







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

TRONDELAG PLATFORM ISRA

Polar Waters Region

SUMMARY

Trondelag Platform is located off the southwest coast of Norway. This area is influenced by the Norwegian Atlantic Current, a branch of the Gulf Stream flowing northwards along the Norwegian coast. It is within a transitional zone, where nutritious, saline, and relatively warm water flows into Arctic water bodies. This area overlaps with one marine protected area and three Key Biodiversity Areas. Within this area there are: **threatened species** and **feeding areas** (Basking Shark Cetorhinus maximus).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas

NORWAY

0-400 metres

10,973 km²

sharkrayareas.org

DESCRIPTION OF HABITAT

Trondelag Platform is located on the southwest coast of Norway's continental shelf. The area encompasses the continental shelf north of Møre and Halten Terrace. The Norwegian coastline is characterised by extensive fjord systems. Most of the continental shelf consists of fine and sandy mud, with coarser sediments on the slope (MAREANO 2015).

The area is dominated by two northward flowing currents: the North Atlantic Current (NAC) and the Norwegian Costal Current (NCC). The NCC is a low-salinity current that originates from the Baltic Sea and runs along the coast fed by freshwater runoff from the fjords (Sundby et al. 2013; Espinasse et al. 2017). The NAC is saltier and runs parallel to the west of the NCC. The NAC is an extension of the Gulf Stream, transporting warm Atlantic water northward and promoting mild climates at these high latitudes (MAREANO 2015).

The area is located north of the Norwegian Trench, a large topographic feature that funnels the crustacean zooplankton copepod *Calanus finmarchicus* into the shelf around Møre. Copepods are an important food source for many pelagic fishes in the Norway Sea. Trondelag, located just upstream, is one the main spawning grounds for the boreal spring-spawning Atlantic Herring *Clupea harengus*, a species highly dependent on copepod eggs and larvae as its primary prey during early life stages (Holst et al. 2004; Opdal & Vikebo 2016).

This area overlaps with the Sularevet Marine Protected Area (UNEP-WCMC & IUCN 2024) and with three Key Biodiversity Areas: Froan, Smøla Archipelago, and Humlingsvær (KBA 2024a, 2024b, 2024c).

This Important Shark and Ray Area is subsurface and pelagic and is delineated from surface and inshore waters (0 m) to 400 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 Endangered Basking Shark (Rigby et al. 2021).

SUB-CRITERION C2 - FEEDING AREAS

Trondelag Platform is an important feeding area for one shark species.

The area is an important seasonal feeding area for Basking Sharks during the boreal summer. Based on citizen science reports between 2019–2024, there were a total of 80 individual sightings of Basking Sharks. Observations were made in 2019 (n = 15), 2020 (n = 2), 2021 (n = 23), 2022 (n = 9), 2023 (n = 5), and May 2024 (n = 4). Most observations (95%) were reported between May and August (with 63.3% of the sightings reported in May and June) (Institute of Marine Research 2024). Basking Sharks are reported swimming calmly on the surface, and in 11.6% of the sightings, feeding with observations of animals with their mouths open or swimming back and forth in the same area. Basking Sharks are selective filter-feeders, foraging on the most profitable zooplankton patches rich in copepods, including fish eggs and fish larvae (Matthews 1950; Sims & Quayle 1998). Trondelag Platform is a highly productive area, with important plankton advections during spring and hosts the main spawning grounds for Atlantic Herring (Holst et al. 2004; Opdal & Vikebo 2016). This area comprises the second highest sighting density of Basking Sharks in Norway after Lofoten, including 16.7% of the

citizen science sightings reported between 2007-2024 nationwide (Institute of Marine Research 2024).



Amanda Batlle-Morera (IUCN SSC Shark Specialist Group – ISRA Project) and Ryan Charles (IUCN SSC Shark Specialist Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 1 – Polar Waters 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. 2024. Trondelag Platform 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	В	C1	C2	C3	C4	C ₅	Dı	D2
SHARKS			1	1					1	ı	ı	
Cetorhinus maximus	Basking Shark	EN	0-1,264	Х			Х					

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category				
SHARKS	,					
Etmopterus spinax	Velvet Belly Lanternshark	VU				
Galeus melastomus	Blackmouth Catshark	LC				
Lamna nasus	Porbeagle	VU				
Somniosus microcephalus	Greenland Shark	VU				
Squalus acanthias	Spiny Dogfish	VU				
CHIMAERAS						
Chimaera monstrosa	Rabbitfish	VU				

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

Espinasse B, Basedow S, Hattermann T, Nøst OA, Albretsen J, Skardhamar J, Eiane K. 2017. Mechanisms regulating inter-annual variability in zooplankton advection over the Lofoten shelf, implications for cod larvae survival. *Fisheries Oceanography* 26(3): 299–315. https://doi.org/10.1111/fog.12193

Holst JC, Røttingen I, Melle W. 2004. The herring. In: Skjoldal HR, ed. The Norwegian Seα ecosystem. First edition. Trondheim: Tapir Academic Press, 203–226.

Institute of Marine Research. 2024. Marine Citizen Science portal. Available at: https://dugnadforhavet.no/ Accessed July 2024

Key Biodiversity Areas (KBA). 2024a. Key Biodiversity Areas factsheet: Froan. Available at: https://www.keybiodiversityareas.org/site/factsheet/3187 Accessed June 2024.

Key Biodiversity Areas (KBA). 2024b. Key Biodiversity Areas factsheet: Humlingsvær. Available at: https://www.keybiodiversityareas.org/site/factsheet/44659 Accessed June 2024.

Key Biodiversity Areas (KBA). 2024c. Key Biodiversity Areas factsheet: Smøla Archipelago. Available at: https://www.keybiodiversityareas.org/site/factsheet/3167 Accessed June 2024.

MAREANO, eds. 2015. The Norwegian Sea floor – new knowledge from MAREANO for ecosystem-based management. First edition. MAREANO.

Matthews LH. 1950. Reproduction in the Basking Shark, Cetorhinus maximus (Gunner). Philosophical Transactions of the Royal Society of London. Biological Sciences 234(612): 247–316.

Opdal AF, Vikebø FB. 2016. Long-term stability in modelled zooplankton influx could uphold major fish spawning grounds on the Norwegian continental shelf. Canadian Journal of Fisheries and Aquatic Sciences 73(2): 189–196. https://doi.org/10.1139/cjfas-2014-0524

Rigby CL, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, Marshall A, et al. 2021. Cetorhinus maximus (amended version of 2019 assessment). The IUCN Red List of Threatened Species 2021: e.T4292A194720078. https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T4292A194720078.en

Sims D, Quayle V. 1998. Selective foraging behaviour of basking sharks on zooplankton in a small-scale front. *Nature* 393: 460–464. https://doi.org/10.1038/30959

Sundby S, Fossum P, Sandvik A, Vikebø FB, Aglen A, Buhl-Mortensen L, Folkvord A, Bakkeplass K, Buhl-Mortensen P, Johannessen M, et al. 2013. KunnskapsInnhenting Barentshavet – Lofoten – Vesterålen KILO. Fisken og havet. Havforskningsinstituttet, Institute of Marine Research.

UNEP-WCMC & IUCN. 2024. Protected Planet: The World Database on Protected Areas (WDPA) and World Database on Other Effective Area-based Conservation Measures (WD-OECM). Available at: www.protectedplanet.net Accessed June 2024.