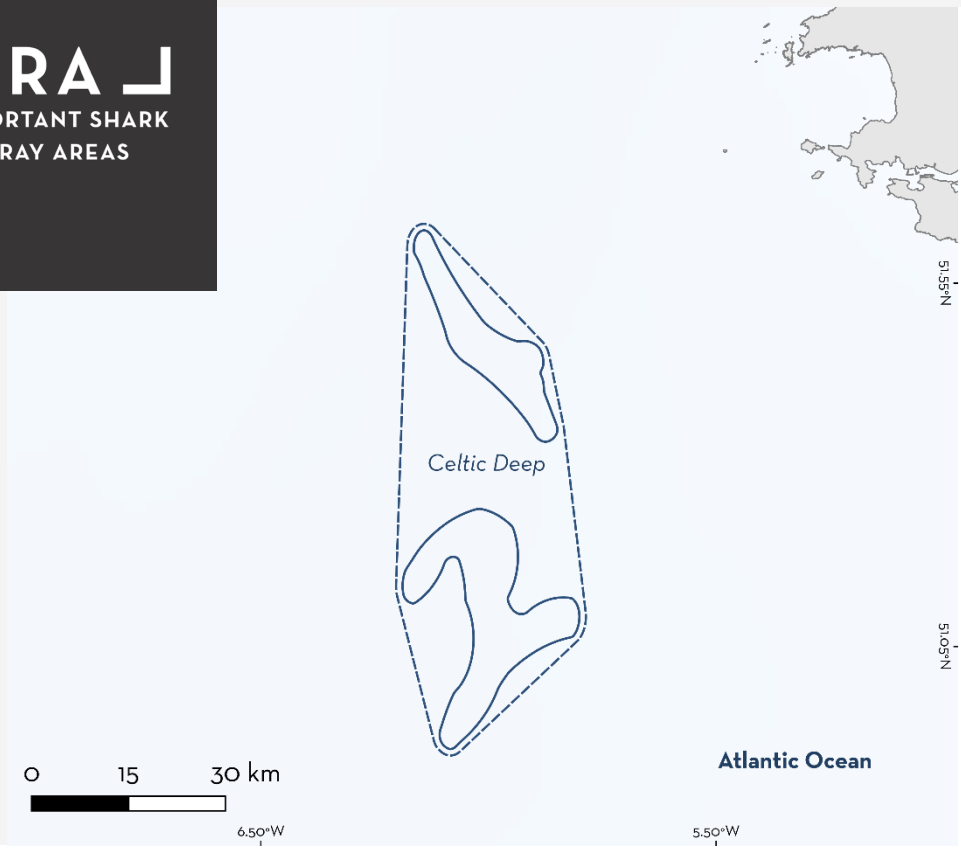
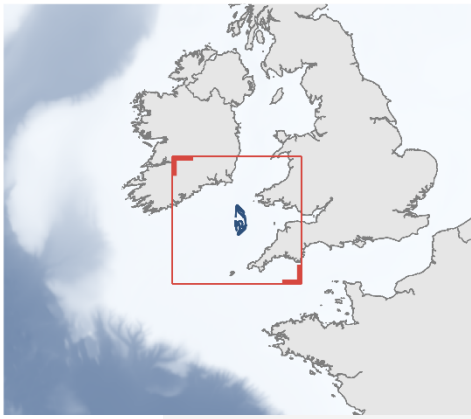
ISRA
IMPORTANT SHARK AND RAY AREAS





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

CELTIC DEEP ISRA

European Atlantic Region

SUMMARY

Celtic Deep is a deep basin in the Celtic Sea, located within the waters of the United Kingdom of Great Britain and Northern Ireland. The area is characterised by muddy and sandy substrates. It is influenced by shelf tidal fronts, variations in phytoplankton biomass, mixing of different currents, and seasonal upwelling. Within this area there are: **threatened species** and **reproductive areas** (Common Blue Skate *Dipturus batis*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C1 – Reproductive Areas

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

10–160 metres

567.3 km²

DESCRIPTION OF HABITAT

Celtic Deep is located within the United Kingdom of Great Britain and Northern Ireland. It is situated outside of the Bristol Channel, between Ireland and the United Kingdom of Great Britain and Northern Ireland in the Celtic Sea. The area is characterised by muddy and sandy substrates (Aldridge et al. 2017). It overlaps with a relatively deep basin on an otherwise shallow shelf.

The area is influenced by shelf tidal fronts, variations in phytoplankton biomass, and mixing of different currents (Pingree et al. 1982), including the exchange of water from the Atlantic Ocean (via St. George's Channel) and the Irish Sea. It is also influenced by seasonal upwelling.

This Important Shark and Ray Area is benthic, pelagic, and subsurface and is delineated from 10–160 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Critically Endangered Common Blue Skate (Ellis et al. 2024).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Celtic Sea is an important reproductive area for one ray species.

Early life stage Common Blue Skates are regularly and predictably observed in this area, in larger numbers compared to adjacent areas (ICES 2025). Data from the International Beam Trawl Survey (IBTS) (2010–2025), operating inside and outside of this area (in the broader Celtic and Irish seas) were analysed. These data indicate that Common Blue Skates were caught in February, March, April, and September. Overall, 247 neonate/young-of-the-year (YOY) Common Blue Skates were caught inside and outside of this area. These measured ≤38 cm total length (TL), and the size-at-birth for this species is 21 cm TL (Last et al. 2016). Nearly one quarter of the neonate/YOY Common Blue Skates (n = 46; 18.6%) were caught within this area. The animals were caught in 2016 (n = 1), 2017 (n = 4), 2018 (n = 2), 2019 (n = 7), 2022 (n = 1), 2024 (n = 17), and 2025 (n = 14). Included in these numbers were 18 neonate Common Blue Skates measuring ≤21 cm TL caught in 2017 (n = 2), 2024 (n = 9), and 2025 (n = 7). This area is nationally important as it is one of only two remaining hotspots where early life stages of the species are regularly and predictably observed.

Acknowledgments

Jim Ellis (Centre for the Environment, Fisheries and Aquaculture Science [Cefas]), Sophy McCully Phillips (Centre for the Environment, Fisheries and Aquaculture Science [Cefas]), Joana Silva (Centre for the Environment, Fisheries and Aquaculture Science [Cefas]), and Ryan Charles (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. Celtic Deep 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
RAYS												
Dipturus batis	Common Blue Skate	CR	10–896	X		X						

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

REFERENCES

Aldridge JN, Lessin G, Amoudry LO, Hicks N, Hull T, Klar JK, Kitidis V, McNeill CL, Ingels J, Parker ER, et al. 2017. Comparing benthic biogeochemistry at a sandy and a muddy site in the Celtic Sea using a model and observations. *Biogeochemistry* 135: 155–182. https://doi.org/10.1007/s10533-017-0367-0

Ellis JR, McCully-Phillips SR, Sims D, Derrick D, Cheok J, Dulvy NK. 2024. *Dipturus batis* (amended version of 2021 assessment). *The IUCN Red List of Threatened Species* 2024: e.T203364219A256580832. https://dx.doi.org/10.2305/IUCN.UK.2024-1.RLTS.T203364219A256580832.en

ICES. 2025. ICES Database on Trawl Surveys (DATRAS). Copenhagen, Denmark: ICES. Available at: https://datras.ices.dk Accessed May 2025.

Last PR, White WT, de Carvalho MR, Séret B, Stehmann MFW, Naylor GJP. 2016. *Rays of the world.* Clayton South: CSIRO Publishing.

Pingree RD, Mardell GT, Holligan PM, Griffiths DK, Smithers J. 1982. Celtic Sea and Armorican current structure and the vertical distributions of temperature and chlorophyll. *Continental Shelf Research* 1: 99–116. https://doi.org/10.1016/0278-4343(82)90033-4