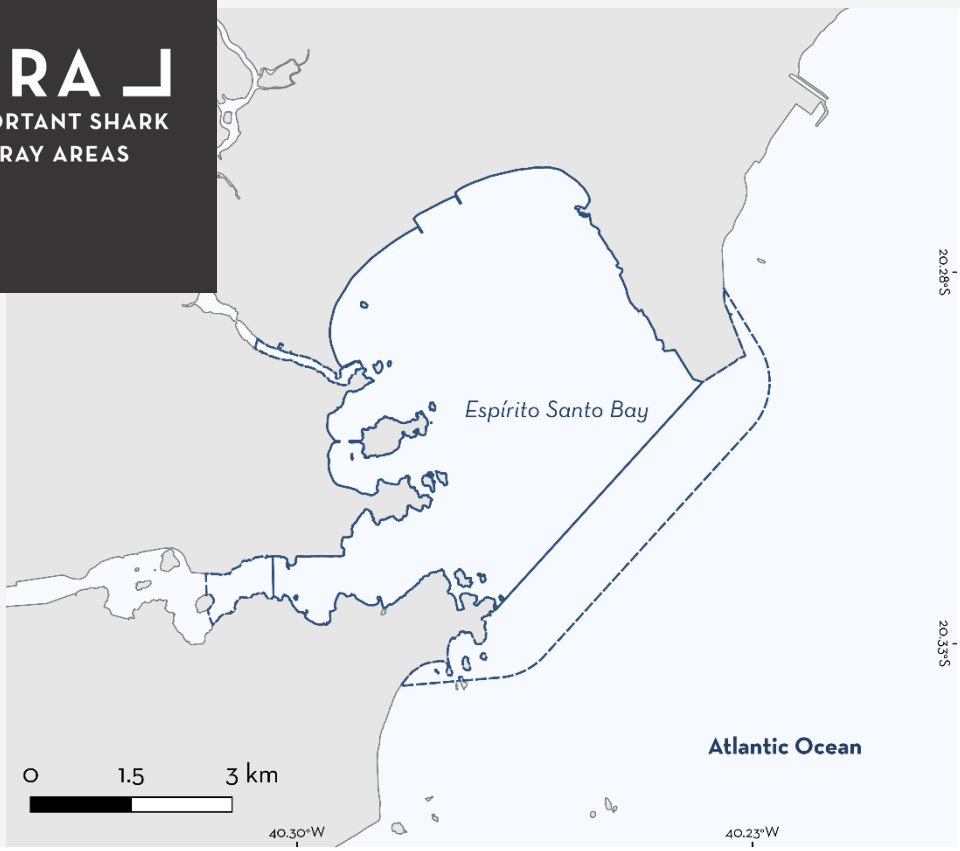
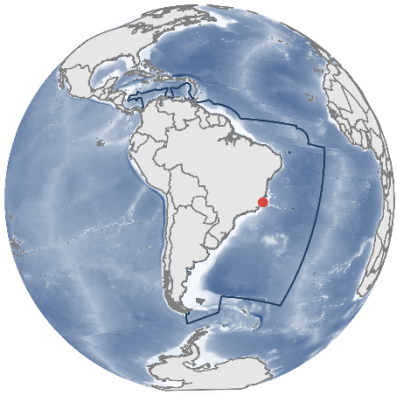
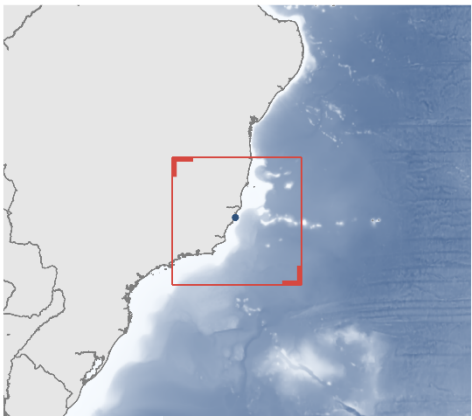
ISRA
IMPORTANT SHARK AND RAY AREAS







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

ESPÍRITO SANTO BAY ISRA

South American Atlantic Region

BRAZIL

0–18 metres

23.96 km²

SUMMARY

Espírito Santo Bay is located in Espírito Santo state, Brazil. The substrate is mostly characterised by fine sand or muddy sediments and seagrass patches. The area is influenced by freshwater discharge from the Santa Maria da Vitória River, with seasonally higher flow from November–March. Within this area there are: **threatened species** (e.g., American Cownose Ray *Rhinoptera bonasus*) and **undefined aggregations** (e.g., Brazilian Cownose Ray *Rhinoptera brasiliensis*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C5 – Undefined Aggregations

DESCRIPTION OF HABITAT

Espírito Santo Bay is located in Espírito Santo state, Brazil. The substrate is mostly formed by fine sand or muddy sediments and seagrass patches (Bastos et al. 2015). The Santa Maria da Vitória River discharges into this area, with elevated flow during the rainy season from November–March. Mangroves line the bay and occupy an area of 18 km^2, which represents 20% of the total mangroves in this state (Giacometti et al. 2018). The bay has a lower mesotidal regime, with a mean spring tidal range of 1.6 m and peak current speeds of up to 0.3 m/s (Bastos et al. 2015).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 18 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

Two Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. These are the Vulnerable American Cownose Ray (Carlson et al. 2020a) and Brazilian Cownose Ray (Carlson et al. 2020b).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Espírito Santo Bay is an important area for undefined aggregations of two ray species.

Between 2019–2025, assemblages of ~80–300 Cownose Rays were opportunistically recorded within the area, mainly from October–March, and shared on social media and on local news outlets (G1 2019; A Gazeta 2022; G1 2025). Photos and videos of these assemblages of cownose rays swimming in groups were analysed. The 2019 assemblage could only be identified at the genus level as comprising *Rhinoptera* spp. (P Charvet pers. obs. 2025). In 2020, 2022, and 2025, it was possible to distinguish between American Cownose Rays and Brazilian Cownose Rays based on the colouration of their dorsal surface. Additionally, cownose rays were found dead on the beaches within this area in 2015 (n = 68 individuals [65 pregnant females and 3 males]), 2020 (~20 individuals), and 2023 (~40 individuals) (R7 2020; A Gazeta 2023). Further information is required to understand the nature and function of the aggregations and the importance of this area for these rays.

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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
RAYS												
Rhinoptera bonasus	American Cownose Ray	VU	0–60	X						X		
Rhinoptera brasiliensis	Brazilian Cownose Ray	VU	0–20	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

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