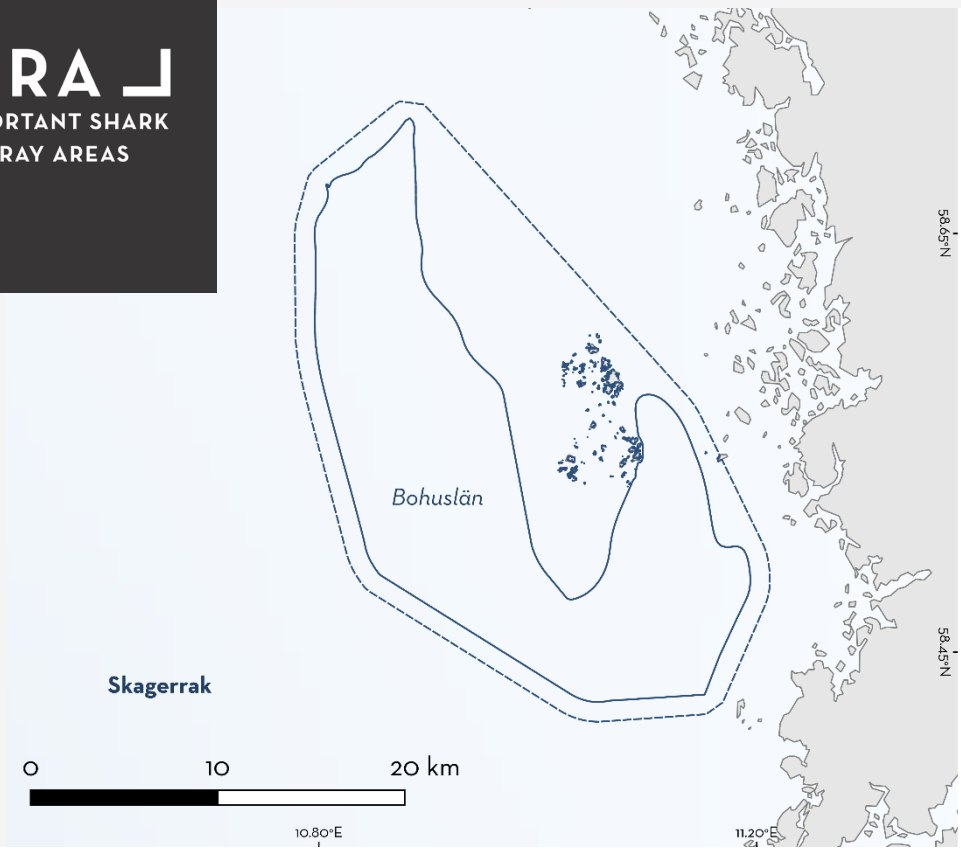
ISRA
IMPORTANT SHARK AND RAY AREAS



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

BOHUSLÄN ISRA

European Atlantic Region

SWEDEN

0–175 metres

293.0 km²

SUMMARY

Bohuslän is located on the western coast of Sweden. The area includes part of the Koster Trench and encompasses a fjord system, situated in between the Skaggerak and Kattegat, east of the Norwegian Trench. It is characterised by muddy substrates and is influenced by the Jutland and Baltic currents. Within this area there are: **threatened species** and **reproductive areas** (Spiny Dogfish *Squalus acanthias*).

CRITERIA

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

DESCRIPTION OF HABITAT

Bohuslän is located on the western coast of Sweden. The area includes part of the Koster Trench and encompasses a fjord system, situated in between the Skaggerak and Kattegat, east of the Norwegian Trench. It is also characterised by muddy substrates and is bordered by rocky substrates to the east. The area is influenced by the Jutland and the Baltic currents (Kankainen et al. 2023).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 175 m based on the bathymetry of 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 Vulnerable Spiny Dogfish (Finucci et al. 2020).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Bohuslän is an important reproductive area for one shark species.

Two surveys were undertaken in this area each year between 2010–2023 as part of the North Sea International Bottom Trawl Survey (IBTS; ICES 2025). These were undertaken between January–April (Q1) and September–December (Q3). During this period, 171 Spiny Dogfish were recorded across all years of the IBTS in this area (n = 3–15 per year). Of these, 42 (24.5% of total) neonates/young-of-the-year (YOY) were caught within this area, measuring up to 35 cm total length (TL). The size-at-birth of Spiny Dogfish in this region is up to 31 cm TL (De Oliveria et al. 2013). Neonate/YOY Spiny Dogfish were reported in 2011 (n = 12), 2013 (n = 3), 2015 (n = 3), 2017 (n = 6), 2022 (n = 15), and 2023 (n = 3) (ICES 2025). In three years (2011, 2015, and 2023), neonate/YOY individuals comprised the entire catch. There are observations of neonate/YOY Spiny Dogfish in adjacent areas, however, this area has the most regular and predictable observations, across the greatest number of contemporary years (ICES 2025). Neonate/YOY Spiny Dogfish observations appear to be associated with the muddy substrate that characterises this area. Despite the relatively low sample size, this area has the largest and most regular and predictable observations of the species at these early life-stages in Sweden and adjacent jurisdictions (e.g., Denmark and Norway).

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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
SHARKS												
Squalus acanthias	Spiny Dogfish	VU	0–1,978	X		X						

REFERENCES

De Oliveira JA, Ellis JR, Dobby H. 2013. Incorporating density dependence in pup production in a stock assessment of NE Atlantic spurdog *Squalus acanthias*. *ICES Journal of Marine Science* 70: 1341–1353.

Finucci B, Cheok J, Chiaramonte GE, Cotton CF, Dulvy NK, Kulka DW, Neat FC, Pacoureau N, Rigby CL, Tanaka S, et al. 2020. *Squalus acanthias*. *The IUCN Red List of Threatened Species* 2020: e.T91209505A124551959. https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T91209505A124551959.en

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

Kankainen M, Martinsson S, Nordberg K, Asteman IP. 2023. In situ ecological quality status in the Kosterhavet National Park (Skagerrak, North Sea): a 100 year-perspective. *Ecological Indicators* 147: 110005. https://doi.org/10.1016/j.ecolind.2023.110005