

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

MARACAJAÚ ISRA

South American Atlantic Region

SUMMARY

Maracajaú is located in northeast Brazil, in the Rio Grande do Norte state. The area is characterised by patch reefs interspersed with sand and gravel substrates and seagrass beds. Within this area there are: **threatened species** and **range-restricted species** (Large-eye Stingray *Hypanus marianae*).

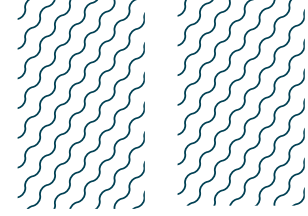
CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted

BRAZIL

0-25 metres

43.11 km²



DESCRIPTION OF HABITAT

Maracajaú is located in northeast Brazil, in the Rio Grande do Norte state. The area is an oval reef complex ~7 km off Maracajaú beach. It is characterised by patch reefs interspersed with sand and gravel substrates and seagrass beds (Costa et al. 2015). Coral reefs on the north side of the area are exposed during low tides. Seagrass beds patches are found at depths <10 m (Costa 2010). Water visibility increases between October–March. Sea surface temperatures range from ~22–27°C. The area is influenced by discharges from the Maxaranguape River that has a short strong flow in the rainy season between March–August (Mayal et al. 2009).

This Important Shark and Ray Area is benthic and is delineated from inshore and surface waters (0 m) to 25 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 Large-eye Stingray (Pollom et al. 2020).

CRITERION B – RANGE RESTRICTED

This area holds the regular presence of the Large-eye Stingray as a resident range-restricted species. This species has been regularly recorded in the area from incidental catches in artisanal fisheries, underwater visual censuses (UVC), and mark-recapture surveys undertaken since 2008 (Costa 2010, 2016; Costa et al. 2015, 2017). Between July 2008 and August 2009, 260 Large-eye Stingrays were recorded in the area (Costa 2010; Costa et al. 2015). Of these, 120 individuals were incidentally caught by artisanal fisheries using gillnets, beach trawls, handlines, and spearfishing at depths <30 m. In UVCs (n = 213; 100 m long x 4 m wide), 30 individuals were observed. Another 100 individuals were directly sampled for mark-recapture studies in the same period. Large-eye Stingrays measured 14–35 cm disc width (DW) with 21 measuring <22 cm DW (Costa 2010; Costa et al. 2015). The reported size-at-birth for the species is 13–14 cm DW (Yokota & Lessa 2007) suggesting that some of these individuals were neonates/young-of-the-year or small juveniles. Most of the individuals were recorded in seagrass beds although they were also observed in coral reefs and sandy substrates. The species was recorded year-round across the different surveys with a larger number of individuals sampled in February and March (Costa 2010; Costa et al. 2015). Between 2013–2014, individuals were sampled at six locations across ~1,100 km of coastline in northeast Brazil using traps, handlines, and by free diving (Costa 2016; Costa et al. 2017). Of 137 individuals recorded, 24 (17.5%) were sampled in Maracajaú in January and February 2014, confirming the regular presence of the species in the area. The other five locations held similar number of individuals, with the maximum number (n = 25) recorded in Abrolhos, ~500 km from Maracajaú. Morphological and molecular analyses revealed population structure and suggested limited mobility for the species in northeast Brazil (Costa et al. 2017, 2022) highlighting the importance of this area. This species was also reported in 2019 in the area (TL Araújo Costa pers. obs. 2025). While Long-eye Stingray has been recorded in other areas across Brazil, Maracajaú stands out (along with Caiçara do Norte) as one of the few locations where the species has been regularly recorded for almost 20 years and in larger numbers than nearby locations. For example, sampling of artisanal fisheries in Pernambuco state (~250 km south of Maracajaú) between 2013–2016 recorded 89 Large-eye Stingrays. These individuals were

incidentally caught in fish-weirs, beach seines, shrimp trawls, and longlines (Queiroz et al. 2019). Between 2016–2017 and 2018–2019, artisanal fisheries using bottom gillnets and handlines were monitored in Paracurú (~400 northwest) with 28 Large-eye Stingray recorded (Parada 2019). Of 1,184 fishing trips monitored in Parnaíba (~650 km northwest) between 2016–2017, only two individuals were recorded (Aragão et al. 2020). This species occurs in the East Brazil Shelf and North Brazil Shelf Large Marine Ecosystems and only occurs in the northeast region of Brazil (Costa et al. 2017).

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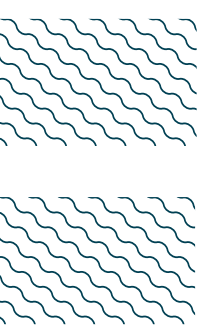
QUALIFYING SPECIES

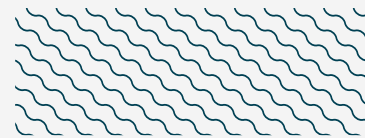
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
<i>Hypanus marianae</i>	Large-eye Stingray	EN	1-30	X	X							

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Ginglymostoma cirratum</i>	Atlantic Nurse Shark	VU
RAYS		
<i>Aetobatus narinari</i>	Whitespotted Eagle Ray	EN

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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