Marine Special Protection Areas (SPAs) in Spain

Preserving our birds, preserving our seas

The LIFE+ INDEMARES Project in brief

It is a LIFE+ (LIFE07NAT/ E / 000732) project funded 50% by the European Commission, carried out from January 2009 to December 2014. It has integrated the work of institutions of reference in the field of management, research and conservation of the marine environment, with the contribution of other marine stakeholders. Coordinated by the Biodiversity Foundation, the project had nine other partners: the Ministry of Agriculture, Food and Environment; the Spanish Institute of Oceanography (IEO), the Spanish National Research Council (CSIC), ALNITAK, the Coordination for the Study of Marine Mammals (CEMMA), OCEANA, the Society for the Study of Cetaceans in the Canary Archipelago (SECAC), SEO/BirdLife and WWF Spain

It has contributed to the protection and sustainable use of biodiversity in Spanish seas through the study, characterisation and inclusion of sites in the Natura 2000 Network:

- 10 marine targeted areas, proposed to the EC to be designated as Sites of Community Importance (SCIs), and eventually to be declared as Special Areas of Conservation (SACs).
- 39 Special Protection Areas (SPAs) designated, based on the inventory of marine Important Bird Areas (IBAs).

Overall, the project brings more than 70,000 Km² to the Spanish Natura 2000 network, multiplying by 8 the protected marine area (which reaches more than 8% of territorial waters). Thus, Spain moves significantly forward in its compliance with the European Habitats and Birds Directives, by extending the Natura 2000 network to the entire marine environment. The project also contributes to achieving the target set by the Convention on Biological Diversity (CBD) of the United Nations, of which Spain is a signatory, to designate as protected at least 10% of the World’s oceans.

Finally, INDEMARES has settled the basis for the future management plans of the Natura 2000 marine sites, by providing a proposal of management guidelines, and by initiating the participatory process to elaborate those plans.
Why protecting sites for seabirds at sea? What do we protect with the marine SPAs?

Attending to the conservation and the study of seabirds is important for two main reasons:

1) Seabirds represent the most threatened group of birds globally: over a third of the 346 known species are threatened, some to the brink of extinction.

2) Seabirds are easy to observe both at sea and in their breeding colonies ashore; and, as marine predators, they integrate information of what happens in the ecosystem. Therefore, they are excellent indicators of the marine environment.

Despite the high mobility that characterises seabirds, which allows them to travel thousands of miles throughout their annual cycle, they tend to use certain areas persistently, so that the designation of these areas as SPAs makes sense. According to the use that seabirds make of them, three different types of areas can be differentiated:

- **Seaward extensions to the breeding colonies:** areas that show high seabird density for being adjacent to the breeding sites. Seabirds may forage there, or just fly across in their commuting trips between the nest and distant foraging areas.

- **Migratory corridors:** areas that concentrate the flow of migrating seabirds. Straits and channels are the most obvious corridors, but other coastal areas can also act as such.

- **Foraging areas at sea:** unrelated to the breeding colonies, those areas tend to congregate seabirds for their high food availability. These may be either coastal or pelagic.

Often, these areas are important not only for birds but also for many other marine biota, so the SPAs may act as an umbrella that contributes to the conservation of the marine ecosystem as a whole.
How were the new marine SPAs identified?

The new marine SPAs were based on the inventory of marine Important Bird Areas (IBAs) elaborated by SEO/BirdLife within the frame of a LIFE project (LIFE04NAT/ES000049) that preceded INDEMARES.

INDEMARES allowed strengthening the marine IBA inventory by:

- Providing additional information, which allowed confirming the importance of the IBAs and their stability over time.
- Strengthening the coverage in areas of difficult access, and confirming two spaces that were proposed as just candidate marine IBAs in the previous project due to insufficient data: the Banco de Galicia and Banco de la Concepción seamounts.
- Studying in detail the use that seabirds make of the sites proposed, as well as their interaction with human activities (and, therefore, evaluating threats).

The identification of the marine SPAs was based on scientific criteria, combining information from different sources, mainly:

- Boat surveys conducting transect counts (over 60,000 Km covered).
- Remote seabird tracking using different devices (GPS loggers, satellite transmitters and others; in total about 1000 marked birds of 6 species, and nearly one million locations).

Among the techniques used to analyse these data, habitat modelling was a very useful tool, which allowed understanding why the identified areas were important, and helped to draw boundaries in an environment where these are not obvious.

The methodology developed for the identification of the marine IBAs, developed in coordination with BirdLife International and several experts, largely contributed to set a standard procedure for the identification of IBAs/SPAs in other EU countries, and IBAs elsewhere.
The Spanish marine SPA network in a glimpse

With INDEMARES, the network of marine SPAs incorporated 39 new sites and 49,124 Km², representing a 20-fold increase in area coverage. As a result, the SPAs network is now formed by 174 sites and 51,788 Km², slightly more than 5% of the Spanish marine territory. It extends from the coast to cover a representative fraction of all the Spanish territorial waters, thus addressing for the first time the full protection of the pelagic seabirds, as well as that of more coastal species.

The SPAs network holds wide seabird diversity, with over 40 regular species. Of those, 27 present significant regional or global numbers and provided the basis for the designation of the sites.

The priority 27 seabirds include the 16 species listed in Annex I of the Birds Directive (those considered particularly sensitive by European law) with breeding populations in Spain, which have been the main goal of the LIFE projects. In addition, 11 other species were taken into account due to their unfavourable conservation status according to other lists, and/or their migratory nature. These include breeding, wintering and migratory species.

The SPAs will contribute to the conservation of these birds, by specifically managing the threats at sea that they face, focused in the most sensitive areas. The SPAs network includes seaward extensions to breeding colonies, migratory corridors and foraging areas at sea (both coastal and pelagic). INDEMARES has particularly contributed to the designation of areas offshore.

Geographical patterns of the SPAs network, with attention to the Marine Strategies’ Demarcations

Leaving aside the smaller and coastal sites previously designated, the new SPAs added 11 more sites in the Marine Demarcation of the Canary Islands, 8 in the North Atlantic, 3 in the South Atlantic, 3 in the Strait of Gibraltar-Alboran Sea and 14 in the Levantine-Balearic. Each region has its own physical and biotic characteristics, and its particular seabird communities, which has significantly influenced the type of sites identified in each case. The Canary and Balearic Islands mainly host seabird extensions to breeding colonies, while peninsular waters are more relevant for foraging areas and, secondly, migration hotspots.

What does the designation of a marine SPA imply? Constraints and opportunities

Upon designation, a management plan will be developed for each SPA to govern the uses and activities, within two years.

Management actions will aim to minimise the identified threats to the seabirds and their habitats, and to either keep the relevant populations at current levels or recover them if appropriate.

The main philosophy is not based on prohibition, but on proper management of the human activities to ensure a minimum impact. It is also possible to promote the activities that are most compatible with the environment, which often are the activities with a wider social impact.

Broadly speaking, management actions might include:

- To raise awareness among the marine stakeholders and the general public about the need to manage those activities that have an impact on the seabirds and their environment, and to seek for agreed solutions through participative processes.
- Promote activities and uses that are respectful with the environment.
- To conduct strict impact assessment studies of any activities carried out in the SPAs.
- Implement actions to mitigate the impact of those activities that have a negative impact on the seabirds and/or their habitat, and to evaluate their efficacy.

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Spain: a seabird hotspot

Seabirds are very long-lived species – they can live over 60 years – that reproduce very slowly (many species lay only one egg per year). Therefore, they also react slowly to changes in the environment, which can cause drastic declines in their populations.

Map 1. GPS data have revealed the enormous distances that some seabirds cover to commute between their breeding colonies (located in quiet and inaccessible places, free of terrestrial predators, such as rats) and their foraging grounds (often in highly productive marine areas, either coastal or well offshore, depending on the species). This type of information is key to address the conservation of these sensitive seabirds. The figure shows examples of foraging trips by Cory’s shearwaters tagged with GPS-loggers in different Spanish colonies during INDEMARES.

What should we do?

We must be aware of the increasing deterioration of our seas, and take steps to reverse this trend. Among them:

- Promote integrated and coordinated management of the marine environment, seeking the sustainability of resources for the benefit of all.
- Develop and implement recovery and conservation plans for endangered species.
- Create marine protected areas (MPAs) to preserve the best biodiversity hotspots. Many MPAs seek to achieve this aim without precluding human uses, through specifically designed management plans. This is the case of Natura 2000, a network of protected areas under the EU Habitats (SCIs) and Birds (SPAs) Directives.

Within this context, the project LIFE+ INDEMARES (LIFE07NAT/E/000732) joined the efforts of 10 partner institutions (administrations, research centres and NGOs) with the aim of extending the Spanish Natura 2000 network in the marine environment, on a scientific basis and looking for the involvement of all stakeholders. The project added 49 new sites and over 70,000 km², representing an 8-fold increase in coverage. This way, Spain becomes an example for other countries in terms of MPA designation.

In danger: between the land and the sea

By alternating between the land and the sea, seabirds face a wide array of threats, that make of them the most threatened group of birds in the world: over a third of the 346 known species are threatened globally, some of them to the brink of extinction. Spain is no exception, and hosts 16 breeding species listed as sensitive at European level (Annex I of the EU Birds Directive), as well as other non-breeding species also included in that list or covered by other international conventions. The Balearic Shearwater (Puffinus maurencticus) is on top of the list, as it is regarded as the most endangered bird in Europe.

At sea

- Fisheries can benefit seabirds by providing extra food (discards), but also contribute to the reduction of their natural prey. And, more directly, seabird bycatch (the accidental capture of seabirds in some fishing gear types) is one of the major threats to many species, while it also represents a nuisance for fishermen, and can even cause economic losses. Fortunately, there are simple ways to minimise bycatch, such as the use of “tor-lines” to keep the birds away from the vessels, which benefit both birds and fishermen.

- New uses of the sea, such as windfarm development, may pose new threats to seabirds. And ultimately, the accelerated pace of global change alters an environment to which seabirds have adapted over millennia, thus posing a threat both to their populations and to the entire marine ecosystem.

On land

- Terrestrial predators (such as cats and rats) introduced by humans into seabird breeding colonies have caused and still cause severe damage to many populations.
- Coastal development has reduced the availability of suitable breeding sites.
- Light pollution –related to coastal development– poses a further threat, as birds (particularly fledglings) can get disoriented and end up stranded inland.

Pollution is one of the most serious threats to seabirds. It is particularly striking in the case of oil spills, which often cause the simultaneous death of thousands of birds. But “background” pollution can have an even greater impact, although it is harder to perceive.

Legend for the seabirds’ plate

- Puffinus phalacrocoracoides – globally threatened (IUCN) and European threatened (Annex I Birds Directive)
- Puffinus tenuirostris – non-breeding
- Puffinus lherminieri – breeding
- Puffinus griseus – migration

The white dot denotes that the species is scarce.