



VALUABLE PRACTICE: Definition of High Potential Areas for Offshore Wind Farms

Description

For certain sectorial activities whose future development is foreseeable and in which it is necessary to identify the most appropriate space for their development, the Spanish MSP plans (POEMs) establish and delimit High Potential Areas (HPA) in order to minimize potential environmental impacts and maximize synergies and coexistence between the different uses and activities. These areas have been identified for Offshore Wind Farms (OWF) as highly suitable for the possible deployment of commercial offshore wind energy infrastructure, without prejudice to the fact that such projects may include hybridisation with other offshore renewable technologies. In order to enhance the management of wind energy uses and activities, several measures have been proposed to address the assessment and modelling of the landscape effects caused by OWF in Spanish waters, as well as the analysis of the fishing sector and the potentially affected marine ecosystems in the proposed areas. The areas' zoning has been obtained after the analysis of oceanographic, geological, wind resource and biodiversity conditions and the consultation to key stakeholders in order to consider the spatial overlapping with other economic sectors.

Practice typology

(i) Measure + (iii) Process-related practice + (iv) zoning

Topics addressed

Main	A. Climate change mitigation [A.1. Renewable energy production, storage and transportation (A.1.1. Development of marine renewable energy installations)]
Secondary	D. Biodiversity and ecosystem protection and restoration. G. Fair and just transition

Sectors/Activity involved

Offshore renewable energy and, indirectly, fishing, coastal and maritime tourism, cables and pipelines, maritime defence, nature protection and restoration, landscape protection, scientific research, marine industry.

Stakeholders involved

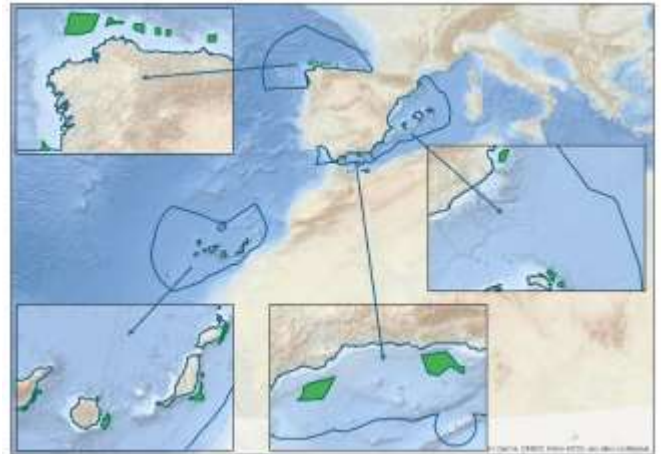
Since the beginning of the designing process, **administrative stakeholders** from the different affected departments of the Ministries with competences at-sea (Energy, biodiversity, fisheries, defence, maritime transport, civil aviation, Spanish air navigation manager, airport operator, climate change office, quality and environmental assessment, aquaculture, ports and technical institutions as IEO(CSIC) and CEDEX) were involved at the **national and sub-national level** for **co-defining** the HPA as part of the technical MSP working group created for the development of the MSP national process, in the framework of Marine Strategies. Additionally, an ad hoc group for OWF was created for detailed discussions of the topic and the zoning.

Afterwards, **private stakeholders** at the **sub-national level** from the fisheries sector were involved in a dedicated online event (during the period of the official public **consultation** of the POEM), where the HPA were presented by Marine Demarcation and sector's representatives could expose and justify their allegations towards them.

Geographical scope

The criteria used in the analysis for the identification of these areas has been applied for all Spanish jurisdictional waters (divided in 5 Marine Demarcations). HPA for OWF have been identified in 4 of the 5 Marine Demarcations (Figure 1).

Figure 1. Surface occupied by High Potential Areas for the OWF in Spain.



Governance context

For this practice we have to talk about the governance of Energy, Biodiversity Protection and Fisheries at the national level. The first two aspects are addressed by the same Ministry, which is also the Competent Authority for MSP. The competences in Fisheries relies on a different Ministry.

There are some shared competences between the national and the sub-national level (i.e. fisheries, land and coastal planning, coastal MPAs, tourism, some ports) that needs to be considered, for instance, beholding the impacts of cables connecting the OWF to land, or the landscape impact, among others.

How this MSP practice can support the EU Green Deal

The aspect on which this practice mainly supports the EGD is in A. Climate change mitigation through *A.1. Renewable energy production through the facilitation of A.1.1 Development of marine renewable energy installations* by the definition of areas where the OWFs are technically viable according to assessment studies of the landscape impact, are minimizing conflicts with other sectors as the fishing sector (according to the analysis conducted, that has its limitations as it will be highlighted in the following section) and minimizing impacts on marine ecosystems through the development of a methodological guide (this also associated to the methodology limitations) which, will make more probable a favourable Environmental Impact Assessment (EIA), mandatory even inside HPA for OWF.

In summary, the definition of HPA for OWF makes the investment in OWF projects in the marine environment more secure, which in turn, is expected to increase the production of renewable energy in Spain, which will contribute to climate change mitigation.

Challenges/gaps/inconsistencies still to be addressed

Limitations identified in the practice towards the achievement of EGD objectives:

- ✓ It is difficult to assess how much electricity would produce the defined HPA if they were covered by OWF in their totality. This has not been calculated for the POEMs and it cannot be assured that all the space occupied by HPA will be, in fact, covered by OWF. However, the POEM mentions the Roadmap for Offshore Wind and Marine Energy Development in Spain, which has specific objectives including the power to be achieved.
- ✓ The MSP process in Spain has not conducted a proper Cumulative Effect Assessment (CEA) so HPA are designed without considering pressures that are already happening. Also regarding the impact on biodiversity, consideration have been made for defined protected areas, however, for mobile species, it just take into consideration the critical areas for

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species that: 1) are declared as such (e.g. killer whale), 2) are identified in draft of Natura 2000 site management plans or conservation/recovery plans, and 3) have a scientific basis non taking into account the single mobile species as seabirds, fish, marine turtles, cetaceans (for more information refer to the criteria included in the “replicability section”). These aspects could risk the objectives of the EGD and related policies regarding *D. Biodiversity and ecosystem protection and restoration*.

- ✓ Also talking about the Just and Fair Transition element of the EGD, private stakeholders were involved only well advanced the process. This is, the fisheries sector at the level of the practitioners (the national representatives were present before) were only involved when the first version of the HPA was already drawn, instead of involving them in the co-design process. Many of their requirements were fulfilled after the official public consultation (many areas were reduced and some of them were removed), however, this did not prevent the POEMs from being heavily criticised in this regard.

In these HPA for offshore wind energy development, interactions have been detected with some Priority Use Areas (PUA), or HPA, or with other uses of space that will have to be considered in detail at the project level. Specifically, and depending on the case:

- ✓ Overlaps with PUA for the protection of biodiversity (not SPAs).
- ✓ Overlaps with any type of aeronautical easement, and therefore detailed studies of the projects to be implemented will be required to assess the feasibility of the project, and reports from the aeronautical administration, without prejudice to the necessary prior favourable agreement of the State Agency for Aeronautical Safety for all elements exceeding 100m in height.
- ✓ Overlaps with any of the areas identified as having a high potential for biodiversity conservation, as long as these areas do not meet the criteria that the General Directorate of Biodiversity, Forests and Desertification of the MITECO identifies as prohibited for the installation.
- ✓ Overlaps with some Interest Areas for Aquacultures and with some of the zones identified as having high potential for aquaculture.
- ✓ Overlaps with some areas where it has been detected, based on the best available information, the presence of fishing activity at an intensity that may be relevant.

**Some of these challenges and limitations will be addressed by task 3.2. New actions fostering MSP contribution to EGD objectives.*

Replicability /Elements which can be capitalised

The **co-design process** at the administrative level can be replicated itself.

Also, this process of discussions among the affected administrations and involving technical institutions (IEO(CSIC) and CEDEX) produced the list of criteria that was used to define the HPA. This list can be used as preliminary criteria to start a similar process in another country, obviously adapting it to its particular characteristics, using the co-design process mentioned before:

- ✓ The wind resource is suitable for commercial exploitation, reaching wind speed values of over 7.5 m/s, at a height of 100m for the four peninsular marine demarcations, and at a height of 140m in the Canary marine demarcation (this difference is due to the availability of better modelled data for the Canaries).

- ✓ Maximum depth is 1000m.
- ✓ If possible, they are located close to an onshore area with adequate electrical infrastructures for the evacuation of the energy generated.

They also comply with the criteria of not overlapping with areas identified as incompatible or as “prohibition to install wind turbines (whether pivoted or floating)” according to the criteria proposed by the environmental authority. The criteria are the following:

- ✓ Natura 2000 Special Protection Areas for birds (SPA) declared on the sea
- ✓ Study areas to declare in the future as SPAs.
- ✓ Identified areas as valuable and of interest for seabirds.
- ✓ In SCAs and SCIs (Natura 2000 sites), in those areas with presence of Habitats of Community Interest (1110, 1120, 1170, 1180, 8330). This presence will be established on the basis of official information and, where it does not exist or is not available, through the corresponding surveys to be carried out by the developer. Those areas where there is a presence of Habitats of Community Interest. This presence will be established on the basis of official information and where it does not exist or is not available, through the corresponding surveys to be carried out by the developer.
- ✓ Areas identified as valuable or interest for their future declaration as SCAs or SCIs.
- ✓ Critical areas for species, especially killer whale, beaked whale, sperm whale, porpoise, turtles, and pilot whale. The requirements for the inclusion of these areas are that: 1) they are declared as such (e.g., killer whale); 2) they are identified in draft management plans for RN2000 areas (e.g., green turtle, pilot whale, bottlenose and angel shark in Canary Islands ZEC management plans) or conservation/recovery plans (e.g., porpoise in draft recovery plan); 3) they have a scientific basis (scientific article attesting that an area meets the definition of a Critical Area in Law 42/2007, December 13, 2007). 3) have a scientific basis (scientific article attesting that an area complies with the definition of Critical Area of Law 42/2007, of December 13).

From the point of view of interactions with shipping and port activity, high potential areas for offshore wind energy also respect the navigational safety criteria established for priority use areas:

·They do not hinder the approach roads to ports or manoeuvrability in ports, including the waters of the service area. They are not located in areas with high traffic density contrasted by AIS data. They respect the navigation channels that have been required by the Directorate-General for Merchant Shipping (MITMA).