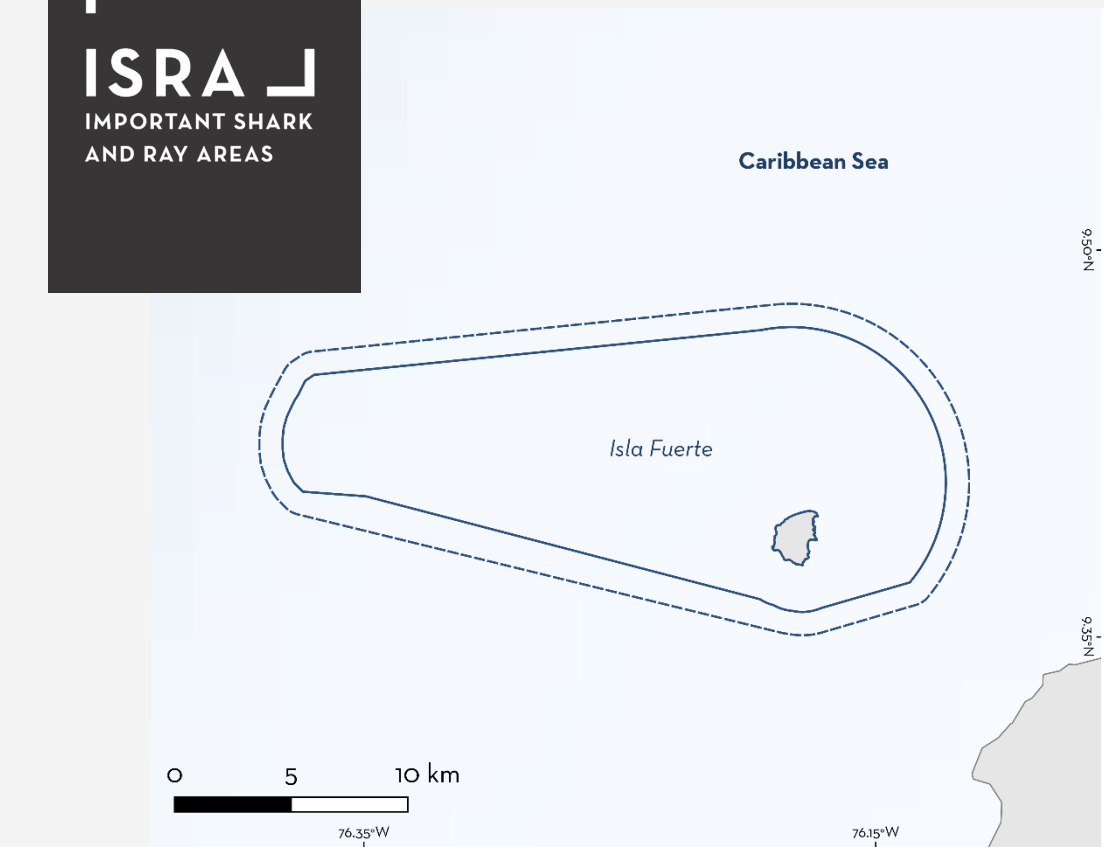
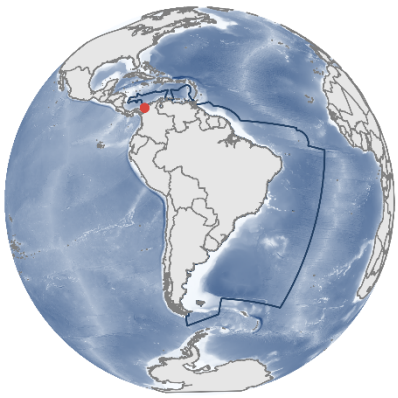
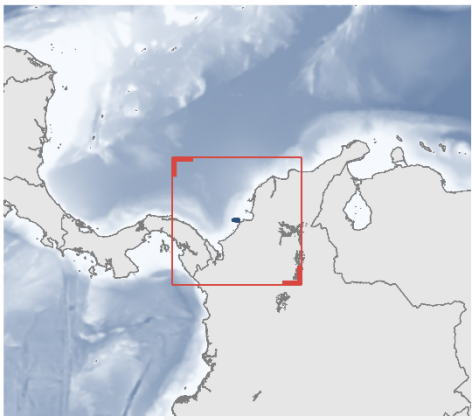
ISRA
IMPORTANT SHARK AND RAY AREAS







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

ISLA FUERTE ISRA

South American Atlantic Region

COLOMBIA

0–40 metres

239 km²

SUMMARY

Isla Fuerte is located in south-central Colombia. It is characterised by a wide shelf with a barrier reef around the island, shallow coral banks, and extensive seagrass meadows. The area is influenced by the Sinú River. Within this area there are: **threatened species** (e.g., Blacktip Shark *Carcharhinus limbatus*) and **reproductive areas** (e.g., Caribbean Sharpnose Shark *Rhizoprionodon porosus*).

CRITERIA

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

DESCRIPTION OF HABITAT

Isla Fuerte is located in south-central Colombia. It is a partially emerged reef complex with an insular platform that occupies an area of 13 km^2 and hosts a barrier reef in the north, a peripheral reef belt on the edge of the platform, shallow coral banks, and extensive seagrass meadows (Díaz et al. 1996). The climate in the area is semi-arid tropical. Annual rainfall is bimodal, with ~1,300 mm of annual precipitation. The predominant current in the area is the Darien Counter Current directed to the northeast with speeds of 1–3 km/hour, the sea surface temperature remains near 27°C year-round, with a salinity value of 36. The Sinú River plume is evident on the west and south side of the area (Díaz et al. 1996).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 40 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

Two species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. These are the Vulnerable Blacktip Shark (Rigby et al. 2021) and Caribbean Sharpnose Shark (Carlson et al. 2021).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Isla Fuerte is an important reproductive area for two shark species.

Neonate and young-of-the-year (YOY) Blacktip Sharks were regularly recorded in the area while monitoring artisanal fisheries between 2004–2012 (Gómez et al. 2007; Vishnoff-Suárez 2008; Almanza-Bernal 2009; Trejos-Méndez 2009; Salazar-Rodríguez 2012). Between 2006–2007, 96 Blacktip Sharks measuring 40–211 cm total length (TL) were recorded (Trejos-Méndez 2009). Of these, 55 (57.3%) measured <65 cm TL and were classified as neonates due to the presence of visible umbilical scars (Trejos-Méndez 2009). Three pregnant females were also recorded during this period (Trejos-Méndez 2009). Between 2006–2008, 99 Blacktip Sharks (60–212 cm TL) were recorded (Vishnoff-Suárez 2008; Almanza-Bernal 2009). Of these, 24 (24.2%) measured <72 cm TL. These individuals were considered neonates as the reported size-at-birth for the species is 38–72 cm TL (Ebert et al. 2021). Neonates/YOY were recorded mostly in August and September (Vishnoff-Suárez 2008; Almanza-Bernal 2009). During monitoring of landing surveys in March–July 2012, 72 Blacktip Sharks were recorded (Salazar-Rodríguez 2012). Of these, 21 (29.1%) were classified as neonate/YOY while another nine individuals were juveniles confirming the contemporary presence of these life stages in the area (Salazar-Rodríguez 2012).

Neonate, YOY, and pregnant Caribbean Sharpnose Sharks have been recorded in the area during monitoring of artisanal fisheries between 2004–2020 (Gómez et al. 2007; Vishnoff-Suárez 2008; Almanza-Bernal 2009; Trejos-Méndez 2009; Salazar-Rodríguez 2012; Reyes-Gómez 2018). Gravid females measuring between 69–106 cm TL were regularly recorded in directed and opportunistic sampling of artisanal fisheries in the area (Gómez et al 2007; F Gómez D unpubl. data 2024). These females were recorded and dissected from March–August and contained 1–9 embryos each (Gómez et al. 2007; F Gómez D unpubl. data 2024). In 2004, 2006, and 2007, 137 Caribbean Sharpnose Sharks measuring 33–164 cm TL were recorded (Trejos-Méndez 2009). Of these, 50 (36.4%) were classified as neonates due to the presence of umbilical scars (Trejos-Méndez 2009). Two pregnant

females were also recorded during this period (Trejos-Méndez 2009). Between 2006–2008, 240 Caribbean Sharpnose Sharks (33–93 cm TL) were recorded (Vishnoff-Suárez 2008; Almanza-Bernal 2009). Of these, 66 (27.5%) measured <49 cm TL. These individuals were considered neonate/YOY as umbilical scars were found in individuals between 33–45 cm TL (Almanza-Bernal 2009). The reported size-at-birth for the species is 31–39 cm TL confirming these were neonates/YOY. These life stages were recorded mostly in March when a pregnant female with near-term embryos was also recorded (Vishnoff-Suárez 2008). Neonates were recorded during monitoring of artisanal fisheries between 2012–2020, confirming the contemporary presence of these life stages in the area (Salazar-Rodríguez 2012; Reyes-Gómez 2018; F Gómez D unpubl. data 2025). According to the Colombian fisheries statistical system, Caribbean Sharpnose Sharks were caught in the area (11 t) between 2012–2021 (De La Hoz et al. 2014, 2015, 2017; Duarte et al. 2018, 2019, 2020, 2021).

Acknowledgments

Fabio Gómez D (Pontificia Universidad Javeriana), Paola A Mejía-Falla (Wildlife Conservation Society–WCS Colombia), Carlos Julio Polo Silva (Sharky Management and Consulting), Andrés F Navia-López (Fundación Squalus), and Emiliano García-Rodríguez (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. Isla Fuerte 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												
Carcharhinus limbatus	Blacktip Shark	VU	0–140	X		X						
Rhizoprionodon porosus	Caribbean Sharpnose Shark	VU	0–500	X		X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Carcharhinus acronotus	Blacknose Shark	EN
Carcharhinus perezi	Caribbean Reef Shark	EN
Carcharhinus porosus	Smalltail Shark	CR
Galeocerdo cuvier	Tiger Shark	NT
Ginglymostoma cirratum	Atlantic Nurse Shark	VU
Rhizoprionodon lalandii	Brazilian Sharpnose Shark	VU
Sphyrna alleni	Shovelbill Shark	NE
Sphyrna lewini	Scalloped Hammerhead	CR
Sphyrna mokarran	Great Hammerhead	CR
Squalus cubensis	Cuban Dogfish	LC
RAYS		
Aetobatus narinari	Whitespotted Eagle Ray	EN
Hypanus guttatus	Longnose Stingray	NT

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; NE, Not Evaluated.

SUPPORTING INFORMATION

There are additional indications that this area is important for the reproductive purposes of four shark species and for undefined aggregations of one shark species.

Neonate and YOY Brazilian Sharpnose Sharks have been recorded in the area during monitoring of artisanal fisheries between 2006–2012 (Almanza-Bernal 2009; Trejos-Méndez 2009). Between 2006–2007, 65 Brazilian Sharpnose Sharks measuring 31–68 cm TL were recorded (Trejos-Méndez 2009). Of these, 22 (33.8%) were classified as neonate due to the presence of umbilical scars (Trejos-Méndez 2009). Between 2007–2008, 46 Brazilian Sharpnose Sharks (39–92 cm TL) were recorded (Almanza-Bernal 2009). Of these, only one neonate was recorded. Additionally, 10 pregnant females with 2–4 embryos were recorded in 2008 at Isla Fuerte (Almanza-Bernal 2009). Between 2009–2012, five Brazilian Sharpnose Sharks were recorded in average per year during opportunistic samplings at landing sites (F Gómez D unpubl. data 2025). After 2012, monitoring of this species at landing sites stopped (F Gómez D unpubl. data 2025). Additional information is needed to confirm the contemporary reproductive importance of the area for this species.

Neonate and YOY Shovelbill Sharks have been recorded in the area in monitoring of artisanal fisheries between 2006–2012 (Almanza-Bernal 2009; Trejos-Méndez 2009). Between 2006–2007, 23 Shovelbill Sharks measuring 29–88 cm TL were recorded (Trejos-Méndez 2009). Of these, 10 (43.4%) were classified as neonates due to the presence of umbilical scars (Trejos-Méndez 2009). Two pregnant females were also recorded. Between 2007–2008, 21 Shovelbill Sharks (29–99 cm TL) were recorded (Almanza-Bernal 2009). Of these, five individuals measured <48 cm TL. The reported size-at-birth for the species is 24–40 cm TL (Ebert et al. 2021) confirming these individuals were neonate/YOY. These life stages were occasionally observed during opportunistic samplings at landing sites up to 2012, confirming their contemporary presence in the area (F Gómez D unpubl. data 2025). After 2012, monitoring of this species at landing sites stopped (F Gómez D unpubl. data 2025). Additional information is needed to confirm the reproductive importance of the area for this species.

Neonate/YOY Scalloped Hammerhead and Great Hammerhead were recorded in the area between 2006–2008 (Vishnoff-Suárez 2008; Almanza-Bernal 2009; Trejos-Méndez 2009). Additional information is needed to confirm their regular presence and the reproductive importance of the area for these species.

In 2014, two Cuban Dogfish specimens were caught in a shallow area around the island (El Risco; Orozco & Gómez 2016). Following this discovery, a fishery for this species started to operate in the area and has continued to grow. However, fishers come from mainland locations and have not allowed their catches to be recorded, although it has been evident that they are catching aggregations of the species. In 2019, a catch of 200 individuals was observed with 40% of the females recorded being pregnant (F Gómez D unpubl. data 2025). Additional information is needed to confirm the regular presence of these aggregations and the importance of the area for this species.

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