

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

RUFIJI DELTA ISRA

Western Indian Ocean Region

SUMMARY

Rufiji Delta is located in the northern part of the Rufiji River mouth on the central Tanzania coast. The Rufiji River is one of the 10 largest rivers in Africa and its delta hosts one of the largest mangrove stands in East Africa. The area is characterised by muddy substrates, mangrove forests, and many small tidal channels. Rufiji Delta overlaps with an Ecologically or Biologically Significant Marine Area, a Key Biodiversity Area, a Ramsar site, and multiple Mangrove Forest Reserves. Within the area there are: **threatened species** and **reproductive areas** (Largetooth Sawfish *Pristis pristis*).

CRITERIA

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

— —
**UNITED
 REPUBLIC OF
 TANZANIA**
 — —

— —
0-30 metres
 — —

— —
294.38 km²
 — —





DESCRIPTION OF HABITAT

Rufiji Delta is located in the Pwani Region on the Tanzanian mainland, west of Mafia Island. The area includes the northern part of the large Rufiji River estuary. The Rufiji River is the largest and longest river (~600 km) in the country and flows into the Mafia Channel with a peak discharge in April (Monga et al. 2018). The area is characterised by muddy substrates and by the largest mangrove coverage in East Africa with the area bisected by numerous small and large tidal channels (Wang et al. 2003). The area which is on the north part of the delta has a higher freshwater input compared to the southern part of the Rufiji River mouth which has higher salinity (Monga et al. 2018).

This area includes the Rufiji-Mafia-Kilwa Ecologically or Biologically Significant Marine Area (CBD 2023), the Rufiji Delta Key Biodiversity Area (KBA 2023), and the Rufiji-Mafia-Kilwa Marine Ramsar Site (Ramsar 2023). It also includes multiple Mangrove Forest Reserves.

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 30 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A - VULNERABILITY

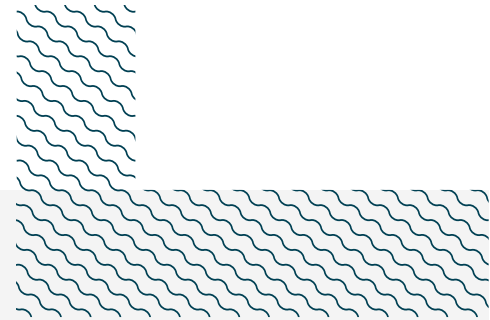
The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Largetooth Sawfish is assessed as Critically Endangered (Espinoza et al. 2022).

SUB-CRITERION C1 - REPRODUCTIVE AREAS

Rufiji Delta is an important reproductive area for one ray species.

Fisher interviews conducted in 2014 along the coast of Tanzania revealed a higher number of reports of Largetooth Sawfish captured in the Rufiji Delta compared to other sites in the country (Braulik et al. 2020). In this area, records of this species are as recent as 2013, with 15 reports of Largetooth Sawfish catches between 1990–2013, including reports of individuals caught months before the date of the interviews. Importantly, this area was the only site where neonates were recorded. Two catches were reported in the past 10 years in Nyamisati and Kiomboni, one measuring ~50 cm total length (TL) and one rostrum (22.5 cm) which was estimated to be from an individual measuring 93 cm TL (based on Whitty et al. 2013). Based on the reported size-at-birth for the species (72–90 cm TL; Last et al. 2016), these individuals were neonates. There were three independent reports from fishers that small sawfish (<100 cm TL) were caught regularly in the shallow waters of smaller channels in the delta (Braulik et al. 2020). Brackish and freshwater mangrove environments are amongst the preferred habitat for neonates, while adults live in marine waters (Kyne et al. 2021), highlighting the Rufiji Delta as suitable nursery habitat for the species.

Despite the relatively low number of verified reports, the fact that this area sustains adult animals and neonates is particularly significant considering the local extinction of Largetooth Sawfish from much of the Western Indian Ocean (Espinoza et al. 2022). More recent reports of sawfishes are not available due to the lack of monitoring in the area after 2014.



Acknowledgments

Gill Braulik (IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force), Christoph A. Rohner (IUCN SSC Shark Specialist Group - ISRA Project), 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 2023 ISRA Region 7 - Western Indian Ocean workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

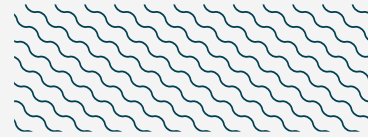
This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

Suggested citation

IUCN SSC Shark Specialist Group. 2023. Rufiji Delta 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
RAYs												
<i>Pristis pristis</i>	Largetooth Sawfish	CR	0-60	X		X						



REFERENCES

Braulik G, Kasuga M, Majubwa G. 2020. Local ecological knowledge demonstrates shifting baselines and the large-scale decline of sawfishes (Pristidae) in Tanzania. *African Journal of Marine Science* 42: 67–79. <https://doi.org/10.2989/1814232X.2020.1728379>

Convention on Biological Diversity (CBD). 2023. Rufiji-Mafia-Kilwa. Ecologically or Biologically Significant Marine Areas (EBSAs). Available at: <https://chm.cbd.int/database/record?documentID=204001> Accessed September 2023.

Esposito M, Bonfil-Sanders R, Carlson J, Charvet P, Chevis M, Dulvy NK, Everett B, Faria V, Ferretti F, Fordham S, et al. 2022. *Pristis pristis*. *The IUCN Red List of Threatened Species 2022*: e.T18584848A58336780. <https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T18584848A58336780.en>

Key Biodiversity Areas (KBA). 2023. Key Biodiversity Areas factsheet: Rufiji Delta. Available at: <https://www.keybiodiversityareas.org/site/factsheet/6995> Accessed September 2023.

Kyne PM, Oetinger M, Grant MI, Feutry P. 2021. Life history of the Critically Endangered largetooth sawfish: a compilation of data for population assessment and demographic modelling. *Endangered Species Research* 44: 79–88. <https://doi.org/10.3354/esr01090>

Monga E, Mangora MM, Mayunga JS. 2018. Mangrove cover change detection in the Rufiji Delta in Tanzania. *Western Indian Ocean Journal of Marine Science* 17: 1–10. <http://dx.doi.org/10.4314/wiojms.v17i2.1>

Ramsar. 2023. Rufiji-Mafia-Kilwa Marine Ramsar Site. Available at: <https://rsis Ramsar.org/ris/1443> Accessed September 2023.

Wang Y, Bonyng G, Nugranad J, Traber M, Tobey J, Hale L, Bowen R, Makota V. 2003. Remote sensing of mangrove change along the Tanzania coast. *Marine Geodesy* 26: 35–48. <https://doi.org/10.1080/01490410306708>

Whitty JM, Phillips NM, Thorburn DC, Simpfendorfer CA, Field I, Peverell SC, Morgan DL. 2014. Utility of rostra in the identification of Australian sawfishes (Chondrichthyes: Pristidae). *Aquatic Conservation: Marine and Freshwater Ecosystems* 24: 791–804. <https://doi.org/10.1002/aqc.2398>