

Section 4

Conservation

4 Conservation

4.1 Overview

An extensive area of the north and west coasts of Ireland are of international and national conservation importance. While there are no statutory nature conservation designations within the IOSEA1 area, it does contain features and species of conservation importance and at its nearest point comes within 30 km of the mainland coast. As more information becomes available on the offshore environment to the west of Ireland it is possible that new conservation areas will be designated to include qualifying features under national and international legislation.

The Habitats and Birds Directives (92/43/EEC and 79/409/EEC), the Convention on Wetlands 'Ramsar' 1975, the Bonn Convention 1997, the OSPAR Convention 1992, and the United Nations Convention on Biodiversity (the Rio Convention) 1993 provide the international framework for domestic policy on nature conservation. In Ireland nature conservation is covered by the Wildlife Act 1976, the Wildlife (Amendment) Act 2000, the European Community (Conservation of Wild Birds) Regulations 1985 and the European Union (Natural Habitats) Regulations (SI 94 of 1997). An overview of commitments on sustainable development and wildlife nature conservation are encompassed by the National Biodiversity Plan 2002 (DoEHLG, 2006).

The maritime archaeological heritage within the IOSEA1 area is limited due to the water depth, both present and historical, harsh wave climate and limited human use of the offshore environment. Historical wrecks are likely to provide the main archaeological interest, although these are predominantly found in coastal areas.

The European Convention on the Protection of the Archaeological Heritage 1992 provides the basic framework for policy on the protection of the archaeological heritage. Maritime archaeological heritage is protected by the National Monument Acts 1930 to 1994, with wrecks and underwater archaeological objects specified in the 1987 Act (as amended). Broad principles for the protection of the archaeological heritage were published by the Government in 1999 (DAHGI, 1999).

4.2 Offshore habitats

4.2.1 Special Areas of Conservation

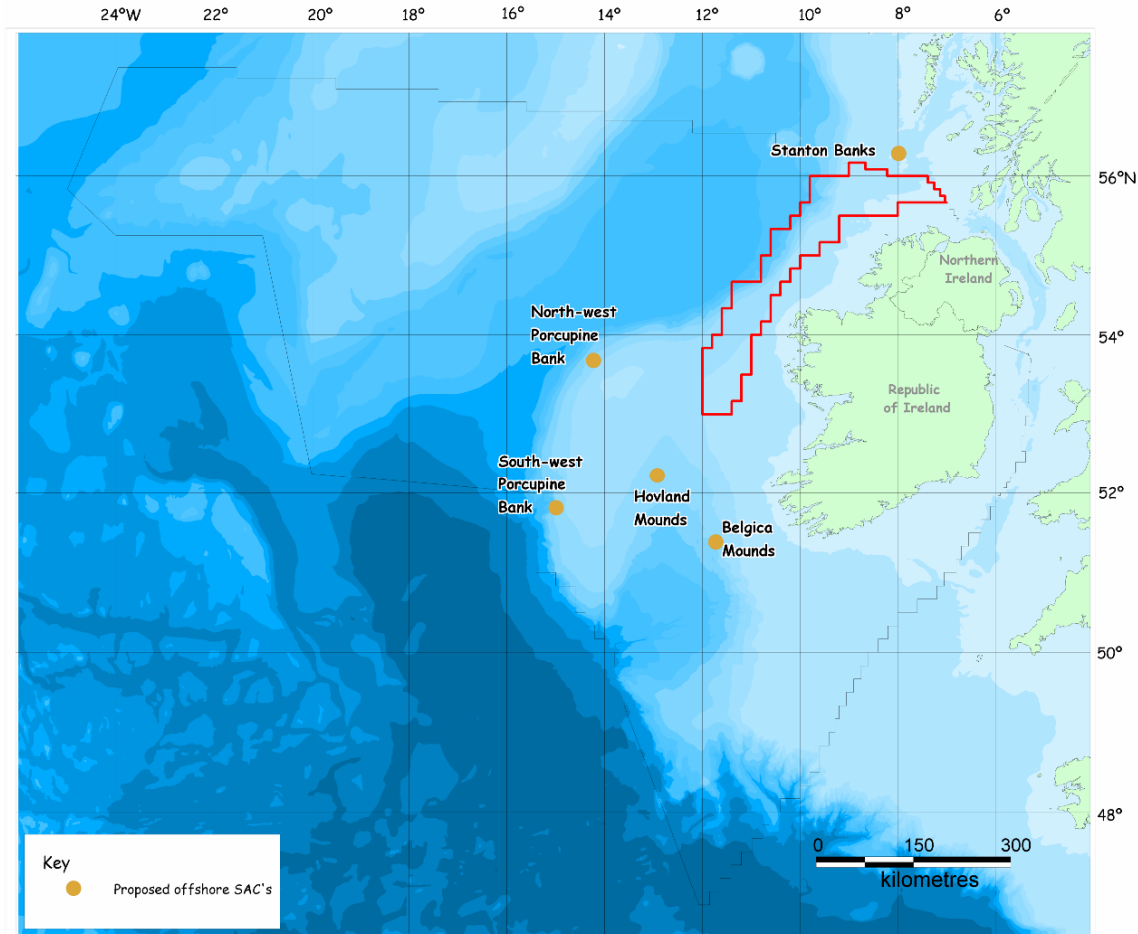
The Habitats Directive (92/43/EEC) requires that Member States introduce a range of measures, including site based protection, for a number of listed habitats and species. The habitat types listed in Annex 1 of the Directive that are likely to be applicable to the offshore area of IOSEA1 are *Reefs* and *Submarine structures made by leaking gases*:

- Reefs. "*Submarine, or exposed at low tide, rocky substrates and biogenic concretions, which arise from the sea floor in the sublittoral zone but may extend into the littoral zone where there is an uninterrupted zonation of plant and animal communities. These reefs generally support a zonation of benthic communities of algae and animals species including concretions, encrustations and corallogenic concretions.*"
- Submarine structures made by leaking gases. "*Spectacular submarine complex structures, consisting of rocks, pavements and pillars up to 4 m high. These formations are due to the aggregation of sandstone by a carbonate cement resulting from microbial oxidation of gas emissions, mainly methane. The methane most likely originated from the microbial decomposition of fossil plant materials. The formations are interspersed with gas vents that intermittently release gas. These formations shelter a highly diversified ecosystem with brightly coloured species*" (European Commission, 2003)

In 2005 Ireland reported to OSPAR that a number of areas had been identified where measures for the protection of cold-water coral reefs could be developed (BDC, 2005). Cold-water coral reefs such as those formed by *Lophelia pertusa* and *Madrepora oculata* are included as biogenic reefs within the *Reef* habitat type of the Habitats Directive. Four areas within the Irish Exclusive Fisheries Zone (IEFZ) have been identified for consideration as possible SACs offshore of the west coast shown in Figure 4.1. The protection of additional areas of coral outside the IEFZ but on the continental shelf is being explored further (NPW, pers comm).

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Figure 4.1 Proposed offshore SAC areas



The Annex 1 habitat *Sandbanks* which are slightly covered by seawater at all times (ie seldom more than 20 m below the sea surface), does not occur within the IOSEA1 area; those sandbanks occurring in deeper water and offshore to the north and west of Ireland are currently not considered as a qualifying interest.

In relation to *Submarine structures made by leaking gases* potential pockmarks have been found in the vicinity of the Corrib field, whilst a large pockmark field (>100 individual pockmarks) was identified during INSS work in the Malin Basin at between 150 and 180 m water depth (Annex 2.2.3). In the Malin Basin, individual pockmarks have a subcircular shape, range from 0.5 to 8 m in depth and have an average diameter of 200 m (Monteys *et al*, 2005b). There are no plans at present to designate SACs for this feature within the IOSEA1 area.

The Hebrides Terrace seamount lies to the north of the IOSEA1 area in UK waters and these habitats may fall within the definition of *Reefs* as outlined by Annex I (Johnston *et al*, 2002). There are no plans at present to designate SACs for this area. The Stanton Banks have been put forward by the Joint Nature Conservation Committee in the UK as a draft Special Area of Conservation (SAC) for *Reefs* (JNCC, 2005).

Ireland has undertaken that marine site network for SACs be in place by 2008 with management objectives agreed and instigated by 2010 (Message from Malahide, 2004).

4.2.2 OSPAR Marine Protected Areas

A key element of OSPAR Annex V *On the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area* is the development of an ecologically coherent network of Marine Protected Areas (MPAs). The Bremen Statement (OSPAR, 2003) included the commitment to identify the first set of MPAs by 2006 and a complete network by 2010. Ireland is currently concentrating on identifying and designating Natura 2000 sites and will consider sites for nomination as OSPAR MPAs in

the latter half of 2005 (BDC, 2005). Irish marine sites designated under the Habitats Directive with suitable qualifying feature are likely to be proposed as OSPAR MPAs.

Those habitats which have been specified as in decline and or threatened in OSPAR Region V (wider Atlantic) and may be of potential relevance to the west of Ireland are:

- carbonate mounds;
- deep sea sponge aggregations;
- *Lophelia pertusa* reefs;
- seamounts;
- *Modiolus modiolus* beds.

Those habitats which have been specified as in decline and or threatened in OSPAR Region III (Celtic Seas) and may be of potential relevance to the west of Ireland are:

- deep sea sponge aggregations;
- *Lophelia pertusa* reefs;
- seapen and burrowing megafauna communities;
- intertidal mudflats;
- intertidal *Mytilus edulis* beds on mixed and sandy sediments;
- *Ostrea edulis* beds;
- *Zostera* beds;
- Maerl beds;
- *Sabellaria spinulosa* reefs;
- *Modiolus modiolus* beds.

4.3 Offshore species

4.3.1 Special Areas of Conservation and Special Protection Areas

There are a number of species listed in the on Annex II and IV of the Habitats Directive that may be found in the offshore environment to the west of Ireland. Annex II lists species that require protection through site-based measures and Annex IV species in need of strict protection across their natural range. Annex II and Annex IV species that may occur in the study area are listed in Table 4.1. It is unlikely that any of the species listed in Habitats Directive Annex II will meet the criteria for site designation within, or adjacent to, the IOSEA1 area. However, new research into the at-sea movements of both seal species in Ireland, using telemetry, may provide the first steps in this direction.

Annex 1 of the Birds Directive lists rare or vulnerable species for which Special Protection Areas (SPAs) should be designated. At present there are no offshore SPAs and the identification of any such sites would require further survey work. Annex 1 bird species that are known to occur, if rarely, in the study area include Leach's storm-petrel, Cory's shearwater and the common and Arctic terns. Both Directives confer general obligations beyond site-based measures to protect wild birds and biodiversity.

4.3.2 The Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals (also known as CMS or Bonn Convention) aims to conserve terrestrial, marine and avian migratory species throughout their range. It is an intergovernmental treaty, concluded under the United Nations Environment Programme, concerned with the conservation of wildlife and habitats on a global scale. The main pieces of legislation to ensure that the provisions of the Bonn convention are applied include the Birds Directive and the Habitats directive. The Convention was ratified in 1983.

4.3.3 Whale and dolphin sanctuary

Under the Whale Fisheries Act 1937 the hunting of all whale species, including dolphins and porpoises, is totally banned within the fisheries limits out to 200 miles from the coast. The Whale Fisheries Act also prohibited the hunting by Irish registered ships of certain whales, including right whales and female whales accompanied by calves, outside of the fisheries limits. In 1991, Ireland declared its waters a whale and dolphin sanctuary, the first European sanctuary within the fishery limits of an entire country (Figure 4.3). In addition, the Wildlife (Amendment) Act 1976 and 2000 list species of dolphins, porpoises, seals and whales as protected wild animals. It is an offence to kill or injure a wild animal. Any person who wilfully interferes with or destroys the breeding place or resting place of a wild animal is also guilty of an offence.

Table 4.1 Marine species identified in the Habitats Directive and which may be found offshore in the northeast Atlantic

Common name	Latin name
Species listed under Annex II (animal and plant species whose conservation requires the designation of SACs)	
Grey seal	<i>Halichoerus grypus</i>
Harbour seal	<i>Phoca vitulina</i>
Bottlenose dolphin	<i>Tursiops truncatus</i>
Harbour porpoise	<i>Phocoena phocoena</i>
Loggerhead turtle (occasional vagrant)	<i>Caretta caretta</i>
Sea lamprey	<i>Petromyzon marinus</i>
Sturgeon	<i>Acipenser sturio</i>
Shad	<i>Alosa spp</i>
Species listed under Annex IV (animal and plant species in need of strict protection)	
Whales and dolphins (all species)	Cetacea
Loggerhead turtle (occasional vagrant)	<i>Caretta caretta</i>
Green turtle (very rare)	<i>Chelonia mydas</i>
Kemp's Ridley turtle	<i>Lepidochelys kempii</i>
Hawksbill turtle (very rare)	<i>Eretmochelys imbricate</i>
Leatherback turtle	<i>Dermochelys coriacea</i>
Sturgeon	<i>Acipenser sturio</i>

4.3.4 OSPAR list of threatened and/or declining species

The OSPAR Strategy on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area outlines the need to develop a list of species and habitats in need of protection. The Initial List of Threatened and/or Declining Species and Habitats was produced in 2003 and updated in 2004 (OSPAR, 2004a). The species that may be of potential relevance to IOSEA1 are listed in Table 4.2.

4.4 Coastal habitats and species

The IOSEA1 area approaches to within approximately 30 km of the Irish mainland coast and 18 km of Tory Island SAC/SPA (Figure 4.2). The west coast of Ireland is a highly indented complex of headlands, embayments and estuaries with a diverse range of shore types and exposures to the Atlantic. This diverse coastline supports a rich variety of habitats and species. Much of the coast is designated as SACs for a range of marine features including seals, otters, reefs, large shallow inlets and bays, lagoons, marine caves, intertidal sand flats and salt marsh. Breeding sites for a number Annex 1 bird species including Arctic terns, storm petrels and barnacle geese have been designated as SPAs. The region is important for shorebirds and for breeding populations of the shag, puffin, Manx shearwater, razorbill and great black-backed gull. A number of wetland areas are also Ramsar sites. National areas of importance, or areas where boundary issue would make it difficult to designate SACs and SPAs, are protected as Natural Heritage Areas (NHAs) under the Wildlife (Amendment) Act 2000. They cover a range of features on the coast adjacent to the IOSEA1 area.

These designations and interests highlight the sensitivity of the coastal area which, despite its distance from the IOSEA1 area, is regarded as vulnerable to events such as hydrocarbon spills.

4.5 Maritime archaeological heritage

Offshore archaeological interest in the IOSEA1 area is likely to be restricted to historic wrecks due to the historic low level of human activity. The majority of the wrecks around Ireland are to be found in the coastal area and to the north of the IOSEA1. Factors influencing the distribution of wrecks include local environmental factors such as shoals and reefs, an increased level of traffic in the inshore region and the presence of major shipping routes. Historic wrecks of archaeological significance are

protected under the National Monuments Act 1987 (as amended) and a database of their locations will be made available through the DoEHLG website.

Table 4.2 Species identified by OSPAR which may be found in Region V

Species	
Invertebrates	
Common name	Latin name
Dog whelk	<i>Nucella lapillus</i>
Azorean limpet	<i>Patella ulyssiponensis aspera</i>
Fish	
Common name	Latin name
Basking shark	<i>Cetorhinus maximus</i>
Common skate	<i>Dipterus (Raja) batis</i>
Orange roughy	<i>Hoplostethus atlanticus</i>
Atlantic bluefin tuna	<i>Thunnus thynnus</i>
Allis shad	<i>Alosa alosa</i>
Cod	<i>Gadus morhua</i>
Sea lamprey	<i>Petromyzon marinus</i>
Atlantic salmon	<i>Salmo salar</i>
Marine turtles	
Loggerhead turtle	<i>Caretta caretta</i>
Leatherback turtle	<i>Dermochelys coriacea</i>
Marine mammals	
Blue whale	<i>Balaenoptera musculus</i>
Northern right whale	<i>Eubalaena glacialis</i>
Harbour porpoise	<i>Phocoena phocoena</i>

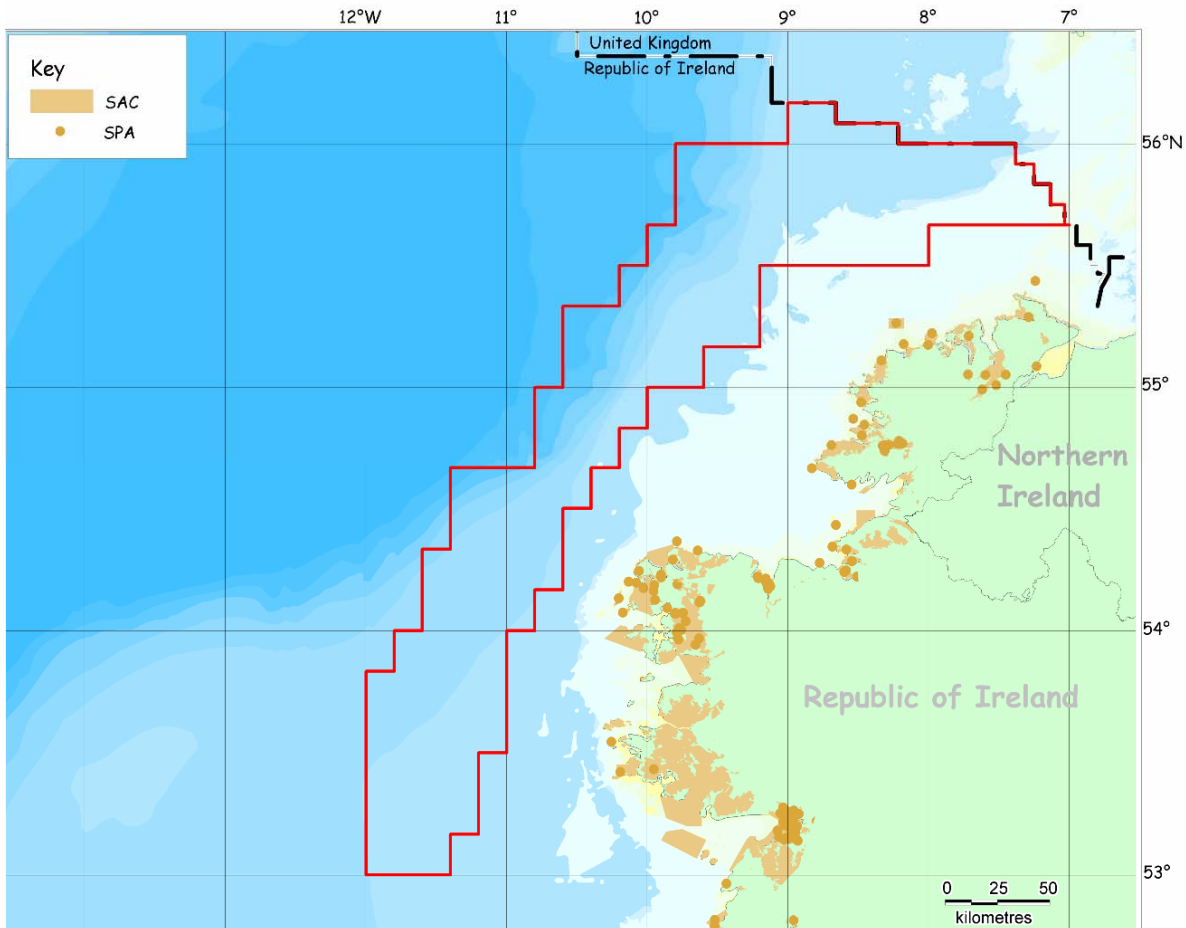
4.6 Other plans

4.6.1 The National Biodiversity Plan

The National Biodiversity Plan is the main vehicle by which Ireland is meeting its commitments under the Convention on Biological Diversity and EC Biodiversity Strategy. The Plan was approved by Government and published in April 2002. The Plan contains 91 actions aimed at securing the conservation and sustainable use of biodiversity. The Plan forms part of Ireland's commitment to the EU target to halt biodiversity loss by 2010. Actions specific to the marine and coastal environment that are relevant to IOSEA1 are:

- Prepare and adopt a National Integrated Coastal Zone Management Strategy making specific provision for the conservation of biodiversity.
- Develop a National Marine Biodiversity Resources Database as part of the National Biological Data Management System.
- Enhance surveys and research on marine biodiversity, through the implementation of a prioritised programme of surveys and mapping of marine benthic species and communities.
- Continue, and where necessary, enhance, in line with relevant EU and international instruments (eg OSPAR), existing programmes and measures to control and monitor pollution of coastal and marine ecosystems.

Figure 4.2 Coastal conservation sites



4.6.2 Particularly Sensitive Sea Areas

Western European Waters including the offshore area to the west of Ireland were designated as a Particularly Sensitive Sea Area (PSSA) in 2004 (IMO, 2006) (Figure 4.3).

MARPOL 73/78 defines certain sea areas as 'special areas' in which, for technical reasons relating to their oceanographical and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under the Convention these special areas are provided with a higher level of protection than other areas of the sea. PSSAs are areas that require special protection through action by the IMO because of their significance for recognized ecological, socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities.

When an area is approved as a particularly sensitive sea area specific measures can be used to control the maritime activities in that area. Measures may include routing and strict application of MARPOL discharge and equipment requirements for ships such as oil tankers.

Figure 4.3 Potentially Sensitive Sea Area and whale and dolphin conservation area around Ireland

