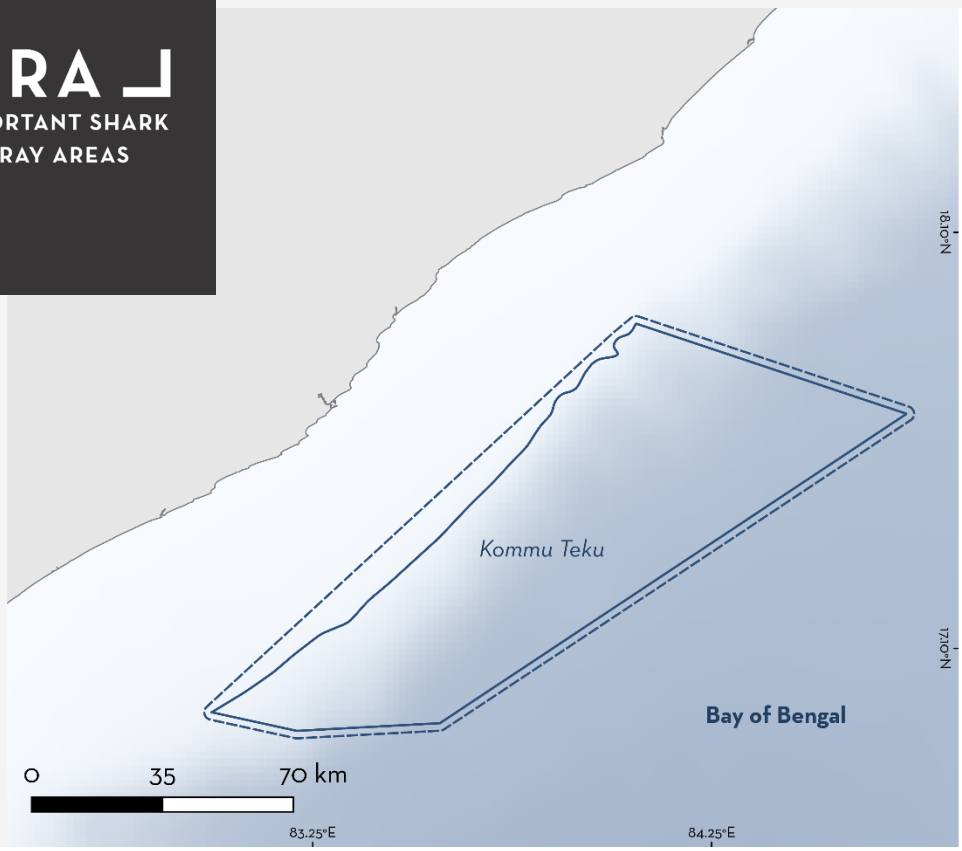
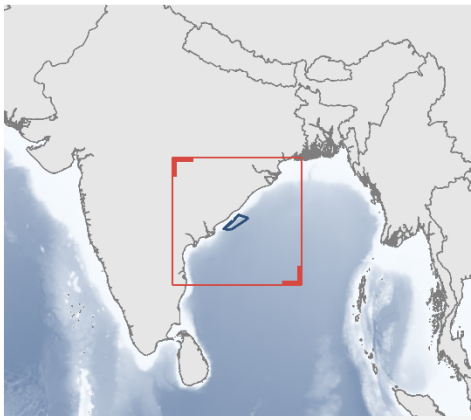
ISRA
IMPORTANT SHARK AND RAY AREAS





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

KOMMU TEKU ISRA

Asia Region

INDIA

0–1,896 metres

7,320.5 km²

SUMMARY

Kommu Teku is situated off the northern coast of Andhra Pradesh, along the east coast of India. The area covers epipelagic, mesopelagic, and bathypelagic waters offshore of the continental shelf edge. Throughout most of the year, oceanography in this area is driven by the East Indian Coastal Current with surface currents moving northwards adjacent to the coastline. Within this area there are: **threatened species** (e.g., Spinetail Devil Ray *Mobula mobular*); and **undefined aggregations** (e.g., Sicklefin Devil Ray *Mobula tarapacana*).

CRITERIA

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

DESCRIPTION OF HABITAT

Kommu Teku is situated off the northern coast of Andhra Pradesh State, along the east coast of India. It ranges from off Burjupadu in the north to off Kakinada in the south. The area covers epipelagic, mesopelagic, and bathypelagic waters offshore of the continental shelf edge. The seafloor underlying the area is punctuated by features such as slopes and fans.

The mean annual sea surface temperature in the area ranges from 28°C to 32°C. Throughout most of the year, the region is impacted by the East Indian Coastal Current with surface currents moving northwards adjacent to the coastline (Hacker et al. 1998; Pirro et al. 2020).

This Important Shark and Ray Area is pelagic and is delineated from surface waters (0 m) to 1,896 m based on the bathymetry of the area and on the global depth range of Qualifying Species.

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 Endangered Spinetail Devil Ray (Marshall et al. 2022a) and Sicklefin Devil Ray (Marshall et al. 2022b).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Kommu Teku is an important area for undefined aggregations of two ray species.

Between 2020–2023, landing surveys (Payyat et al. unpubl. data 2023) and interviews with fishers at Kakinada (Karnad et al. unpubl. data 2021; Banerjee et al. unpubl. data 2023) indicated that Spinetail Devil Ray and Sicklefin Devil Ray are sighted year-round in aggregations across years within the area. These species are primarily caught as the incidental catch of tuna fisheries operating in the area and landed at Kakinada, the largest landing site for the tuna-driven fishery operating off the central eastern coast of India. Interviews with fishers (n = 113 in 2020 and 2021, Karnad et al. unpubl. data 2021; n = 26 in 2023, Payyat et al. unpubl. data 2023) indicate that this is the only known area where these devil ray species regularly co-occur in considerable numbers, despite there being tuna fisheries practiced across other parts of the east coast of India. Fishers from other key sites along India's east coast (West Bengal, Visakhapatnam, and Chennai) report far smaller numbers of devil rays than vessels operating off Kakinada. This indicates that the area therefore hosts larger devil ray numbers than other parts of the Bay of Bengal, for yet unknown reasons. Landing surveys have recorded 334 Spinetail Devil Rays and 163 Sicklefin Devil Ray from the area (Payyat et al. unpubl. data 2023). For Spinetail Devil Ray, this has included six instances of five or more individuals landed on a single day, and for Sicklefin Devil Ray, this has included four instances of five or more individuals landed on a single day (Payyat et al. unpubl. data 2023). Further information is required to understand the nature and function of these aggregations.

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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												
Mobula mobular	Spinetail Devil Ray	EN	0–1,112	X						X		
Mobula tarapacana	Sicklefin Devil Ray	EN	0–1,896	X						X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Alopias superciliosus	Bigeye Thresher	VU
Carcharhinus falciformis	Silky Shark	VU
Galeocerdo cuvier	Tiger Shark	NT
Pseudocarcharias kamoharai	Crocodile Shark	LC
Sphyrna lewini	Scalloped Hammerhead	CR
RAYS		
Mobula birostris	Oceanic Manta 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.

REFERENCES

Hacker P, Firing E, Hummon J, Gordon AL, Kindle JC. 1998. Bay of Bengal currents during the northeast monsoon. *Geophysical Research Letters* 25: 2769–2772. https://doi.org/10.1029/98GL52115

Marshall A, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, Rigby CL et al. 2022a. *Mobula mobular* (amended version of 2020 assessment). *The IUCN Red List of Threatened Species* 2022: e.T110847130A214381504. https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T110847130A214381504.en

Marshall A, Barreto R, Bigman JS, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, et al. 2022b. *Mobula tarapacana* (amended version of 2019 assessment). *The IUCN Red List of Threatened Species* 2022: e.T60199A214371388. https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T60199A214371388.en

Pirro A, Fernando HJS, Wijesekera HW, Jensen TG, Centurioni LR, Jinadasa SUP. 2022. Eddies and currents in the Bay of Bengal during summer monsoons. *Deep Sea Research Part II: Topical Studies in Oceanography* 172: 104728. https://doi.org/10.1016/j.dsr2.2019.104728