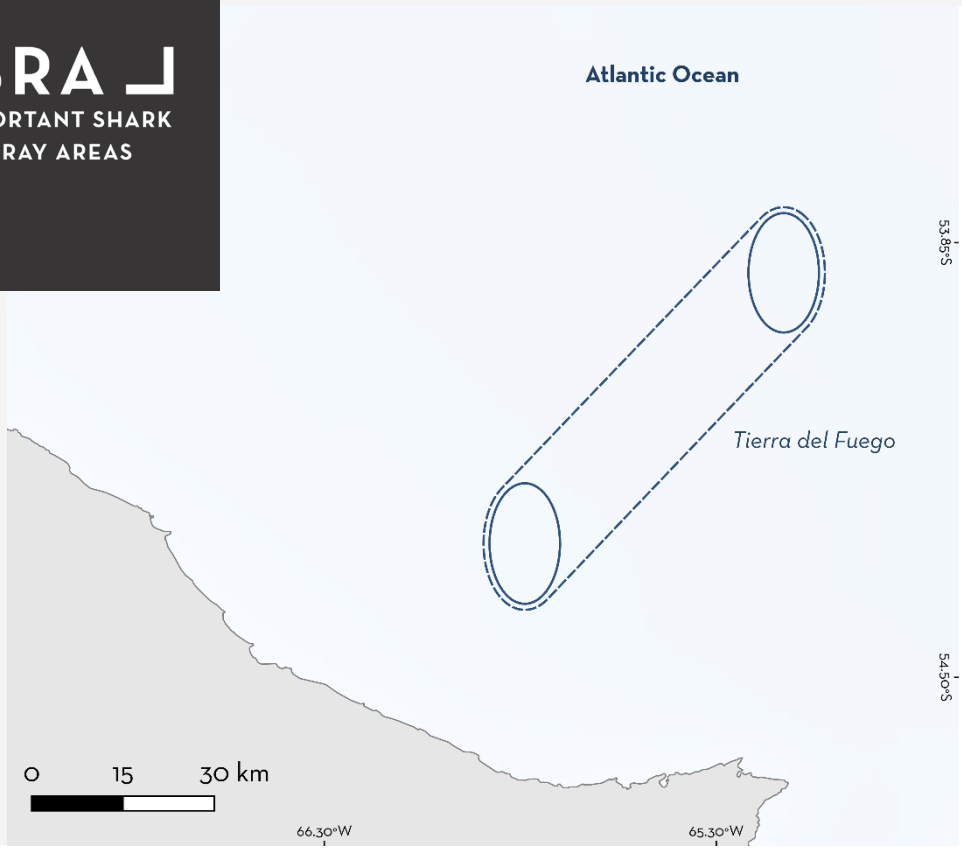
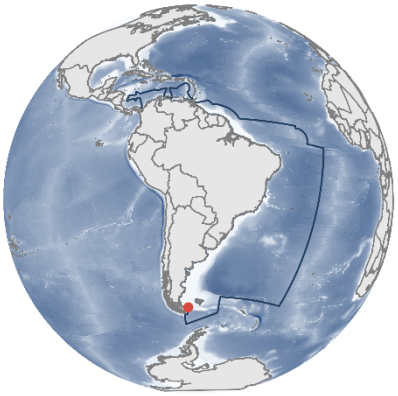
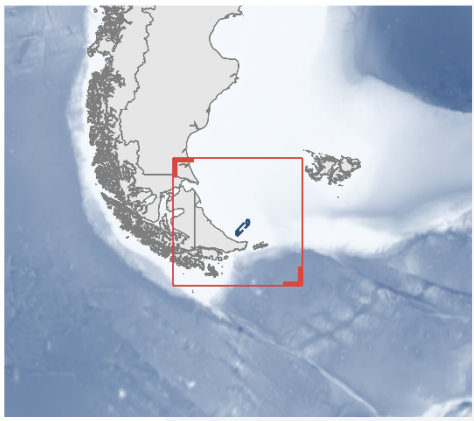
ISRA
IMPORTANT SHARK AND RAY AREAS







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

TIERRA DEL FUEGO ISRA

South American Atlantic Region

ARGENTINA

70–120 metres

367.7 km²

SUMMARY

Tierra del Fuego is located off the coast of Tierra del Fuego Province, Argentina. It includes part of the Patagonian Shelf. The habitat is characterised by mud, fine and medium sands, and gravel substrates. The area is influenced by the northward-flowing Malvinas Current and by strong tidal currents. Within this area there are: **reproductive areas** (e.g., Narrowmouth Catshark *Schroederichthys bivius*).

CRITERIA

Sub-criterion C1 – Reproductive Areas

DESCRIPTION OF HABITAT

Tierra del Fuego is located ~26 km off the coast of Tierra del Fuego Province, Argentina. It includes part of the Patagonian Shelf. The habitat is characterised by mud, fine and medium sands, and gravel substrates (Violante et al. 2014). The area is influenced by the northward-flowing Malvinas Current, which carries cold, nutrient-rich subantarctic waters along the continental slope (Guihou et al. 2020), and by strong tidal currents that enhance mixing and nutrient distribution across the shelf (Violante et al. 2014).

This Important Shark and Ray Area is benthic and subsurface and is delineated from 70–120 m based on the distribution of the Qualifying Species in the area.

ISRA CRITERIA

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Tierra del Fuego is an important reproductive area for one shark and one ray species.

High densities of egg cases are found in the area for the Narrowmouth Catshark and the Magellan Skate (Matusevich et al. 2023). Between 2016–2018, four research cruises conducted bottom trawls 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. 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).

Between 2016–2018, Narrowmouth Catshark egg cases were collected in the area and adjacent regions of the Southern Patagonian shelf (Matusevich et al. 2023). The egg cases were found at depths ranging from 71–119 m, with the highest densities recorded at 78 m (Matusevich et al. 2023). The density of Narrowmouth Catshark egg cases ranged between 282–1,483 egg cases/km^2 (Matusevich et al. 2023). The area encompasses two of the three hauls with the highest egg case densities. All the egg cases with embryos (n = 9) were captured within this area and one adjacent location in November, highlighting that the area is an important egg-laying ground for this species. Due to the different stages of embryos found during the austral spring (initial, intermediate, and advanced), a year-round oviposition in the area was suggested (Matusevich et al. 2023).

Between 2016–2018, Magellan Skate egg cases were collected in the area and adjacent regions of the Southern Patagonian shelf (Matusevich et al. 2023). The egg cases were found at depths ranging from 71–118 m, with the highest densities recorded at 71 m (Matusevich et al. 2023). The density of Magellan Skate egg case ranged between 53–1,102 egg cases/km^2 within the area (Matusevich et al. 2023). The highest densities were observed within the area including one of the two hauls with densities of 1,102 egg cases/km^2, and one haul (of the two) with 500–1,000 egg cases/km^2 (Matusevich et al. 2023). Two advanced, and one pre-hatching embryos were captured in the area in November, suggesting a late summer egg-laying season (Matusevich et al. 2023).

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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												
Schroederichthys bivius	Narrowmouth Catshark	LC	12–359			X						
RAYS												
Bathyraja magellanica	Magellan Skate	LC	30–600			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Squalus acanthias	Spiny Dogfish	VU
RAYS		
Bathyraja albomaculata	White-dotted Skate	VU
Bathyraja brachyurops	Broadnose Skate	NT
Bathyraja macloviana	Patagonian Skate	NT
Psammobatis rudis	Smallthorn Sandskate	LC
Zearaja brevicaudata	Shorttail Yellownose Skate	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.

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