





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

POKADERA ISRA

Asia Region

SUMMARY

Pokadera is a shallow coastal area on the east coast of Middle Andaman Island in the Andaman and Nicobar Islands, India. The area has a gentle slope, providing shallow, primarily sandy, habitat sheltered within a bay. Pokadera also contains dense seagrass meadows. Within the area there are: **threatened species** and **reproductive areas** (Giant Guitarfish Glaucostegus typus).

CRITERIA

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

INDIA

0-5 metres

1.03 km²

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sharkrayareas.org

DESCRIPTION OF HABITAT

Pokadera is situated on the east coast of Middle Andaman Island in the Andaman and Nicobar Islands of India. This archipelago is located ~1,360 km east of mainland India, situated between the Bay of Bengal and the Andaman Sea (Nazareth et al. 2022). It is part of an undersea mountain range that extends from the west coast of Myanmar to the northwest coast of Indonesia. The Andaman Islands comprise over 325 islands, of which 21 are inhabited (Census of India 2011).

These oceanic islands have a limited continental shelf covering ~16,000 km², and almost no continental slope. They are also part of the Indo-Myanmar and Sundaland biodiversity hotspot (Roberts et al. 2002). They are not only diverse in the biodiversity they support, but also the types of ecosystems and habitats that exist along the coast, with mangroves, coral reefs, seagrass meadows, algal beds, and habitats like creeks, inlets, bays, estuaries, and lagoons. This diversity has led to the islands being highly productive (Ramachandran 2000).

Pokadera is a shallow coastal site with a gentle slope, providing shallow, primarily sandy, habitat sheltered within a bay. This site also contains dense seagrass meadows (Rao et al. 2023).

The Andaman and Nicobar Islands receive seven months of rain a year due to the southwest and northeast monsoons which together last from May to December (Patankar 2019).

This Important Shark and Ray Area is benthic and is delineated from inshore and surface waters (O m) to 5 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

CRITERION A - VULNERABILITY

One Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Giant Guitarfish is assessed as Critically Endangered (Kyne et al. 2019).

SUB-CRITERION C1 - REPRODUCTIVE AREAS

Pokadera is an important reproductive area for one ray species.

Local ecological knowledge (LEK) collected between September 2019 and June 2020 from coastal stakeholders (including fishers, coastal residents, dive operators, forest department staff) of the Andaman Islands revealed that early life-stage Giant Guitarfish are utilising the shallow coastal waters of the area (Nazareth et al. 2022). Three of the five respondents that had reported observing Giant Guitarfish at Pokadera said that they had observed them daily.

In addition to the LEK, Visual Transect Surveys (VST) and Baited Remote Underwater Video Station (BRUVS) surveys were conducted at this site between 2021 and 2023 (E Nazareth unpubl. data 2021-2023). This included 24 VTS with 65 Giant Guitarfish detections and 38 BRUVS with 8 detections between April and July 2021, 7 VTS with 13 detections in January 2022, and two VTS with 8 detections in April/May 2023. In addition to these surveys, periodic visits to the area during other field programs recorded juvenile Giant Guitarfish at all times of the year across multiple years (2021-2024) (E Nazareth et al. unpubl. data 2024). The individuals observed were estimated to be 30-45 cm total length (TL) (except for one individual detected on BRUVS that was estimated to be ~100 cm TL) and were classified as neonates and young-of-the-year based on sizes-at-birth reported in the literature

(35-40 cm TL; Last et al. 2016; Freeman 2019; Gaskins et al. 2020). Pokadera provides shallow inshore habitat consistent with habitat reported for early life-stage Giant Guitarfish elsewhere (e.g., Freeman 2019; Gaskins et al. 2020).

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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	В	C1	C2	C ₃	C4	C ₅	Dı	D2
RAYS												
Glaucostegus typus	Giant Guitarfish	CR	0-100	Х		Х						



Scientific Name	Common Name	IUCN Red List Category				
RAYS						
Pastinachus ater	Broad Cowtail Ray	VU				

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.



Census of India. 2011. District census handbook, Andaman & Nicobar Islands.

Freeman A. 2019. A nursery for the giant Shovel-nosed ray (Glaucostegus typus) in the northern Great Barrier Reef. North Queensland Naturalist 49: 34–37.

Gaskins LC, Morton JP, Renzi JJ, Valdez SR, Silliman BR. 2020. Habitat features associated with newborn giant shovelnose rays (Glaucostegus typus). North Queensland Naturalist 50: 73-79.

Kyne PM, Rigby CL, Dharmadi, Gutteridge AN, Jabado RW. 2019. Glaucostegus typus. The IUCN Red List of Threatened Species 2019: e.T104061138A68623995. https://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T104061138A68623995.en

Last PR, White WT, de Carvalho MR, Séret B, Stehmann MFW, Naylor GJP. 2016. Rays of the world. Clayton South: CSIRO Publishing.

Nazareth E, D'Souza E, Arthur R, Jabado RW. 2022. Distribution of the Critically Endangered Giant Guitarfish (Glaucostegus typus) based on local ecological knowledge in the Andaman Islands, India. Ocean & Coastal Management 220: 106075. https://doi.org/10.1016/j.ocecoaman.2022.106075

Patankar VJ. 2019. Attitude, perception and awareness of stakeholders towards the protected marine species in the Andaman Islands. Ocean & Coαstal Management 179: 104830. https://doi.org/10.1016/j.ocecoaman.2019.104830

Ramachandran S. 2000. The Andaman, Nicobar and Lakshadweep Islands. In: Sheppard CRC, ed. Seas at the millennium, an environmental evaluation. Volume II. Regional chapters: the Indian Ocean to the Pacific. Amsterdam: Pergamon, 189–197.

Rao R, Alcoverro T, Kongari P, Yoayela S, Arthur R, D'Souza E. 2023. Tolerance to aerial exposure influences distributional patterns in multi-species intertidal seagrass meadows. *Marine Environmental Research* 191: 106146.

Roberts CM, McClean CJ, Veron JEN, Hawkins JP, Allen GR, McAllister DE, Mittermeier CG, Schueler FW, Spalding M, Wells F, et al. 2002. Marine biodiversity hotspots and conservation priorities for tropical reefs. Science 295: 1280–1284. https://doi.org/10.1126/science.1067728