED
Ses Salines d Eivissa i Formentera	MT	MED	MED
S Albufera des Grau	MT	LEBA	MMED
S Albufera des Grau	MT	MED	MED
Reserva Marina de la Isla de Alborán	M	ESAL	MMED
Reserva Marina de la Isla de Tabarca	M	LEBA	MMED
Reserva Marina de las Islas Columbretes	M	LEBA	MMED
Reserva Marina de Cabo de Gata-Níjar	M	ESAL	MMED
Reserva Marina de Cabo de Gata-Níjar	M	LEBA	MMED
Reserva Marina de Cabo de Gata-Níjar	M	MED	MED
Reserva Marina de Cabo de Palos-Islas Hormigas	M	LEBA	MMED
Reserva Marina de Cabo de Palos-Islas Hormigas	M	MED	MED
Reserva Marina de Levante de Mallorca-Cala Ratjada	M	LEBA	MMED
Reserva Marina de Masía Blanca	M	LEBA	MMED
Reserva Marina de Masía Blanca	M	MED	MED
Tamarit-Punta de la Móra-Costes del Tarragonès	MT	LEBA	MMED
Tamarit-Punta de la Móra-Costes del Tarragonès	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Cabo de Gata-Nijar	MT	ESAL	MMED
Cabo de Gata-Nijar	MT	LEBA	MMED
Cabo de Gata-Nijar	MT	MED	MED
Bahía de Cádiz	MT	MED	MED
Estrecho	MT	ESAL	MMED
Estrecho	MT	MED	MED
Alborán	M	ESAL	MMED
Alborán	M	MED	MED
Islote de San Andrés	M	LEBA	MMED

Name	Marine	DEMARCACION	REGION
Islote de San Andrés	M	MED	MED
La Breña y Marismas del Barbate	MT	MED	MED
Fondos Marinos de Bahía de Cádiz	M	MED	MED
Fondos Marinos Marismas del Río Palmones	M	ESAL	MMED
Fondos Marinos Marismas del Río Palmones	M	MED	MED
Fondos Marinos Estuario del Río Guadiaro	M	ESAL	MMED
Fondos Marinos Estuario del Río Guadiaro	M	MED	MED
Acantilados y Fondos Marinos Tesorillo-Salobreña	M	ESAL	MMED
Acantilados y Fondos Marinos Tesorillo-Salobreña	M	MED	MED
Acantilados y Fondos Marinos de Calahonda-Castell de Ferro	MT	ESAL	MMED
Acantilados y Fondos Marinos de Calahonda-Castell de Ferro	MT	MED	MED
Acantilados y Fondos Marinos de la Punta de la Mona	M	ESAL	MMED
Acantilados y Fondos Marinos de la Punta de la Mona	M	MED	MED
Estuario del Río tinto	MT	MED	MED
Acantilados de Maro-Cerro Gordo	MT	ESAL	MMED
Acantilados de Maro-Cerro Gordo	MT	MED	MED
Calahonda	M	ESAL	MMED
Calahonda	M	MED	MED
Reserva Marina de Cabo Tiñoso	M	LEBA	MMED
Reserva Marina de Cabo Tiñoso	M	MED	MED
Corredor de migración de cetáceos del Mediterráneo	M	LEBA	MMED
Corredor de migración de cetáceos del Mediterráneo	M	MED	MED
Parc Natural Maritimoterrestre Es Trenc-Salobrar de Campos	MT	LEBA	MMED
Parc Natural Maritimoterrestre Es Trenc-Salobrar de Campos	MT	MED	MED
Delta del Ebro	MT	LEBA	MMED
Delta del Ebro	MT	MED	MED
Salinas de Ibiza y Formentera	MT	LEBA	MMED
Salinas de Ibiza y Formentera	MT	MED	MED
Mar Menor	MT	LEBA	MMED
Mar Menor	MT	MED	MED
Aiguamolls de l Alt Emporda	MT	LEBA	MMED
Aiguamolls de l Alt Emporda	MT	MED	MED
Aiguamolls de l Alt Emporda	MT	LEBA	MMED
Aiguamolls de l Alt Emporda	MT	MED	MED
Delta de l Ebre	MT	LEBA	MMED
Delta de l Ebre	MT	MED	MED
Delta de l Ebre	MT	LEBA	MMED
Delta de l Ebre	MT	MED	MED
L Albufera	MT	LEBA	MMED
L Albufera	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Marismas del Odiel	MT	MED	MED
Cabo de Gata-Nijar	MT	ESAL	MMED
Cabo de Gata-Nijar	MT	LEBA	MMED
Cabo de Gata-Nijar	MT	MED	MED
Cabo de Gata-Nijar	MT	ESAL	MMED
Cabo de Gata-Nijar	MT	LEBA	MMED
Cabo de Gata-Nijar	MT	MED	MED

Name	Marine	DEMARCACION	REGION
Prat de Cabanes i Torreblanca	MT	LEBA	MMED
Prat de Cabanes i Torreblanca	MT	MED	MED
Es Vedra - Es Vedranell	MT	LEBA	MMED
Es Vedra - Es Vedranell	MT	MED	MED
Es Vedra - Es Vedranell	MT	LEBA	MMED
Es Vedra - Es Vedranell	MT	MED	MED
Cap Enderrocat - Cap Blanc	MT	LEBA	MMED
Cap Enderrocat - Cap Blanc	MT	MED	MED
Tagomago	MT	LEBA	MMED
Tagomago	MT	MED	MED
Tagomago	MT	LEBA	MMED
Tagomago	MT	MED	MED
Arxipelag de Cabrera	MT	LEBA	MMED
Arxipelag de Cabrera	MT	MED	MED
Arxipelag de Cabrera	MT	LEBA	MMED
Arxipelag de Cabrera	MT	MED	MED
Ses Salines d Eivissa i Formentera	MT	LEBA	MMED
Ses Salines d Eivissa i Formentera	MT	MED	MED
Ses Salines d Eivissa i Formentera	MT	LEBA	MMED
Ses Salines d Eivissa i Formentera	MT	MED	MED
Illots de Benidorm i Serra Gelada	MT	LEBA	MMED
Illots de Benidorm i Serra Gelada	MT	MED	MED
Bahia de Cadiz	MT	MED	MED
Bahia de Cadiz	MT	MED	MED
Salinas y Arenales de San Pedro del Pinatar	MT	LEBA	MMED
Salinas y Arenales de San Pedro del Pinatar	MT	MED	MED
Salinas y Arenales de San Pedro del Pinatar	MT	LEBA	MMED
Salinas y Arenales de San Pedro del Pinatar	MT	MED	MED
Espacio marino de Tabarca	M	LEBA	MMED
Espacio marino de Tabarca	M	MED	MED
Espacio marino de Tabarca	M	LEBA	MMED
Espacio marino de Tabarca	M	MED	MED
Sa Dragonera	MT	LEBA	MMED
Sa Dragonera	MT	MED	MED
Sa Dragonera	MT	LEBA	MMED
Sa Dragonera	MT	MED	MED
Muntanyes d Arta	MT	LEBA	MMED
Muntanyes d Arta	MT	MED	MED
Muntanyes d Arta	MT	LEBA	MMED
Muntanyes d Arta	MT	MED	MED
D Addaia a s Albufera	MT	LEBA	MMED
D Addaia a s Albufera	MT	MED	MED
D Addaia a s Albufera	MT	LEBA	MMED
D Addaia a s Albufera	MT	MED	MED
S Albufera des Grau	MT	LEBA	MMED
S Albufera des Grau	MT	MED	MED
S Albufera des Grau	MT	LEBA	MMED
S Albufera des Grau	MT	MED	MED
Illots de Santa Eularia, Rodona i es Cana	MT	LEBA	MMED
Illots de Santa Eularia, Rodona i es Cana	MT	MED	MED
Illots de Santa Eularia, Rodona i es Cana	MT	LEBA	MMED
Illots de Santa Eularia, Rodona i es Cana	MT	MED	MED

Name	Marine	DEMARCACION	REGION
Islas Hormigas	M	LEBA	MMED
Mar Menor	MT	LEBA	MMED
Mar Menor	MT	MED	MED
Isla Cueva de Lobos	M	LEBA	MMED
Isla Cueva de Lobos	M	MED	MED
Isla de las Palomas	M	LEBA	MMED
Isla de las Palomas	M	MED	MED
Estrecho	MT	ESAL	MMED
Estrecho	MT	MED	MED
Estrecho	MT	ESAL	MMED
Estrecho	MT	MED	MED
Serra d Irta (ZEPA)	MT	LEBA	MMED
Serra d Irta (ZEPA)	MT	MED	MED
Espacio marino de Orpesa y Benicassim	M	LEBA	MMED
Espacio marino de Orpesa y Benicassim	M	MED	MED
Espacio marino de Orpesa y Benicassim	M	LEBA	MMED
Espacio marino de Orpesa y Benicassim	M	MED	MED
Montgo-Cap de Sant Antoni	MT	LEBA	MMED
Montgo-Cap de Sant Antoni	MT	MED	MED
Prat de Cabanes i Torreblanca (ZEPA)	MT	LEBA	MMED
Prat de Cabanes i Torreblanca (ZEPA)	MT	MED	MED
l Albufera (ZEPA)	MT	LEBA	MMED
l Albufera (ZEPA)	MT	MED	MED
Espacio marino del Tinto y del Odiel	M	MED	MED
Espacio marino de la Bahia de Cadiz	M	MED	MED
Bahia de Malaga-Cerro Gordo	M	ESAL	MMED
Bahia de Malaga-Cerro Gordo	M	MED	MED
Espacio marino de la Isla de Alboran	M	ESAL	MMED
Espacio marino de la Isla de Alboran	M	MED	MED
Espacio marino de la Isla de Alboran	M	ESAL	MMED
Espacio marino de la Isla de Alboran	M	MED	MED
Bahia de Almeria	M	ESAL	MMED
Bahia de Almeria	M	LEBA	MMED
Bahia de Almeria	M	MED	MED
Espacio marino de los Islotes Litorales de Murcia y Almeria	M	LEBA	MMED
Espacio marino de los Islotes Litorales de Murcia y Almeria	M	MED	MED
Espacio marino de Tabarca-Cabo de Palos	M	LEBA	MMED
Espacio marino de Tabarca-Cabo de Palos	M	MED	MED
Plataforma-talud marinos del Cabo de la Nao	M	LEBA	MMED
Espacio marino del Delta de l Ebre-Illes Columbretes	M	LEBA	MMED
Espacio marino del Delta de l Ebre-Illes Columbretes	M	MED	MED
Espacio marino del Baix Llobregat-Garraf	M	LEBA	MMED
Espacio marino del Baix Llobregat-Garraf	M	MED	MED
Espacio marino de l Emporda	M	LEBA	MMED
Espacio marino de l Emporda	M	MED	MED
Espacio marino de Formentera y del sur de Ibiza	M	LEBA	MMED
Espacio marino de Formentera y del sur de Ibiza	M	MED	MED
Espacio marino del poniente y norte de Ibiza	M	LEBA	MMED
Espacio marino del poniente y norte de Ibiza	M	MED	MED
Espacio marino del levante de Ibiza	M	LEBA	MMED
Espacio marino del levante de Ibiza	M	MED	MED
Espacio marino del sur de Mallorca y Cabrera	M	LEBA	MMED
Espacio marino del sur de Mallorca y Cabrera	M	MED	MED
Espacio marino del poniente de Mallorca	M	LEBA	MMED

Name	Marine	DEMARCACION	REGION
Espacio marino del poniente de Mallorca	M	MED	MED
Espacio marino del norte de Mallorca	M	LEBA	MMED
Espacio marino del norte de Mallorca	M	MED	MED
Espacio marino del norte y oeste de Menorca	M	LEBA	MMED
Espacio marino del norte y oeste de Menorca	M	MED	MED
Espacio marino del sureste de Menorca	M	LEBA	MMED
Espacio marino del sureste de Menorca	M	MED	MED
ZEPA Espacio marino de Ifac	M	LEBA	MMED
ZEPA Espacio marino de Ifac	M	MED	MED
Costes del Maresme	M	LEBA	MMED
Costes del Garraf	M	LEBA	MMED
Costes del Garraf	M	MED	MED
Costes del Garraf	M	LEBA	MMED
Costes del Garraf	M	MED	MED
Cap de Creus	MT	LEBA	MMED
Cap de Creus	MT	MED	MED
Cap de Creus	MT	LEBA	MMED
Cap de Creus	MT	MED	MED
Massis de les Cadiretes	MT	LEBA	MMED
Massis de les Cadiretes	MT	MED	MED
Massis de les Cadiretes	MT	LEBA	MMED
Massis de les Cadiretes	MT	MED	MED
Litoral del Baix Emporda	MT	LEBA	MMED
Litoral del Baix Emporda	MT	MED	MED
Litoral del Baix Emporda	MT	LEBA	MMED
Litoral del Baix Emporda	MT	MED	MED
El Montgri- Les Medes - El Baix Ter	MT	LEBA	MMED
El Montgri- Les Medes - El Baix Ter	MT	MED	MED
El Montgri- Les Medes - El Baix Ter	MT	LEBA	MMED
El Montgri- Les Medes - El Baix Ter	MT	MED	MED
Litoral meridional tarragoni	MT	LEBA	MMED
Litoral meridional tarragoni	MT	MED	MED
Costes del Tarragones	MT	LEBA	MMED
Costes del Tarragones	MT	MED	MED
Grapissar de la Masia Blanca	M	LEBA	MMED
Grapissar de la Masia Blanca	M	MED	MED
Montgo	MT	LEBA	MMED
Montgo	MT	MED	MED
L Almadrava	M	LEBA	MMED
L Almadrava	M	LEBA	MMED
Serra Gelada i Litoral de la Marina Baixa	MT	LEBA	MMED
Serra Gelada i Litoral de la Marina Baixa	MT	MED	MED
Alguers de Borriana-Nules-Moncofa	M	LEBA	MMED
Alguers de Borriana-Nules-Moncofa	M	MED	MED
Serra d Irta	MT	LEBA	MMED
Serra d Irta	MT	MED	MED
Badies de Pollença i Alcudia	M	LEBA	MMED
Badies de Pollença i Alcudia	M	MED	MED
Illots de Ponent d Eivissa	MT	LEBA	MMED
Illots de Ponent d Eivissa	MT	MED	MED
Illots de Ponent d Eivissa	MT	LEBA	MMED
Illots de Ponent d Eivissa	MT	MED	MED

Name	Marine	DEMARCACION	REGION
La Mola	MT	LEBA	MMED
La Mola	MT	MED	MED
La Mola	MT	LEBA	MMED
La Mola	MT	MED	MED
Cap de Barbaria	MT	LEBA	MMED
Cap de Barbaria	MT	MED	MED
Cap de Barbaria	MT	LEBA	MMED
Cap de Barbaria	MT	MED	MED
Costa de Llevant	M	LEBA	MMED
Costa de Llevant	M	MED	MED
Area marina del Nord de Menorca	M	LEBA	MMED
Area marina del Nord de Menorca	M	MED	MED
Area marina del Sud de Ciutadella	M	LEBA	MMED
Area marina del Sud de Ciutadella	M	MED	MED
Cap Negre	MT	LEBA	MMED
Cap Negre	MT	MED	MED
Cala d Algairens	M	LEBA	MMED
Cala d Algairens	M	MED	MED
Punta Redona - Arenal d en Castell	M	LEBA	MMED
Punta Redona - Arenal d en Castell	M	MED	MED
Cala en Brut	M	LEBA	MMED
Cala en Brut	M	MED	MED
Caleta de Binillauti	M	LEBA	MMED
Caleta de Binillauti	M	MED	MED
Area marina Punta Prima - Illa de l Aire	M	LEBA	MMED
Area marina Punta Prima - Illa de l Aire	M	MED	MED
De cala Llucalari a Cales Coves	M	LEBA	MMED
De cala Llucalari a Cales Coves	M	MED	MED
Arenal de Son Saura	M	LEBA	MMED
Arenal de Son Saura	M	MED	MED
Es Rajoli	M	LEBA	MMED
Es Rajoli	M	MED	MED
Port des Canonge	MT	LEBA	MMED
Port des Canonge	MT	MED	MED
S Estaca - Punta de Deia	MT	LEBA	MMED
S Estaca - Punta de Deia	MT	MED	MED
Cala Figuera	M	LEBA	MMED
Cala Figuera	M	MED	MED
Punta de n Amer	MT	LEBA	MMED
Punta de n Amer	MT	MED	MED
Area marina Costa de Llevant	M	LEBA	MMED
Portocolom	M	LEBA	MMED
Portocolom	M	MED	MED
Area marina Cap de cala Figuera	M	LEBA	MMED
Area marina Cap de cala Figuera	M	MED	MED
Costa de l Oest d Eivissa	M	LEBA	MMED
Costa de l Oest d Eivissa	M	MED	MED
Es Amunts d Eivissa	MT	LEBA	MMED
Es Amunts d Eivissa	MT	MED	MED
Area marina de ses Margalides	M	LEBA	MMED
Area marina de Tagomago	M	LEBA	MMED
Area marina de Tagomago	M	MED	MED

Name	Marine	DEMARCACION	REGION
Area marina del cap Martinet	M	LEBA	MMED
Area marina del cap Martinet	M	MED	MED
Area marina de cala Saona	M	LEBA	MMED
Area marina de cala Saona	M	MED	MED
Area marina Platja de Tramuntana	M	LEBA	MMED
Area marina Platja de Tramuntana	M	MED	MED
Area marina Platja de Migjorn	M	LEBA	MMED
Area marina Platja de Migjorn	M	MED	MED
Nord de Sant Joan	MT	LEBA	MMED
Nord de Sant Joan	MT	MED	MED
Cap Enderrocat i cap Blanc	MT	LEBA	MMED
Cap Enderrocat i cap Blanc	MT	MED	MED
Fondos Marinos de Punta Entinas-Sabinar	M	ESAL	MMED
Fondos Marinos de Punta Entinas-Sabinar	M	MED	MED
Fondos Marinos Levante Almeriense	M	LEBA	MMED
Fondos Marinos Levante Almeriense	M	MED	MED
Alborán	M	ESAL	MMED
Alborán	M	MED	MED
Arrecifes de Roquetas de Mar	M	ESAL	MMED
Arrecifes de Roquetas de Mar	M	MED	MED
Islote de San Andres	M	LEBA	MMED
Islote de San Andres	M	MED	MED
La Breña y Marismas del Barbate	MT	MED	MED
La Breña y Marismas del Barbate	MT	MED	MED
Fondos Marinos de Bahia de Cadiz	M	MED	MED
Punta de Trafalgar	MT	MED	MED
Corrales de Rota	M	MED	MED
Estrecho Oriental	M	ESAL	MMED
Estrecho Oriental	M	MED	MED
Fondos Marinos Marismas del Rio Palmones	M	ESAL	MMED
Fondos Marinos Marismas del Rio Palmones	M	MED	MED
Fondos Marinos Estuario del Rio Guadiaro	M	ESAL	MMED
Fondos Marinos Estuario del Rio Guadiaro	M	MED	MED
Acantilados y Fondos Marinos Tesorillo-Salobreña	M	ESAL	MMED
Acantilados y Fondos Marinos Tesorillo-Salobreña	M	MED	MED
Acantilados y Fondos Marinos de Calahonda-Castell de Ferro	MT	ESAL	MMED
Acantilados y Fondos Marinos de Calahonda-Castell de Ferro	MT	MED	MED
Acantilados y Fondos Marinos de La Punta de La Mona	M	ESAL	MMED
Acantilados y Fondos Marinos de La Punta de La Mona	M	MED	MED
Enebrales de Punta Umbria	MT	MED	MED
Estuario del Rio Tinto	MT	MED	MED
Acantilados de Maro-Cerro Gordo	MT	ESAL	MMED
Acantilados de Maro-Cerro Gordo	MT	MED	MED
Acantilados de Maro-Cerro Gordo	MT	ESAL	MMED
Acantilados de Maro-Cerro Gordo	MT	MED	MED
Calahonda	M	ESAL	MMED
Calahonda	M	MED	MED
Fondos Marinos de La Bahia de Estepona	M	ESAL	MMED

Name	Marine	DEMARCACION	REGION
El Saladillo - Punta de Baños	M	ESAL	MMED
El Saladillo - Punta de Baños	M	MED	MED
Franja Litoral Sumergida de la Region de Murcia	M	LEBA	MMED
Franja Litoral Sumergida de la Region de Murcia	M	MED	MED
Mar Menor	M	LEBA	MMED
Mar Menor	M	MED	MED
Valles submarinos del Escarpe de Mazarron	M	LEBA	MMED
Valles submarinos del Escarpe de Mazarron	M	MED	MED
Islas Chafarinas	MT	ESAL	MMED
Islas Chafarinas	MT	MED	MED
Islas Chafarinas	MT	ESAL	MMED
Islas Chafarinas	MT	MED	MED
Zona maritimo-terrestre del Monte Hacho	M	ESAL	MMED
Zona maritimo-terrestre del Monte Hacho	M	MED	MED
Zona maritimo terrestre de los acantilados de Aguadu	MT	ESAL	MMED
Zona maritimo terrestre de los acantilados de Aguadu	MT	MED	MED
Sistema de cañones submarinos occidentales del Golfo de Leon	M	LEBA	MMED
Canal de Menorca	M	LEBA	MMED
Canal de Menorca	M	MED	MED
Sur de Almeria - Seco de los Olivos	M	ESAL	MMED
Sur de Almeria - Seco de los Olivos	M	LEBA	MMED
Espacio marino de Illes Columbretes	M	LEBA	MMED
Espacio marino de Alboran	M	ESAL	MMED
Espacio marino de Ifac	M	LEBA	MMED
Espacio marino de Ifac	M	MED	MED
Espacio marino de la Marina Alta	M	LEBA	MMED
Espacio marino de la Marina Alta	M	MED	MED
Espacio marino de la Marina Alta	M	LEBA	MMED
Espacio marino de la Marina Alta	M	MED	MED
Espacio marino del Cabo de les Hortes	M	LEBA	MMED
Espacio marino del Cabo de les Hortes	M	MED	MED
Espacio marino de Cabo Roig	M	LEBA	MMED
Espacio marino de Cabo Roig	M	MED	MED
Espacio marino de Cabo Roig	M	LEBA	MMED
Espacio marino de Cabo Roig	M	MED	MED
Espacio marino del entorno de Illes Columbretes	M	LEBA	MMED
Espacio marino del entorno de Illes Columbretes	M	LEBA	MMED

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
13,44887531	90,50536291	103,9542382	900815
13,6026372	91,61778998	105,2204272	142805
11,4967509	39,2714017	50,7681526	142809
0,590013982	2,557670414	3,147684396	142820
2,661355783	0,005943478	2,667299261	151248
2,661355783	0,005943478	2,667299261	151248
1,88170744	5,510991982	7,392699423	151292
1,88170744	5,510991982	7,392699423	151292
1,202622963	7,445936082	8,648559045	15509
1,202622963	7,445936082	8,648559045	15509
0,194860238	1,989167169	2,184027406	195974
0,194860238	1,989167169	2,184027406	195974
901,0519202	13,15120513	914,2031253	196045
901,0519202	13,15120513	914,2031253	196045
140,7973312	27,53274042	168,3300716	196166
140,7973312	27,53274042	168,3300716	196166
5,108424192	71,14516138	76,25358557	196213
5,108424192	71,14516138	76,25358557	196213
120,3220279	374,7999397	495,1219676	196284
120,3220279	374,7999397	495,1219676	196284
120,3220279	374,7999397	495,1219676	196284
17,32482448	33,81022786	51,13505234	196293
17,32482448	33,81022786	51,13505234	196293
3,88107441	62,43254081	66,31361522	196457
0,976536139	0,103610278	1,080146418	20934
0,976536139	0,103610278	1,080146418	20934
0,976536139	0,103610278	1,080146418	20934
0,010014371	0,013583578	0,023597949	20955
0,010014371	0,013583578	0,023597949	20955
68,13	121,05	189,19	5197
120,2894597	374,8024587	495,0919184	145809
120,2894597	374,8024587	495,0919184	145809
120,2894597	374,8024587	495,0919184	145809
13,7977306	0	13,7977306	348792
24,48081774	0,159415212	24,64023295	348802
24,48081774	0,159415212	24,64023295	348802
0,003500278	0,013664149	0,017164427	348804
0,003500278	0,013664149	0,017164427	348804
93,88100243	95,44144587	189,3224483	348851
93,88100243	95,44144587	189,3224483	348851
9,577290542	0,144117459	9,721408	348860
9,577290542	0,144117459	9,721408	348860
29,21342922	0	29,21342922	349119
4,464529191	0,00032211	4,464851301	349123
4,464529191	0,00032211	4,464851301	349123
30,88452989	108,3567922	139,2413221	349127
30,88452989	108,3567922	139,2413221	349127
263,6756007	0,0788175	263,7544182	349166

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
263,6756007	0,0788175	263,7544182	349166
15,29549265	3,833008985	19,12850163	349187
15,29549265	3,833008985	19,12850163	349187
1,086824377	0,001152429	1,087976806	349370
49,58355477	7,511783774	57,09533855	349430
49,58355477	7,511783774	57,09533855	349430
4489,42	700,88	5190,3	61525
4489,42	700,88	5190,3	61525
263,6756006	0,07881749	263,7544181	365006
263,6756006	0,07881749	263,7544181	365006
30,86703688	108,4539367	139,3209736	365007
30,86703688	108,4539367	139,3209736	365007
87,7175349	13,1512051	100,86874	365008
87,7175349	13,1512051	100,86874	365008
120,7557957	374,714888	495,4706837	365009
120,7557957	374,714888	495,4706837	365009
120,7557957	374,714888	495,4706837	365009
5,78109124	0,257940132	6,039031373	365010
5,78109124	0,257940132	6,039031373	365010
122,8647502	0,1940759	123,0588261	365011
122,8647502	0,1940759	123,0588261	365011
63,10748962	0,0274616	63,13495122	365013
63,10748962	0,0274616	63,13495122	365013
257,2862022	17,74423243	275,0304346	365014
257,2862022	17,74423243	275,0304346	365014
14,20147951	3,956058959	18,15753846	365022
14,20147951	3,956058959	18,15753846	365022
5,769320678	8,81621606	14,58553674	389004
5,769320678	8,81621606	14,58553674	389004
59,04507013	49,91921494	108,9642851	389077
59,04507013	49,91921494	108,9642851	389077
30,88452989	108,3567922	139,2413221	389087
30,88452989	108,3567922	139,2413221	389087

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
46,02227599	0,986901577	47,00917757	389088
46,02227599	0,986901577	47,00917757	389088
360,2206057	125,9021385	486,1227443	389097
360,2206057	125,9021385	486,1227443	389097
20,56271518	61,90416748	82,46688265	389123
20,56271518	61,90416748	82,46688265	389123
14,73035179	77,79392285	92,52427463	389127
14,73035179	77,79392285	92,52427463	389127
10,49583422	11,35439469	21,85022891	389140
10,49583422	11,35439469	21,85022891	389140
0,139722405	0,718791188	0,858513592	389150
0,139722405	0,718791188	0,858513592	389150
7,961593251	4,310166137	12,27175939	389221
7,961593251	4,310166137	12,27175939	389221
265,7527088	8,44084E-05	265,7527932	389228
265,7527088	8,44084E-05	265,7527932	389228
806,172143	2875,791866	3681,964009	
806,172143	2875,791866	3681,964009	
4,382362747	63,86448005	68,2468428	68180
0,933072815	9,263063409	10,19613622	68191
0,933072815	9,263063409	10,19613622	68191
16,35132745	61,84762628	78,19895373	555546001
16,35132745	61,84762628	78,19895373	555546001
1,012161335	0,230884612	1,243045947	555546014
1,012161335	0,230884612	1,243045947	555546014
4,349331807	9,5199693	13,86930111	555546019
4,349331807	9,5199693	13,86930111	555546019
0,110369018	1,067005818	1,177374836	555546020
0,110369018	1,067005818	1,177374836	555546020
16,56209627	0	16,56209627	555552483
13,79819002	0	13,79819002	555552484
54,9905264	0	54,9905264	555552485
124,5990738	0,001939561	124,6010133	555552486
124,5990738	0,001939561	124,6010133	555552486
124,5990738	0,001939561	124,6010133	555552486
19,3065245	0,011312746	19,31783725	555552487
19,3065245	0,011312746	19,31783725	555552487
113,8439716	0	113,8439716	555552488
4,472442759	1,32976E-06	4,472444089	555552489
4,472442759	1,32976E-06	4,472444089	555552489
9,567403162	1,204515101	10,77191826	555562410
9,567403162	1,204515101	10,77191826	555562410
3,576647955	62,0710799	65,64772785	555588793
120,3219765	374,7999394	495,1219159	555588805
120,3219765	374,7999394	495,1219159	555588805
120,3219765	374,7999394	495,1219159	555588805
13,60264	91,61781758	105,2204576	555588813
93,92809985	97,84478266	191,7728825	555588820
93,92809985	97,84478266	191,7728825	555588820
263,6756007	0,0788175	263,7544182	555588831
263,6756007	0,0788175	263,7544182	555588831
0,405199242	0,012633205	0,417832447	555588835

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
0,405199242	0,012633205	0,417832447	555588835
11,49679282	39,2712892	50,76808202	555588840
70,35310987	0,001067105	70,35417698	555588841
0,867488336	0,00958826	0,877076596	555588857
0,867488336	0,00958826	0,877076596	555588857
1,040643135	0,033684972	1,074328107	555588858
1,040643135	0,033684972	1,074328107	555588858
10,20684879	0,244497398	10,45134619	555588883
10,20684879	0,244497398	10,45134619	555588883
8,945931471	0,781113518	9,727044988	555588884
8,945931471	0,781113518	9,727044988	555588884
1,215378232	0,033810998	1,249189229	555588886
1,215378232	0,033810998	1,249189229	555588886
6,862683688	4,803505166	11,66618885	555588903
15,29549265	3,833008985	19,12850163	555588918
15,29549265	3,833008985	19,12850163	555588918
13,82889954	0,212756707	14,04165625	555588945
13,82889954	0,212756707	14,04165625	555588945
11,39570434	0,004661354	11,4003657	555596224
11,39570434	0,004661354	11,4003657	555596224
46613,46132	0,194075931	46613,65539	555596226
46613,46132	0,194075931	46613,65539	555596226
23,41253562	14,51661043	37,92914606	555638694
23,41253562	14,51661043	37,92914606	555638694
6,956249474	71,2196537	78,17590317	68193
6,956249474	71,2196537	78,17590317	68193
1,725638074	15,12948999	16,85512806	94077
1,725638074	15,12948999	16,85512806	94077
135,0031699	15,52606244	150,5292323	102876
135,0031699	15,52606244	150,5292323	102876
59,02745796	49,93471026	108,9621682	555580768
59,02745796	49,93471026	108,9621682	555580768
59,02745796	49,93471026	108,9621682	555538169
59,02745796	49,93471026	108,9621682	555538169
360,1955728	125,898896	486,0944688	555580776
360,1955728	125,898896	486,0944688	555580776
360,1955736	125,898896	486,0944695	555538170
360,1955736	125,898896	486,0944695	555538170
66,87615232	208,5009897	275,377142	555580778
66,87615232	208,5009897	275,377142	555580778
4,109513787	62,07134966	66,18086345	555580773
3,576647295	62,071079	65,6477263	555538175
120,3219618	374,7999084	495,1218702	555548901
120,3219618	374,7999084	495,1218702	555548901
120,3219618	374,7999084	495,1218702	555548901
120,3219556	374,7999084	495,121864	555538196
120,3219556	374,7999084	495,121864	555538196
120,3219556	374,7999084	495,121864	555538196

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
10,77185486	8,627904344	19,3997592	555548913
10,77185486	8,627904344	19,3997592	555548913
5,580521677	0,793818028	6,374339706	555548926
5,580521677	0,793818028	6,374339706	555548926
5,580508512	0,793818028	6,37432654	555538224
5,580508512	0,793818028	6,37432654	555538224
34,23041228	82,22326059	116,4536729	555538227
34,23041228	82,22326059	116,4536729	555538227
4,963003295	0,599492405	5,5624957	555548930
4,963003295	0,599492405	5,5624957	555548930
4,962995622	0,599492405	5,562488027	555538228
4,962995622	0,599492405	5,562488027	555538228
193,4651556	13,17405165	206,6392072	555548931
193,4651556	13,17405165	206,6392072	555548931
193,4651421	13,17405165	206,6391938	555538229
193,4651421	13,17405165	206,6391938	555538229
136,6287757	28,24435862	164,8731344	555548932
136,6287757	28,24435862	164,8731344	555548932
136,6285119	28,24435862	164,8728706	555538230
136,6285119	28,24435862	164,8728706	555538230
54,48530436	7,439446236	61,92475059	555538264
54,48530436	7,439446236	61,92475059	555538264
13,6026429	91,61782023	105,2204631	555548954
13,60262424	91,61782015	105,2204444	555538280
1,202652734	7,086577615	8,289230349	555548970
1,202652734	7,086577615	8,289230349	555548970
1,202652734	7,086577615	8,289230349	555548970
1,202652751	7,08657762	8,28923037	555538313
1,202652751	7,08657762	8,28923037	555538313
142,5528041	0,063177798	142,6159819	555593024
142,5528041	0,063177798	142,6159819	555593024
142,552805	0,001801549	142,5546065	555538349
142,552805	0,001801549	142,5546065	555538349
10,01769716	2,77116177	12,78885892	555548976
10,01769716	2,77116177	12,78885892	555548976
10,01765672	2,77116177	12,78881849	555538356
10,01765672	2,77116177	12,78881849	555538356
56,69647042	91,43837956	148,13485	555548980
56,69647042	91,43837956	148,13485	555548980
56,69646158	91,43837854	148,1348401	555538362
56,69646158	91,43837854	148,1348401	555538362
10,19685218	18,20719539	28,40404757	555548985
10,19685218	18,20719539	28,40404757	555548985
10,19685115	18,20722967	28,40408083	555538368
10,19685115	18,20722967	28,40408083	555538368
6,783562119	18,83137899	25,61494111	555548986
6,783562119	18,83137899	25,61494111	555548986
6,783560142	18,83136395	25,6149241	555538369
6,783560142	18,83136395	25,6149241	555538369
0,634457237	0,069909252	0,704366489	555548994
0,634457237	0,069909252	0,704366489	555548994
0,634457248	0,069909252	0,7043665	555538377
0,634457248	0,069909252	0,7043665	555538377

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
1,53879842	0	1,53879842	555538391
134,4198051	11,08412873	145,5039338	555538395
134,4198051	11,08412873	145,5039338	555538395
0,279439229	0,003177646	0,282616875	555538405
0,279439229	0,003177646	0,282616875	555538405
0,270739007	0,011879608	0,282618615	555538406
0,270739007	0,011879608	0,282618615	555538406
93,92810414	97,84478318	191,7728873	555548999
93,92810414	97,84478318	191,7728873	555548999
93,92810414	97,84478318	191,7728873	555538467
93,92810414	97,84478318	191,7728873	555538467
20,55314174	77,42418694	97,97732868	555538568
20,55314174	77,42418694	97,97732868	555538568
13,17791895	0,000192846	13,17811179	555593025
13,17791895	0,000192846	13,17811179	555593025
13,17785213	0,000192846	13,17804497	555538571
13,17785213	0,000192846	13,17804497	555538571
8,248831155	21,84614971	30,09498086	555538578
8,248831155	21,84614971	30,09498086	555538578
10,77215437	8,65862051	19,43077488	555538591
10,77215437	8,65862051	19,43077488	555538591
84,34899115	208,501262	292,8502531	555538595
84,34899115	208,501262	292,8502531	555538595
49,45136114	0,00032197	49,45168311	555593052
36,15018934	0,000825769	36,15101511	555593053
609,8459166	0,003916946	609,8498335	555593054
609,8459166	0,003916946	609,8498335	555593054
661,1143498	0,000238579	661,1145883	555593055
661,1143498	0,000238579	661,1145883	555593055
1267,68423	0,000991173	1267,685221	555593056
1267,68423	0,000991173	1267,685221	555593056
1267,68423	0,000991173	1267,685221	555593056
123,3489305	0,001056936	123,3499875	555593057
123,3489305	0,001056936	123,3499875	555593057
1260,678144	0,000765598	1260,678909	555593058
1260,678144	0,000765598	1260,678909	555593058
2682,752106	0	2682,752106	555593059
9032,138161	7,71054E-06	9032,138169	555593060
9032,138161	7,71054E-06	9032,138169	555593060
388,1770842	5,07537E-05	388,1771349	555593061
388,1770842	5,07537E-05	388,1771349	555593061
860,1182975	3,38846E-05	860,1183313	555593062
860,1182975	3,38846E-05	860,1183313	555593062
465,7424422	1,75225E-06	465,742444	555593063
465,7424422	1,75225E-06	465,742444	555593063
472,9842475	5,02219E-06	472,9842525	555593064
472,9842475	5,02219E-06	472,9842525	555593064
192,2690324	8,71948E-07	192,2690332	555593065
192,2690324	8,71948E-07	192,2690332	555593065
402,4015614	1,30323E-07	402,4015615	555593066
402,4015614	1,30323E-07	402,4015615	555593066
471,6598855	5,94477E-06	471,6598915	555593067

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
471,6598855	5,94477E-06	471,6598915	555593067
990,6994098	3,3942E-05	990,6994437	555593068
990,6994098	3,3942E-05	990,6994437	555593068
1627,102593	2,27035E-05	1627,102616	555593069
1627,102593	2,27035E-05	1627,102616	555593069
237,7761	4,14835E-06	237,7761042	555593070
237,7761	4,14835E-06	237,7761042	555593070
9,333298806	0,000125361	9,333424167	555593084
9,333298806	0,000125361	9,333424167	555593084
29,21315463	0	29,21315463	555523638
265,7392625	0,000194666	265,7394572	555549036
265,7392625	0,000194666	265,7394572	555549036
265,7392625	0,000194666	265,7394572	555538646
265,7392625	0,000194666	265,7394572	555538646
30,87819972	108,3720252	139,2502249	555549040
30,87819972	108,3720252	139,2502249	555549040
30,87820188	108,3720252	139,2502271	555538650
30,87820188	108,3720252	139,2502271	555538650
14,72204443	77,79879119	92,52083562	555549042
14,72204443	77,79879119	92,52083562	555549042
14,72204443	77,79879119	92,52083562	555538652
14,72204443	77,79879119	92,52083562	555538652
18,45074504	15,67839459	34,12913963	555549044
18,45074504	15,67839459	34,12913963	555549044
18,45074503	15,67839459	34,12913963	555538654
18,45074503	15,67839459	34,12913963	555538654
18,45074503	15,67839459	34,12913963	555538654
20,57813265	44,57330348	65,15143613	555549045
20,57813265	44,57330348	65,15143613	555549045
20,57813265	44,57330354	65,15143619	555538655
20,57813265	44,57330354	65,15143619	555538655
46,06216744	3,100289363	49,1624568	555523677
46,06216744	3,100289363	49,1624568	555523677
9,56752807	1,580687628	11,1482157	555523679
9,56752807	1,580687628	11,1482157	555523679
4,464363617	0,000468655	4,464832272	555523681
4,464363617	0,000468655	4,464832272	555523681
8,225489008	21,86785054	30,09333955	555523683
8,225489008	21,86785054	30,09333955	555523683
22,39439768	0	22,39439768	555523686
22,39439768	0	22,39439768	555577705
51,10582635	4,423540428	55,52936678	555523697
51,10582635	4,423540428	55,52936678	555523697
40,80619445	0,012877123	40,81907157	555523717
40,80619445	0,012877123	40,81907157	555523717
20,55354075	77,42307476	97,9766155	555523722
20,55354075	77,42307476	97,9766155	555523722
309,5743231	0,035835484	309,6101586	555523762
309,5743231	0,035835484	309,6101586	555523762
23,91505778	1,52135936	25,43641714	555549094
23,91505778	1,52135936	25,43641714	555549094
23,91499293	1,521359359	25,43635229	555538704
23,91499293	1,521359359	25,43635229	555538704

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
11,08330182	10,8914126	21,97471442	555549095
11,08330182	10,8914126	21,97471442	555549095
11,08328256	10,89141195	21,9746945	555538705
11,08328256	10,89141195	21,9746945	555538705
17,76705327	7,077358559	24,84441183	555549096
17,76705327	7,077358559	24,84441183	555549096
17,76682948	7,077358569	24,84418805	555538706
17,76682948	7,077358569	24,84418805	555538706
18,51541262	0,003345084	18,51875771	555523768
18,51541262	0,003345084	18,51875771	555523768
51,2945796	0,110317591	51,40489719	555523773
51,2945796	0,110317591	51,40489719	555523773
22,5751818	0,007707244	22,58288905	555523774
22,5751818	0,007707244	22,58288905	555523774
5,586504831	1,800620924	7,387125756	555523806
5,586504831	1,800620924	7,387125756	555523806
1,41232787	0,006269736	1,418597606	555523807
1,41232787	0,006269736	1,418597606	555523807
9,795174886	0,334775955	10,12995084	555523808
9,795174886	0,334775955	10,12995084	555523808
0,391979555	0,003503199	0,395482753	555523809
0,391979555	0,003503199	0,395482753	555523809
1,594304712	0,00349563	1,597800342	555523810
1,594304712	0,00349563	1,597800342	555523810
13,33348555	0,001753515	13,33523907	555523811
13,33348555	0,001753515	13,33523907	555523811
13,33348555	0,001753515	13,33523907	555523811
10,74832725	0,000822051	10,7491493	555523812
10,74832725	0,000822051	10,7491493	555523812
3,485712599	0,000733005	3,486445605	555523813
3,485712599	0,000733005	3,486445605	555523813
1,114020242	4,01823E-05	1,114060424	555523815
1,114020242	4,01823E-05	1,114060424	555523815
1,659041723	4,528004595	6,187046319	555523819
1,659041723	4,528004595	6,187046319	555523819
7,872211159	2,217778427	10,08998959	555523820
7,872211159	2,217778427	10,08998959	555523820
0,671712756	0,000919693	0,672632449	555523832
0,671712756	0,000919693	0,672632449	555523832
3,295061652	2,009318121	5,304379773	555523834
3,295061652	2,009318121	5,304379773	555523834
20,13302869	0	20,13302869	555523835
0,764851024	8,48321E-05	0,764935856	555523837
0,764851024	8,48321E-05	0,764935856	555523837
1,297479618	2,18659E-05	1,297501484	555523841
1,297479618	2,18659E-05	1,297501484	555523841
12,79119289	0,00761094	12,79880383	555523842
12,79119289	0,00761094	12,79880383	555523842
1,567963801	13,08192527	14,64988907	555523843
1,567963801	13,08192527	14,64988907	555523843
0,98865888	0	0,98865888	555523844
7,454215947	0,012434692	7,46665064	555523845
7,454215947	0,012434692	7,46665064	555523845

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
5,537176315	0,011867439	5,549043754	555523846
5,537176315	0,011867439	5,549043754	555523846
4,523565544	0,000200247	4,523765791	555523847
4,523565544	0,000200247	4,523765791	555523847
14,26305568	0,000978565	14,26403424	555523848
14,26305568	0,000978565	14,26403424	555523848
20,528267	0,000515917	20,52878292	555523849
20,528267	0,000515917	20,52878292	555523849
4,850308302	14,49768716	19,34799547	555523850
4,850308302	14,49768716	19,34799547	555523850
34,23041359	37,00426492	71,23467851	555578073
34,23041359	37,00426492	71,23467851	555578073
39,51713139	0,074375945	39,59150734	555523868
39,51713139	0,074375945	39,59150734	555523868
106,5293957	0,392735336	106,9221311	555523869
106,5293957	0,392735336	106,9221311	555523869
263,6756006	0,0788175	263,7544181	555523874
263,6756006	0,0788175	263,7544181	555523874
2,082210263	1,62571E-05	2,08222652	555523878
2,082210263	1,62571E-05	2,08222652	555523878
0,405199242	0,012633205	0,417832447	555523879
0,405199242	0,012633205	0,417832447	555523879
11,49679275	39,27129061	50,76808336	555549105
11,49679275	39,27129061	50,76808336	555538715
70,35310825	0,001067101	70,35417535	555523880
5,502636675	1,151462647	6,654099322	555523884
0,475012743	0,000278562	0,475291304	555523890
236,0552567	0,366309172	236,4215659	555523899
236,0552567	0,366309172	236,4215659	555523899
0,866201328	0,009329295	0,875530623	555523900
0,866201328	0,009329295	0,875530623	555523900
1,040643137	0,033684978	1,074328115	555523901
1,040643137	0,033684978	1,074328115	555523901
10,20684879	0,244497399	10,45134619	555523926
10,20684879	0,244497399	10,45134619	555523926
8,945931471	0,781113518	9,727044988	555523927
8,945931471	0,781113518	9,727044988	555523927
1,215378232	0,033810998	1,24918923	555523929
1,215378232	0,033810998	1,24918923	555523929
0,193764515	1,681907299	1,875671814	555523931
6,862683701	4,803505164	11,66618887	555523952
15,2954928	3,833008912	19,12850171	555549121
15,2954928	3,833008912	19,12850171	555549121
15,01323256	3,833008912	18,84624147	555538732
15,01323256	3,833008912	18,84624147	555538732
13,82889954	0,212756707	14,04165625	555523983
13,82889954	0,212756707	14,04165625	555523983
5,751557064	0	5,751557064	555523988

GIS_T_AREA	GIS_M_AREA	GIS_AREA	WCMC
32,4135443	0,052016154	32,46556045	555523989
32,4135443	0,052016154	32,46556045	555523989
136,6581347	0,171752069	136,8298868	555524030
136,6581347	0,171752069	136,8298868	555524030
134,4029939	1,424020443	135,8270144	555524031
134,4029939	1,424020443	135,8270144	555524031
1540,816538	1,25642E-05	1540,81655	555524049
1540,816538	1,25642E-05	1540,81655	555524049
4,540608337	0,52879283	5,069401167	555524050
4,540608337	0,52879283	5,069401167	555524050
4,540608337	0,52879283	5,069401167	555538186
4,540608337	0,52879283	5,069401167	555538186
8,361998991	0,287054646	8,649053637	555524051
8,361998991	0,287054646	8,649053637	555524051
0,454609942	0,106609654	0,561219595	555524052
0,454609942	0,106609654	0,561219595	555524052
944,0519742	0	944,0519742	555593031
3379,80228	6,19346E-06	3379,802286	555593032
3379,80228	6,19346E-06	3379,802286	555593032
2829,239375	0	2829,239375	555593033
2829,239375	0	2829,239375	555593033
12,78617901	0	12,78617901	555593034
108,8795662	0	108,8795662	555593035
9,22958924	0,000106317	9,229695557	555593036
9,22958924	0,000106317	9,229695557	555593036
23,18932252	0,003285457	23,19260798	555593037
23,18932252	0,003285457	23,19260798	555593037
23,18932252	0,003285457	23,19260798	555593086
23,18932252	0,003285457	23,19260798	555593086
42,53198985	0,000571115	42,53256097	555592920
42,53198985	0,000571115	42,53256097	555592920
46,86490811	2,22859E-05	46,8649304	555592921
46,86490811	2,22859E-05	46,8649304	555592921
46,86493718	2,22859E-05	46,86495946	555593087
46,86493718	2,22859E-05	46,86495946	555593087
122,8647471	0	122,8647471	555592922
122,862304	0	122,862304	555593088

DEMARCACION	LEBA

Cuenta de REGION Designation (Original)	WDPA_CODE	GIS_T_AREA	GIS_M_AREA	GIS_AREA	Total
Lugar de Interés Comunitario (Directiva Habitat)	ES0000023_LIC	66,87615232	208,5009897	275,377142	1
	ES0000060_LIC	10,77185486	8,627904344	19,3997592	1
	ES0000078_LIC	5,580521677	0,793818028	6,374339706	1
	ES0000082_LIC	4,963003295	0,599492405	5,5624957	1
	ES0000214_LIC	142,5528041	0,063177798	142,6159819	1
	ES0000221_LIC	10,01769716	2,77116177	12,78885892	1
	ES0000227_LIC	56,69647042	91,43837956	148,13485	1
	ES0000233_LIC	10,19685218	18,20719539	28,40404757	1
	ES0000234_LIC	6,783562119	18,83137899	25,61494111	1
	ES0000242_LIC	0,634457237	0,069909252	0,704366489	1
	ES0000447_LIC	13,17791895	0,000192846	13,17811179	1
	ES5211007_LIC	8,225489008	21,86785054	30,09333955	1
	ES5212005_LIC	22,39439768	0	22,39439768	1
	ES5213021_LIC	51,10582635	4,423540428	55,52936678	1
	ES5222007_LIC	40,80619445	0,012877123	40,81907157	1
	ES5223036_LIC	20,55354075	77,42307476	97,9766155	1
	ES5310005_LIC	309,5743231	0,035835484	309,6101586	1
	ES5310023_LIC	23,91505778	1,52135936	25,43641714	1
	ES5310024_LIC	11,08330182	10,8914126	21,97471442	1
	ES5310025_LIC	17,76705327	7,077358559	24,84441183	1
	ES5310030_LIC	18,51541262	0,003345084	18,51875771	1
	ES5310035_LIC	51,2945796	0,110317591	51,40489719	1
	ES5310036_LIC	22,5751818	0,007707244	22,58288905	1
	ES5310068_LIC	5,586504831	1,800620924	7,387125756	1
	ES5310069_LIC	1,41232787	0,006269736	1,418597606	1
	ES5310070_LIC	9,795174886	0,334775955	10,12995084	1
	ES5310071_LIC	0,391979555	0,003503199	0,395482753	1
	ES5310072_LIC	1,594304712	0,00349563	1,597800342	1
	ES5310073_LIC	13,33348555	0,001753515	13,33523907	1
	ES5310074_LIC	10,74832725	0,000822051	10,7491493	1
	ES5310075_LIC	3,485712599	0,000733005	3,486445605	1
	ES5310096_LIC	3,295061652	2,009318121	5,304379773	1
	ES5310097_LIC	20,13302869	0	20,13302869	1
	ES5310099_LIC	0,764851024	8,48321E-05	0,764935856	1
	ES5310103_LIC	1,297479618	2,18659E-05	1,297501484	1
	ES5310104_LIC	12,79119289	0,00761094	12,79880383	1
	ES5310105_LIC	1,567963801	13,08192527	14,64988907	1
	ES5310106_LIC	0,98865888	0	0,98865888	1
	ES5310107_LIC	7,454215947	0,012434692	7,46665064	1
	ES5310109_LIC	4,523565544	0,000200247	4,523765791	1
	ES5310110_LIC	14,26305568	0,000978565	14,26403424	1
	ES5310111_LIC	20,528267	0,000515917	20,52878292	1
	ES5310112_LIC	4,850308302	14,49768716	19,34799547	1
	ES5310128_LIC	34,23041359	37,00426492	71,23467851	1
	ESZZ16001_LIC	944,0519742	0	944,0519742	1
	ESZZ16002_LIC	3379,80228	6,19346E-06	3379,802286	1
	ESZZ16003_LIC	2829,239375	0	2829,239375	1
	ESZZ16004_LIC	12,78617901	0	12,78617901	1
	ESZZ16006_LIC	9,22958924	0,000106317	9,229695557	1
	ESZZ16007_LIC	23,18932252	0,003285457	23,19260798	1
	ESZZ16008_LIC	42,53198985	0,000571115	42,53256097	1
	ESZZ16009_LIC	46,86490811	2,22859E-05	46,8649304	1
	ESZZ16010_LIC	122,8647471	0	122,8647471	1
Zonas de Especial Conservación (Directiva Habitat)	ES0000019_ZEC	59,02745796	49,93471026	108,9621682	1
	ES0000020_ZEC	360,1955728	125,898896	486,0944688	1
	ES0000046_ZEC	120,3219618	374,7999084	495,1218702	1
	ES0000083_ZEC	193,4651556	13,17405165	206,6392072	1
	ES0000084_ZEC	136,6287757	28,24435862	164,8731344	1
	ES0000175_ZEC	1,202652734	7,086577615	8,289230349	1
	ES5110017_ZEC	29,21315463	0	29,21315463	1
	ES5110020_ZEC	265,7392625	0,000194666	265,7394572	1
	ES5120007_ZEC	30,87819972	108,3720252	139,2502249	1
	ES5120013_ZEC	14,72204443	77,79879119	92,52083562	1
	ES5120015_ZEC	18,45074504	15,67839459	34,12913963	1
	ES5120016_ZEC	20,57813265	44,57330348	65,15143613	1
	ES5140001_ZEC	46,06216744	3,100289363	49,1624568	1
	ES5140007_ZEC	9,56752807	1,580687628	11,1482157	1
	ES5140020_ZEC	4,464363617	0,000468655	4,464832272	1
	ES5310077_ZEC	1,114020242	4,01823E-05	1,114060424	1
	ES5310081_ZEC	1,659041723	4,528004595	6,187046319	1
	ES5310082_ZEC	7,872211159	2,217778427	10,08998959	1
	ES5310094_ZEC	0,671712756	0,000919693	0,672632449	1
	ES5310108_ZEC	5,537176315	0,011867439	5,549043754	1
	ES6110010_ZEC	106,5293957	0,392735336	106,9221311	1
	ES6110020_ZEC	0,405199242	0,012633205	0,417832447	1
	ES6200029_ZEC	136,6581347	0,171752069	136,8298868	1
	ES6200030_ZEC	134,4029939	1,424020443	135,8270144	1
Zonas de Especial Conservación (Directiva Habitat)	ES6200048_ZEC	1540,816538	1,25642E-05	1540,81655	1
Zonas de Especial Protección para las Aves (Directiva Aves	ES0000019_ZEPA	59,02745796	49,93471026	108,9621682	1
	ES0000020_ZEPA	360,1955736	125,898896	486,0944695	1
	ES0000046_ZEPA	120,3219556	374,7999084	495,121864	1
	ES0000078_ZEPA	5,580508512	0,793818028	6,37432654	1
	ES0000081_ZEPA	34,23041228	82,22326059	116,4536729	1
	ES0000082_ZEPA	4,962995622	0,599492405	5,562488027	1
	ES0000083_ZEPA	193,4651421	13,17405165	206,6391938	1
	ES0000084_ZEPA	136,6285119	28,24435862	164,8728706	1
	ES0000121_ZEPA	54,48530436	7,439446236	61,92475059	1
	ES0000175_ZEPA	1,202652751	7,08657762	8,28923037	1
	ES0000214_ZEPA	142,552805	0,001801549	142,5546065	1
	ES0000221_ZEPA	10,01765672	2,77116177	12,78881849	1
	ES0000227_ZEPA	56,69646158	91,43837854	148,1348401	1
	ES0000233_ZEPA	10,19685115	18,20722967	28,40408083	1
	ES0000234_ZEPA	6,783560142	18,83136395	25,6149241	1
	ES0000242_ZEPA	0,634457248	0,069909252	0,7043665	1
	ES0000256_ZEPA	1,53879842	0	1,53879842	1
	ES0000260_ZEPA	134,4198051	11,08412873	145,5039338	1
	ES0000270_ZEPA	0,279439229	0,003177646	0,282616875	1
	ES0000271_ZEPA	0,270739007	0,011879608	0,282618615	1
	ES0000444_ZEPA	20,55314174	77,42418694	97,97732868	1
	ES0000447_ZEPA	13,17785213	0,000192846	13,17804497	1
	ES0000454_ZEPA	8,248831155	21,84614971	30,09498086	1
	ES0000467_ZEPA	10,77215437	8,65862051	19,43077488	1
	ES0000471_ZEPA	84,34899115	208,501262	292,8502531	1
	ES0000506_ZEPA	1267,68423	0,000991173	1267,685221	1
	ES0000507_ZEPA	123,3489305	0,001056936	123,3499875	1
	ES0000508_ZEPA	1260,678144	0,000765598	1260,678909	1
	ES0000510_ZEPA	2682,752106	0	2682,752106	1
	ES0000512_ZEPA	9032,138161	7,71054E-06	9032,138169	1
	ES0000513_ZEPA	388,1770842	5,07537E-05	388,1771349	1
	ES0000514_ZEPA	860,1182975	3,38846E-05	860,1183313	1
	ES0000515_ZEPA	465,7424422	1,75225E-06	465,742444	1
	ES0000516_ZEPA	472,9842475	5,02219E-06	472,9842525	1
	ES0000517_ZEPA	192,2690324	8,71948E-07	192,2690332	1
	ES0000518_ZEPA	402,4015614	1,30323E-07	402,4015615	1
	ES0000519_ZEPA	471,6598855	5,94477E-06	471,6598915	1
	ES0000520_ZEPA	990,6994098	3,3942E-05	990,6994437	1
	ES0000521_ZEPA	1627,102593	2,27035E-05	1627,102616	1
	ES0000522_ZEPA	237,7761	4,14835E-06	237,7761042	1
	ES0000538_ZEPA	9,333298806	0,000125361	9,333424167	1
	ES5110020_ZEPA	265,7392625	0,000194666	265,7394572	1
	ES5120007_ZEPA	30,87820188	108,3720252	139,2502271	1
	ES5120013_ZEPA	14,72204443	77,79879119	92,52083562	1
	ES5120015_ZEPA	18,45074503	15,67839459	34,12913963	1
	ES5120016_ZEPA	20,57813265	44,57330354	65,15143619	1
	ES5212005_ZEPA	22,39439768	0	22,39439768	1
	ES5310023_ZEPA	23,91499293	1,521359359	25,43635229	1
	ES5310024_ZEPA	11,08328256	10,89141195	21,9746945	1
	ES5310025_ZEPA	17,76682948	7,077358569	24,84418805	1
	ESZZ16007_ZEPA	23,18932252	0,003285457	23,19260798	1
	ESZZ16009_ZEPA	46,86493718	2,22859E-05	46,86495946	1
	ESZZ16010_ZEPA	122,862304	0	122,862304	1
Humedal de Importancia Internacional (Convenio de Rams	458_RAMSAR	0,933072815	9,263063409	10,19613622	1
	593_RAMSAR	6,956249474	71,2196537	78,17590317	1
	641_RAMSAR	1,725638074	15,12948999	16,85512806	1
	706_RAMSAR	135,0031699	15,52606244	150,5292323	1
Espacios Naturales Protegidos (ENP)	555596226_CDDA	46613,46132	0,194075931	46613,65539	1
	151248_CDDA	2,661355783	0,005943478	2,667299261	1
	151292_CDDA	1,88170744	5,510991982	7,392699423	1
	15509_CDDA	1,202622963	7,445936082	8,648559045	1
	195974_CDDA	0,194860238	1,989167169	2,184027406	1
	196045_CDDA	901,0519202	13,15120513	914,2031253	1
	196166_CDDA	140,7973312	27,53274042	168,3300716	1
	196213_CDDA	5,108424192	71,14516138	76,25358557	1
	196284_CDDA	120,3220279	374,7999397	495,1219676	1
	196293_CDDA	17,32482448	33,81022786	51,13505234	1
	348792_CDDA	13,7977306	0	13,7977306	1
	348802_CDDA	24,48081774	0,159415212	24,64023295	1
	348804_CDDA	0,003500278	0,013664149	0,017164427	1
	348860_CDDA	9,577290542	0,144117459	9,721408	1
	349119_CDDA	29,21342922	0	29,21342922	1
	349123_CDDA	4,464529191	0,00032211	4,464851301	1
	349127_CDDA	30,88452989	108,3567922	139,2413221	1
	349430_CDDA	49,58355477	7,511783774	57,09533855	1
	389004_CDDA	5,769320678	8,81621606	14,58553674	1
	389077_CDDA	59,04507013	49,91921494	108,9642851	1
	389087_CDDA	30,88452989	108,3567922	139,2413221	1
	389088_CDDA	46,02227599	0,986901577	47,00917757	1
	389097_CDDA	360,2206057	125,9021385	486,1227443	1
	389123_CDDA	20,56271518	61,90416748	82,46688265	1

	389127_CDDA	*14,73035179*	***77,79392285***	*92,52427463*	*1*
	389140_CDDA	*10,49583422*	***11,35439469***	*21,85022891*	*1*
	389150_CDDA	*0,139722405*	***0,718791188***	*0,858513592*	*1*
	389221_CDDA	*7,961593251*	***4,310166137***	*12,27175939*	*1*
	389228_CDDA	*265,7527088*	***8,44084E-05***	*265,7527932*	*1*
	555546001_CDDA	*16,35132745*	***61,84762628***	*78,19895373*	*1*
	555546014_CDDA	*1,012161335*	***0,230884612***	*1,243045947*	*1*
	555546019_CDDA	*4,349331807*	***9,5199693***	*13,86930111*	*1*
	555546020_CDDA	*0,110369018*	***1,067005818***	*1,177374836*	*1*
	555552484_CDDA	*13,79819002*	***0***	*13,79819002*	*1*
	555552485_CDDA	*54,9905264*	***0***	*54,9905264*	*1*
	555552486_CDDA	*124,5990738*	***0,001939561***	*124,6010133*	*1*
	555552487_CDDA	*19,3065245*	***0,011312746***	*19,31783725*	*1*
	555552488_CDDA	*113,8439716*	***0***	*113,8439716*	*1*
	555552489_CDDA	*4,472442759*	***1,32976E-06***	*4,472444089*	*1*
	555562410_CDDA	*9,567403162*	***1,204515101***	*10,77191826*	*1*
	555588805_CDDA	*120,3219765*	***374,7999394***	*495,1219159*	*1*
	555588835_CDDA	*0,405199242*	***0,012633205***	*0,417832447*	*1*
	555596224_CDDA	*11,39570434*	***0,004661354***	*11,4003657*	*1*
	555638694_CDDA	*23,41253562*	***14,51661043***	*37,92914606*	*1*
Reserva de la Biosfera	**34_MAB**	*120,2894597*	***374,8024587***	*495,0919184*	*1*
	35_MAB	*4489,42*	***700,88***	*5190,3*	*1*
	43_MAB	*806,172143*	***2875,791866***	*3681,964009*	*1*
Zona Especialmente Protegida de Importancia para el Me	**365007_ZEPIM**	*30,86703688*	***108,4539367***	*139,3209736*	*1*
	365008_ZEPIM	*87,7175349*	***13,1512051***	*100,86874*	*1*
	365009_ZEPIM	*120,7557957*	***374,714888***	*495,4706837*	*1*
	365010_ZEPIM	*5,78109124*	***0,257940132***	*6,039031373*	*1*
	365011_ZEPIM	*122,8647502*	***0,1940759***	*123,0588261*	*1*
	365013_ZEPIM	*63,10748962*	***0,0274616***	*63,13495122*	*1*
	365014_ZEPIM	*257,2862022*	***17,74423243***	*275,0304346*	*1*
Total general					***189***

SPA/RAC WORKING AREAS

*SPA/ RAC, the UNEP/ MAP **Specially Protected Areas Regional Activity Centre**, was created in 1985 to assist the Contracting Parties to the Barcelona Convention (21 Mediterranean contries and the European Union) in implementing the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol).*

POST-2020 SAPBIO

Strategic Action Programme for the **Conservation** of **Biodiversity** and **Sustainable Management** of **Natural Resources** in the **Mediterranean Region**

SPAMI

Specially Protected Areas of **Mediterranean Importance**

Marine turtles

Cetaceans

Mediterranean Monk Seal

Cartilaginous fishes
(Chondrichtyans)

Marine and coastal bird species

Listed in Annex II of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean

Specially Protected Areas

Monitoring

Coralligenous and other calcareous bio-concretions

Marine vegetation

Dark Habitats

Habitats and species associated with seamounts, underwater caves and canyons, aphotic hard beds and chemo-synthetic phenomena

Species introduction and invasive species

POST-2020

SAP BIO

Strategic Action Programme
for the **Conservation** of **Biodiversity**
and **Sustainable Management**
of **Natural Resources**
in the **Mediterranean Region**

UN environment programme

Mediterranean Action Plan
Barcelona Convention

SPA/RAC
The Mediterranean Biodiversity Centre

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MAVA FONDATION POUR LA NATURE

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