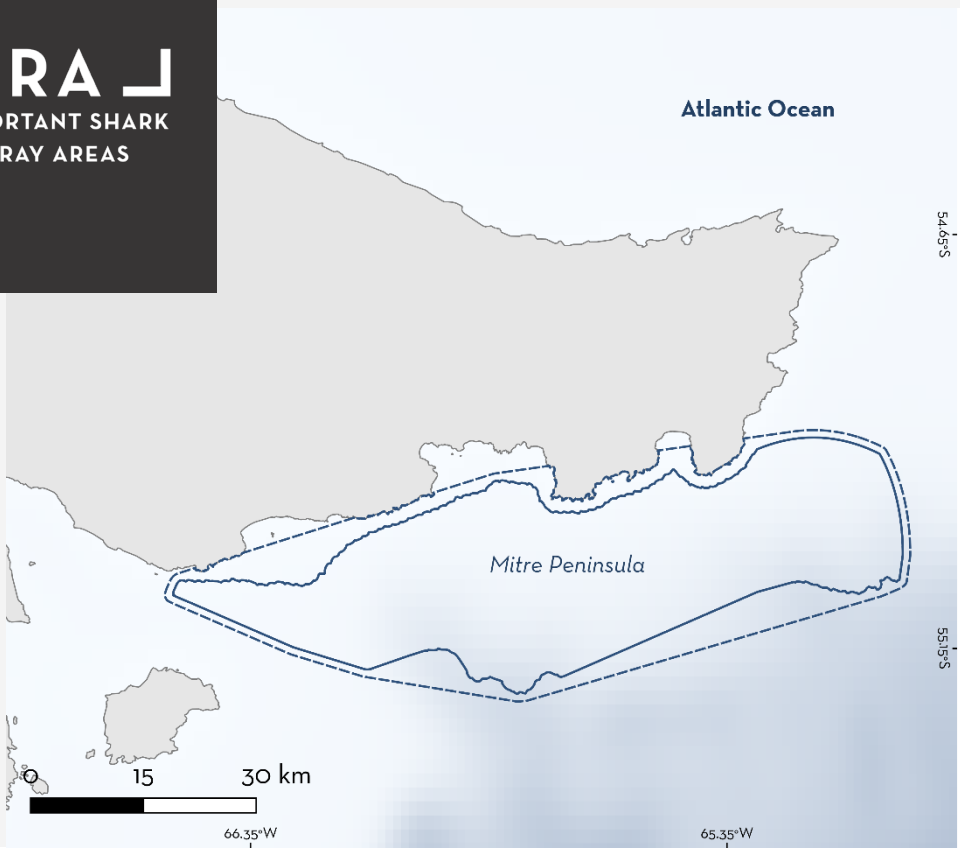
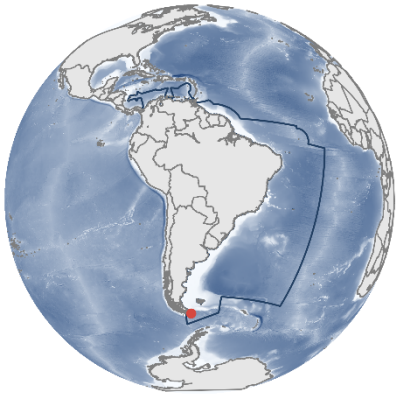
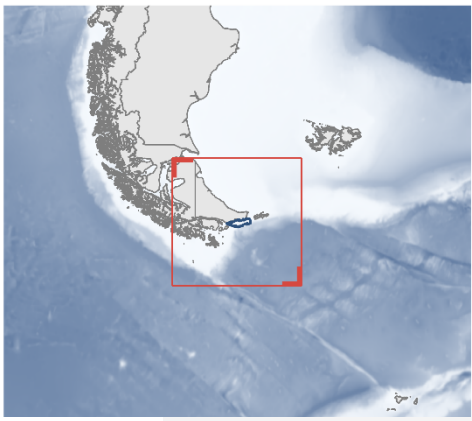
ISRA
IMPORTANT SHARK AND RAY AREAS







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

MITRE PENINSULA ISRA

South American Atlantic Region

ARGENTINA

0–1,000 metres

1,654.7 km²

SUMMARY

Mitre Peninsula is located on the southeast coast of Isla Grande of Tierra del Fuego, Argentina. It encompasses the southwestern portion of the Le Maire Strait and part of the slope leading to the Yaganes Basin. The area is characterised by abrupt bathymetry descending steeply to 1,000 m depth and is influenced by the Subantarctic Water Mass. Within this area there are: **threatened species** (Porbeagle *Lamna nasus*); **reproductive areas** (Shortfin Sandskate *Psammobatis normani*); and **feeding areas** (Porbeagle).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C1 – Reproductive Areas; Sub-criterion C2 – Feeding Areas

DESCRIPTION OF HABITAT

Mitre Peninsula is located on the southeastern coast of Isla Grande of Tierra del Fuego, Argentina. The area encompasses the southwestern portion of the Le Maire Strait and part of the slope leading to the Yaganes Basin. It is characterised by abrupt bathymetry, with the seafloor depth rapidly reaching 1,000 m, forming steep walls that define the upper boundary of the Yaganes Basin, which extends to depths of over 5,740 m (Del Cogliano et al. 2000). The area is influenced by the Subantarctic Water Mass, which is part of the Antarctic Circumpolar Current. These waters mix with channel waters receiving freshwater input from glacial melt and precipitation, creating a low-salinity belt that surrounds the southern tip of South America (Camus 2001).

This Important Shark and Ray Area is benthic and pelagic and is delineated from surface waters (0 m) to 1,000 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 Porbeagle (Rigby et al. 2019).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Mitre Peninsula is an important reproductive area for one ray species.

High densities of Shortfin Sandskate egg cases are found in the area (Matusevich et al. 2023). Between 2016–2018, four research cruises conducted bottom trawl surveys in the southern part of the Southwest Atlantic at depths of 33–785 m (Matusevich et al. 2023). Sampling employed a small bottom trawl net (50 mm mesh in the wings, and 20 mm in the cod end; horizontal opening 6 m) with trawling durations of 5–20 minutes at speeds of 1.5–5 knots, resulting in a total of 110 fishing hauls (Matusevich et al. 2023). Catch-per-unit-effort (CPUE) for egg cases of each species was calculated based on the area swept by survey trawls (Alverson & Pereyra 1969) expressed as egg cases per km^2 (egg cases/km^2). After taxonomic identification, the number of egg cases per haul for each species was recorded (Matusevich et al. 2023).

Shortfin Sandskate egg cases were found in the area at depths ranging from 40–114 m, with the highest densities recorded at 71 m (Matusevich et al. 2023). The density ranged between 532–2,314 egg cases/km^2 (Matusevich et al. 2023). The highest densities were observed within the area, including the only haul with densities of 2,204 egg cases/km^2, and one haul (of the two) with 500–1,000 egg cases/km^2 (Matusevich et al. 2023).

SUB-CRITERION C2 – FEEDING AREAS

Mitre Peninsula is an important feeding area for one shark species.

The area is an important feeding ground for Porbeagle that forage on demersal and pelagic fishes that are abundant in this area (Cortés & Waessle 2017; Cortés et al. 2017; Belleggia et al. 2021). Between 2010–2020, 148 fishing sites were surveyed for Porbeagle incidental catch on commercial trawl fishing vessels targeting Hoki *Macruronus magellanicus* and Southern Blue Whiting *Micromesistius australis* within the area and surrounding areas in the southwestern Atlantic Ocean.

Surveys conducted during January (n = 5), February (n = 22), March (n = 24), April (n = 32), May (n = 45), June (n = 15), and July (n = 5) were monitored by 15 scientific observers from the National Institute of Fisheries Research and Development (Belleggia et al. 2021). Data collected included date, coordinates, depth, total length (TL), sex, and prey items identified to the lowest possible taxonomic level from Porbeagle stomachs. The importance of each prey in the Porbeagle's diet was assessed by calculating its percentage frequency of occurrence (%F), representing the proportion of stomachs containing a given prey relative to all stomachs with food (Belleggia et al. 2021).

A total of 413 Porbeagles were captured within the area and surrounding areas in the southwestern Atlantic Ocean, with 292 females ranging from 71–241 cm TL (mean = 183.7 cm, SD = 27) and 121 males ranging from 87–218 cm TL (mean = 170.2 cm, SD = 23.5) (Belleggia et al. 2021). A total of 310 stomachs (75%) contained food (Belleggia et al. 2021). Porbeagles in this area primarily fed on fishes (88.3%), with cephalopods (5.9%), and crustaceans (4.3%), making up smaller portions of their diet. The most important identifiable fish prey were Hoki and Southern Blue Whiting, followed by Patagonian Sprat *Sprattus fuegensis*, notothenids, and Southern Hake *Merluccius australis* (Belleggia et al. 2021). Although surveys of stomach content were carried out only between the months of January–July, Porbeagle is captured year-round in the area (Pérez et al. 2023).

This area overlaps with the spawning grounds of its main prey, Hoki between June–October (Gorini & Pájaro 2011). However, Hoki peak abundance is recorded between January–May (Gorini & Lukaszewicz, 2024). It also coincides with the highest year-round abundances of its secondary prey, Southern Hake (Giussi et al. 2016). Although, the area represents ~10–15% of Porbeagle captures where stomach contents were analysed, incidental catches in trawl nets in the area were consistently high between 2006–2021 (Pérez et al. 2023) confirming that this area is important for feeding for Porbeagle.

Acknowledgments

María Lourdes Estalles (Dirección Nacional de Áreas Marinas Protegidas – Administración de Parques Nacionales), Paula Cedrola (Dirección Nacional de Áreas Marinas Protegidas – Administración de Parques Nacionales), Fabian Leandro Rabuffetti (Dirección Nacional de Áreas Marinas Protegidas – Administración de Parques Nacionales), Gustavo Enrique Chiaramonte (Estación Hidrobiológica de Puerto Quequén – División Ictiología, Museo Argentino de Ciencias Naturales 'B. Rivadavia' [EHPQ-MACN-CONICET]), Florencia Matusevich (IIMyC, FCEyN Universidad Nacional de Mar del Plata – CONICET), Diego M Vazquez (INALI, Universidad Nacional del Litoral – CONICET), Valeria Gabbanelli (IIMyC, FCEyN Universidad Nacional de Mar del Plata – CONICET), Juan M Díaz de Astarloa (IIMyC, FCEyN Universidad Nacional de Mar del Plata – CONICET), Ezequiel Mabragaña (IIMyC, FCEyN Universidad Nacional de Mar del Plata – CONICET), Amanda Batlle Morera (IUCN SSC Shark Specialist Group – ISRA Project), and Marta D Palacios (IUCN SSC Shark Specialist Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2025 ISRA Region 05 – South American 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. Mitre Peninsula 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
SHARKS												
Lamna nasus	Porbeagle	VU	0–1,809	X			X					
RAYS												
Psammobatis normani	Shortfin Sandskate	LC	30–360			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Schroederichthys bivius	Narrowmouth Catshark	LC
RAYS		
Bathyraja macloviana	Patagonian Skate	NT
Bathyraja magellanica	Magellan Skate	LC

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.

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