

Area Size

5,889 km²

Qualifying Species and Criteria

Bryde's whale – *Balaenoptera edeni*

Criterion C2

Indian Ocean humpback dolphin – *Sousa plumbea* Criterion A, C2

> Spinner dolphin – *Stenella longirostris* Criterion B2

Indo-Pacific bottlenose dolphin – *Tursiops aduncus* Criterion C2

> Dugong – *Dugong dugon* Criterion A, C2

Marine Mammal Diversity

Balaenoptera edeni, Dugong dugon, Orcinus orca, Sousa plumbea, Stenella longirostris,

Tursiops aduncus

Summary

The Farasan Islands are a large archipelago comprising over 170 islands and islets of uplifted coral reef. The IMMA lies between 40 and 90 km offshore from the city of Jazan on the southeastern Red Sea coast of the Kingdom of Saudi Arabia. A marine protected area covering 5,408 km² was established around the town of Farasan.. This MPA has also been nominated by Saudi Arabia as a tentative UNESCO World Heritage site. The waters

Farasan Archipelago IMMA

Summary (continued)

of the Farasan Islands support a host of marine mammal species including Endangered Indian Ocean humpback dolphins (*Sousa plumbea*) and Vulnerable dugongs (*Dugong dugon*), which feed on the area's extensive seagrass beds. Bryde's whales (*Balaenoptera edeni*), spinner dolphins (*Stenella longirostris*), and Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) are also documented in the area.

Description

The Farasan archipelago islands, formed from uplifted fossil coral reef, lie on the Arabian continental shelf, which is less than 200 m deep and about 120 km wide off Jazan. The climate is arid and subtropical, characterized by high mean annual temperatures and low annual rainfall. Most rain falls in October, January, and May (ranging from 50-100mm/annum), due to the Indian Ocean monsoon. Average daily minimum and maximum summer temperatures: 28–29°C; 39–40°C in Summer and 20-21°C; 30–31°C in winter. A human population of around 12,000 inhabitants lives exclusively on the main island of Farasan, mostly concentrated in the main town of Farasan. The Farasan Islands rank high in terms of marine species diversity, number of species of conservation significance, and protection status/management effectiveness. This includes more than 230 fish species, 50 species of coral, and a significant number of species from other taxa, including sea birds and sea mammals (from the submission by Saudi Arabia to UNESCO, for listing the Archipelago in the Tentative List of World Heritage sites). In addition to the previously listed species, Gladstone and Fisher (2000) also report: "Farasan Islands' artisanal fishermen reported sightings to us (and confirmed from illustrations) of killer whales (Orcinus orca Linnaeus, 1758) they had observed at two locations within the Farasan MPA: the Abalat Islands (in 1994) and Sumair Island (in 1992)". The presence of killer whales in the Farasan Archipelago was confirmed by Notarbartolo di Sciara et al. (2017).

Criterion A: Species or Population Vulnerability

Two species within the IMMA are listed as threatened on IUCN's Red List: the Indian Ocean humpback dolphin (EN) (Gladstone and Fisher 2000, Masseti 2010; Fig. 1), and the dugong (VU) (Preen 1989, Masseti 2010). Both species consistently occur in the area. Please note that: a) Indian Ocean humpback dolphins were listed in both papers as *Sousa chinensis*, as opposed to *Sousa plumbea*, because they were published before the species was split; b) bottlenose dolphins are listed as *Tursiops truncatus*, but the locations where the sightings were made (many of which in very shallow waters) strongly suggests that these must have been *Tursiops aduncus*, a species the presence of which in the Red Sea seems not to have been known by the authors.

Criterion B: Distribution and Abundance Sub-criterion B2: Aggregations

The area is noted as providing aggregation opportunities in shallow waters for spinner dolphins (Fig. 2), a species known to spend daylight hours within reef shelters to rest after a night spent foraging over open sea slope/deep areas. Given the proximity of steep slopes (about 10 nm from the Farasan Islands), which likely provide appropriate feeding grounds for the dolphins, it can be assumed that the Farasan Islands offer daytime resting aggregation opportunities for spinner dolphins.

Criterion C: Key Life Cycle Activities Sub-criterion C2: Feeding Areas

Bryde's whales (*Balaenoptera edeni*) and Indian Ocean humpback dolphins were observed feeding in the IMMA area (Gladstone and Fisher 2000; Fig. 3) and dugongs were reported to occur on the extensive seagrass beds in Khawr Ma'di between Farasan Kebir and Segid (Masseti 2010).



Figure 1: Locations of Indian Ocean humpback dolphins (Sousa plumbea') in the Farasan Archipelago. From Gladstone and Fisher, 2000. *Please note that the Indian Ocean humpback dolphins were listed in both papers as S. chinensis because they were published before the species was split.



Figure 2: Locations of spinner dolphins (*Stenella longirostris*) in the Farasan Archipelago. From Gladstone and Fisher, 2000.



Figure 3: Locations of bottlenose dolphins⁺, Bryde's whales (*Balaenoptera edeni*; living and dead) in the Farasan Archipelago. From Gladstone and Fisher, 2000. **Please note that bottlenose dolphins are listed as T. truncatus, but the locations where the sightings were made (many in very shallow waters) strongly suggests that these must have been T. aduncus, a species the presence of which in the Red Sea seems not to have been known by the authors.*

Supporting Information

Gladstone W. and Fisher P.R. 2000. Status and ecology of cetaceans in the Farasan Islands marine protected area (Red Sea). Fauna of Arabia 18:385-396.

Masseti M. 2010. The mammals of the Farasan archipelago, Saudi Arabia. Turkish Journal of Zoology 34:359-365. doi:10.3906/zoo-0905-2

Notarbartolo di Sciara G., Kerem D., Smeenk C., Rudolph P., Cesario A., Costa M., Elasar M., Feingold D., Fumagalli M., Goffman O., Hadar N., Mebrathu Y.T., Scheinin A. 2017. Cetaceans of the Red Sea. CMS Technical Series 33. 86 p.

Preen, A. (1989). The status and conservation of dugongs in the Arabian Region. MEPA Coastal and Marine Management Series Report, 10, 200 p.

Acknowledgements

We would like to thank the participants of the 2019 IMMA Regional Expert Workshop held in Salalah, Oman for the identification of IMMAs in the Western Indian Ocean and Arabian Seas. Funding for the identification of this IMMA was provided to the Global Ocean Biodiversity Initiative by the International Climate Initiative (IKI). The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative on the basis of a decision adopted by the German Bundestag. Support was also provided by Whale and Dolphin Conservation and the Tethys Research Institute.



Suggested Citation: IUCN-Marine Mammal Protected Areas Task Force, 2021. Farasan Archipelago IMMA Factsheet. <u>https://www.marinemammalhabitat.org/wp-</u> <u>content/uploads/imma-factsheets/</u> WesternIndianOcean/farasan-archipelago-WesternIndianOcean.pdf. Downloaded on (day month year).

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