

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

## BARRA-DONEGAL FAN COMPLEX ISRA

### European Atlantic Region

#### SUMMARY

Barra-Donegal Fan Complex is located on the northwestern European continental margin west of Scotland in the United Kingdom of Great Britain and Northern Ireland and north of Ireland. This shelf-slope area is characterised by a variety of substrates, ranging from rock and coarse sediment to sand and mud. It is influenced by the warm North Atlantic Current, the European Slope Current, and along-slope bottom currents. Within this area there are: **threatened species** (e.g., Rabbitfish *Chimaera monstrosa*) and the area sustains a **high diversity of sharks** (14 species).

#### CRITERIA

**Criterion A - Vulnerability; Sub-criterion D2 - Diversity**

IRELAND,  
 UNITED  
 KINGDOM OF  
 GREAT  
 BRITAIN AND  
 NORTHERN  
 IRELAND

0-1,100 metres

2,814.5 km<sup>2</sup>





## DESCRIPTION OF HABITAT

Barra-Donegal Fan Complex is located on the northwestern European continental margin west of Scotland in the United Kingdom of Great Britain and Northern Ireland and north of Ireland. This area lies on the shelf edge and upper slope and includes canyons and escarpments. Similar to other fans on the regional continental margin, the Donegal and Barra Fans were deposited in front of fast-flowing ice streams during the Pliocene-Pleistocene (Owen 2013; Owen & Long 2016). The habitat comprises mostly soft substrate, with deep circalittoral coarse sediment, muddy, and sandy substrates on the shelf edge (JNCC 2014). On the continental slope there are also rocky substrates in addition to gravel, sand, and mud (JNCC 2014).

The area is influenced by the North Atlantic Current, which brings warm, salty water from the Gulf Stream to western Europe, and the European Slope Current that drives the exchange of slope and shelf waters (Fraser et al. 2022). Strong along-slope bottom currents (up to 50 cm s<sup>-1</sup>) under the influence of the Eastern North Atlantic Water at 500-1,500 m water depths control sediment transport across the fan complex (Wang et al. 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from surface waters (0 m) to 1,100 m based on the bathymetry of the area.

## ISRA CRITERIA

### CRITERION A - VULNERABILITY

Fourteen Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. Threatened sharks comprise one Critically Endangered species, two Endangered species, and four Vulnerable species; threatened rays comprise two Critically Endangered species, two Endangered species, and two Vulnerable species; threatened chimaeras comprise one Vulnerable species (IUCN 2025).

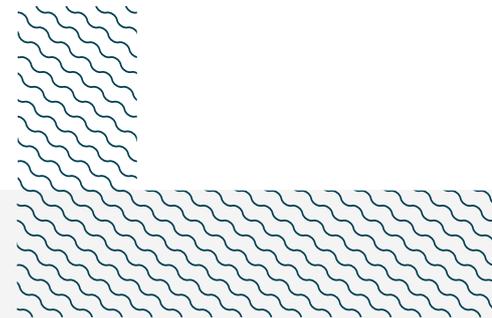
### SUB-CRITERION D2 - DIVERSITY

Barra-Donegal Fan Complex sustains a high diversity of Qualifying Species (14 species). This exceeds the regional diversity threshold (13 species) for the European Atlantic region.

Data between 2010-2021 from the French on-board observer program (ObsMer; IFREMER SIH 2022) and International Council for the Exploration of the Sea (ICES) Database of Trawl Surveys (DATRAS; IE-IAMS, IE-IGFS, and SCOWCGFS campaigns) (ICES 2025) confirm the regular occurrence of these species in the area. The compilation of all DATRAS campaigns over the period 2010-2021 (i.e., 20 campaigns) also highlight that Barra-Donegal Fan Complex represents the diversity hotspot of threatened species occurrence within the survey region spanning from Portugal via the British Isles to the North Sea. The *Atlas des chondrichthyens de France métropolitaine* was used to further support inclusion of some of the species (Bisch et al. 2024). Additional data from observers on Irish commercial fisheries vessels collected between 2003-2021 (EU data collection framework unpubl. data 2025) also support the regular occurrence of some of these species.

Two threatened species are most common (i.e., more than 100 occurrences in total and captured in 11 of the 12 years analysed) in this area: Leafscale Gulper Shark (n = 157 occurrences, captured in 11 years) and Rabbitfish (n = 234, 11 years; additional 235 records from Irish surveys). An additional six threatened species were regularly captured in at least 8 of the 12 years analysed, but have fewer

than 100 occurrences in total: Common Blue Skate (n = 56 occurrences, 9 years; additional 212 individuals in 12 years in Irish surveys), Flapper Skate (n = 37, 9 years), Longnosed Skate (n = 58, 8 years; additional 3 records in 1 year), Velvet Belly Lanternshark (n = 40, 9 years; additional 14 records), Shagreen Skate (n = 83, 11 years; additional 12 records), and Spiny Dogfish (n = 59, 11 years; additional 226 records). The Common Smoothhound was regularly captured in Irish surveys (n = 78, 8 years). Three species were captured regularly in low numbers and are generally rare in the surveys: Kitefin Shark (n = 17, 7 years), Tope (n = 8, 5 years; additional 1 record), and Sandy Skate (n = 9, 5 years; additional 1 record). The remaining two species with the lowest captures are particularly rare in the surveys throughout the region but had a hotspot of captures in this area: Sailfin Roughshark (n = 5, 4 years) and Norwegian Skate (n = 7, 3 years; additional 2 records).



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### **Acknowledgments**

Amaëlle Bisch (PatriNat), Anthony Acou (PatriNat), Thomas Barreau (Muséum national d'Histoire naturelle), and Christoph A Rohner (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2025 ISRA Region 02 - European Atlantic workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

### **Suggested citation**

**IUCN SSC Shark Specialist Group. 2025.** Barra-Donnegal Fan Complex ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

## QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
<b>SHARKS</b>												
<i>Centrophorus squamosus</i>	Leafscale Gulper Shark	EN	0-3,366	X								X
<i>Dalatias licha</i>	Kitefin Shark	VU	37-1,800	X								
<i>Etmopterus spinax</i>	Velvet Belly Lanternshark	VU	70-2,000	X								
<i>Galeorhinus galeus</i>	Tope	CR	0-826	X								
<i>Mustelus mustelus</i>	Common Smoothhound	EN	5-800	X								
<i>Oxynotus paradoxus</i>	Sailfin Roughshark	VU	265-1,104	X								
<i>Squalus acanthias</i>	Spiny Dogfish	VU	0-1,978	X								

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
<b>RAYS</b>													
<i>Dipturus batis</i>	Common Blue Skate	CR	10-896	X									X
<i>Dipturus intermedius</i>	Flapper Skate	CR	0-1,500	X									
<i>Dipturus nidarosiensis</i>	Norwegian Skate	EN	125-1,573	X									
<i>Dipturus oxyrinchus</i>	Longnosed Skate	VU	70-1,230	X									
<i>Leucoraja circularis</i>	Sandy Skate	EN	50-800	X									
<i>Leucoraja fullonica</i>	Shagreen Skate	VU	30-800	X									
<b>CHIMAERAS</b>													
<i>Chimaera monstrosa</i>	Rabbitfish	VU	120-1,663	X									X

## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
<b>SHARKS</b>		
<i>Apristurus aphyodes</i>	White Ghost Catshark	LC
<i>Apristurus laurussonii</i>	Iceland Catshark	LC
<i>Apristurus melanoasper</i>	Black Roughscale Catshark	LC
<i>Centroscyllium fabricii</i>	Black Dogfish	LC
<i>Centroscymnus coelelepis</i>	Portuguese Dogfish	NT
<i>Centroselachus crepidater</i>	Longnose Velvet Dogfish	NT
<i>Deania calceus</i>	Birdbeak Dogfish	NT
<i>Etmopterus princeps</i>	Great Lanternshark	LC
<i>Galeus melastomus</i>	Blackmouth Catshark	LC
<i>Galeus murinus</i>	Mouse Catshark	LC
<i>Hexanchus griseus</i>	Bluntnose Sixgill Shark	NT
<i>Pseudotriakis microdon</i>	False Catshark	LC
<i>Scyliorhinus canicula</i>	Smallspotted Catshark	LC
<i>Somniosus microcephalus</i>	Greenland Shark	VU
<b>RAYS</b>		
<i>Leucoraja naevus</i>	Cuckoo Skate	NT
<i>Neoraja caerulea</i>	Blue Pygmy Skate	LC
<i>Raja clavata</i>	Thornback Skate	NT
<i>Raja montagui</i>	Spotted Skate	LC
<i>Rajella fyllae</i>	Round Skate	LC
<i>Rajella kukujevi</i>	Mid-Atlantic Skate	LC
<i>Rostroraja alba</i>	White Skate	EN
<b>CHIMAERAS</b>		
<i>Chimaera opalescens</i>	Opal Chimaera	LC
<i>Hydrolagus mirabilis</i>	Large-eyed Rabbitfish	LC

IUCN Red List of Threatened Species Categories are available by searching species names at [www.iucnredlist.org](http://www.iucnredlist.org) Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.



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