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

AL WAJH LAGOON ISRA

Western Indian Ocean Region

SAUDI ARABIA

0–60 metres

1,711.91 km²

SUMMARY

Al Wajh Lagoon is located in Saudi Arabia in the northeastern Red Sea and is bounded by an archipelago of 92 islands. It is characterised by a variety of shallow coastal habitats including reef, mangrove, seagrass, and sandy areas. Within this area there are: **threatened species** and **reproductive areas** (Halavi Guitarfish *Glaucostegus halavi*).

CRITERIA

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

sharkrayareas.org

DESCRIPTION OF HABITAT

Al Wajh Lagoon is located in Saudi Arabia in the northeastern Red Sea. It is bounded by an archipelago of 92 islands. The area is characterised by a wide variety of shallow coastal habitats including reef, mangrove, seagrass, and sandy areas (Chalastani et al. 2020). The semi-enclosed nature of the lagoon results in environmental conditions that are starkly different from the Red Sea waters immediately outside of the lagoon, including more extreme temperature regimes (both cooler in the winter/spring and hotter in the summer/autumn) and higher chlorophyll concentrations (Zhan et al. 2020). These conditions have led to differences in species abundance and community composition in otherwise similar habitats inside and outside the lagoon (Atta et al. 2019).

This Important Shark and Ray Area is benthic and extends from inshore and surface waters (0 m) to a depth of 60 m based on the maximum depth of the area.

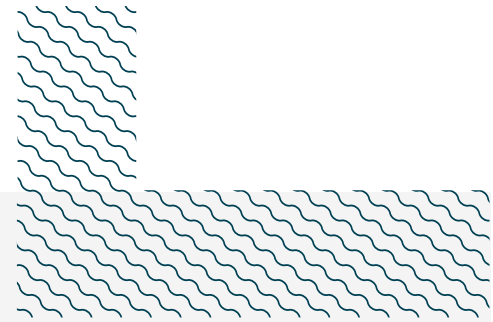## ISRA CRITERIA

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 Halavi Guitarfish is assessed as Critically Endangered (Kyne & Jabado 2019).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Al Wajh Lagoon is an important reproductive area for one ray species.

Opportunistic sightings of 142 Halavi Guitarfish in this area from March to November 2021 expanded into dedicated search efforts in 2022. In 2022, 339 sightings of individual Halavi Guitarfish were reported from Al Wajh Lagoon with size estimates ranging from 20–130 cm total length (TL) (R Hardenstine unpubl. data 2022). Halavi Guitarfish have a reported size-at-birth of 29 cm TL and reach a maximum size of 171 cm TL (Last et al. 2016). Growth data are not yet available for this species but are available for its similarly sized (34 cm TL at birth to 175 cm TL maximum size) congener, Blackchin Guitarfish *Glaucostegus cemiculus* (Başusta et al. 2020). The von Bertalanffy curves for the Blackchin Guitarfish suggest a size-at-one-year of ~60 cm TL for both sexes. In the absence of other data, a 60 cm TL threshold to delineate young-of-the-year (YOY) is applied to Halavi Guitarfish. This is supported by the presence of closed but visible umbilical scars on captured guitarfish of this size (E Richardson pers. obs. 2022).

Catch-and release-efforts successfully captured and measured 56 individuals including 25 neonates (28–32 cm TL), 26 YOY (32–60 cm TL), and later stage juveniles (n = 5; 60–70 cm TL) during 16–23 November 2022 (E Richardson unpubl. data 2022). Acoustic monitoring of 17 individuals (including 13 YOY and four juveniles) indicates almost continuous residency of some tagged animals to relatively small home ranges in this area over nearly a year of tracking (B Scannel unpubl. data 2023). Acoustic tracking is ongoing and data confirm the regular and predictable occurrence of Halavi Guitarfish in this area. Further, preliminary results suggest Al Wajh Lagoon is likely to act as a nursery habitat for Halavi Guitarfish (as defined in Martins et al. 2018).

Suggested citation

IUCN SSC Shark Specialist Group. 2023. Al Wajh Lagoon 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												
Glaucostegus halavi	Halavi Guitarfish	CR	0–100	X		X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Carcharhinus melanopterus	Blacktip Reef Shark	VU
Galeocerdo cuvier	Tiger Shark	NT
Nebrius ferrugineus	Tawny Nurse Shark	VU
Triaenodon obesus	Whitetip Reef Shark	VU
RAYS		
Aetobatus ocellatus	Spotted Eagle Ray	EN
Himantura uarnak	Coach Whipray	EN
Pastinachus sephen	Cowtail Ray	NT
Taeniura lymma	Bluespotted Lagoon Ray	LC
Urogymnus granulatus	Mangrove Whipray	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.
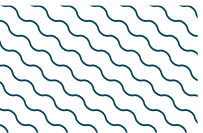
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