

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

FESDU FALHU ISRA

Western Indian Ocean Region

SUMMARY

Fesdu Falhu is an enclosed lagoon located in North Ari Atoll, Maldives. The lagoon measures ~2.8 km in length and ~1.4 km in width. The inner basin reaches a maximum depth of 20 m with a substrate of fine sands and scattered coral blocks. The geomorphology of this shallow lagoon coupled with the tidal movements acts as a zooplankton trap. Within the area there are: **threatened species** and **feeding areas** (Reef Manta Ray *Mobula alfredi*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas

— —
MALDIVES
 — —
0-20 metres
 — —
3.11 km²
 — —





DESCRIPTION OF HABITAT

Fesdu Falhu is an enclosed lagoon located in North Ari Atoll, Maldives. The inner basin area is 20 m deep and is characterised by sandy substrates with several scattered coral blocks. In the north of the lagoon there is a section of reef which does not rise to the surface.

The geomorphology of the shallow lagoon coupled with the tidal movements and Langmuir Circulation acts as a zooplankton trap, especially during the southwest monsoon (May–November) (Hedley et al. 2018; Moloney et al. 2019; Harris et al. 2020; Harris & Stevens 2021).

The tides in the Maldives are characterised by a semidiurnal microtidal regime with a tidal range of ~1 m (Caldwell et al. 2015; Rasheed et al. 2021). Combined tidal and wind-driven currents can exceed speeds of 2 m/s, and be very variable in speed and direction, especially through the channels between atolls, atoll rims, and channel gaps in the atoll rims (Ciarapica & Passeri 1993; Kuitert & Godfrey 2019; Rasheed et al. 2021).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 20 m based on the bathymetry of the area.

ISRA CRITERIA

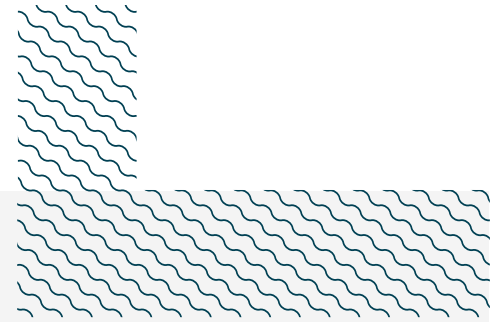
CRITERION A – VULNERABILITY

The one Qualifying Species occurring in the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Reef Manta Ray is assessed as Vulnerable (Marshall et al. 2022).

SUB-CRITERION C2 – FEEDING AREAS

Fesdu Falhu is an important feeding area for one ray species.

This is one of the main feeding areas for juvenile Reef Manta Rays in North Ari Atoll. Data from citizen science submissions and Underwater Visual Census (UVC) surveys utilising photo-identification during 2011–2022 recorded 580 sightings of feeding Reef Manta Rays across 243 surveys. Feeding has been recorded in 234 of these surveys (96%), with aggregations of 2–6 animals on average (maximum = 11). Ninety-five percent (n = 54) of the individuals identified in Fesdu Falhu are recorded during feeding events. Seventy percent (n = 38) of these feeding manta rays are young-of-the-year (YOY) or juvenile Reef Manta Rays that find an abundance of prey in this sheltered lagoon (IDtheManta unpubl. data. 2022). The feeding aggregations are mostly observed just after sunset or at night, regularly and predictably. Individuals in the aggregations are observed actively feeding individually or in feeding chains. Feeding is observed mostly year-round, with slight peaks throughout the northeast monsoon (IDtheManta unpubl. data. 2022). Of the YOY and juveniles recorded in Fesdu Falhu (n = 40), 35% of the animals have been recorded at Fesdu Falhu over consecutive years, confirming that this area is used repeatedly across years.



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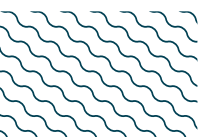
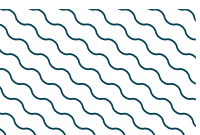
QUALIFYING SPECIES

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													
<i>Mobula alfredi</i>	Reef Manta Ray	VU	0-711	X			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Nebrius ferrugineus</i>	Tawny Nurse Shark	VU
<i>Negaprion acutidens</i>	Sharptooth Lemon Shark	EN
RAYS		
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN
<i>Pastinachus sephen</i>	Cowtail Ray	NT
<i>Pateobatis fai</i>	Pink Whipray	VU
<i>Taeniurops meyeri</i>	Blotched Fantail Ray	VU
<i>Urogymnus asperrimus</i>	Porcupine 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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