

Lakshadweep Archipelago IMMA

Summary (continued)

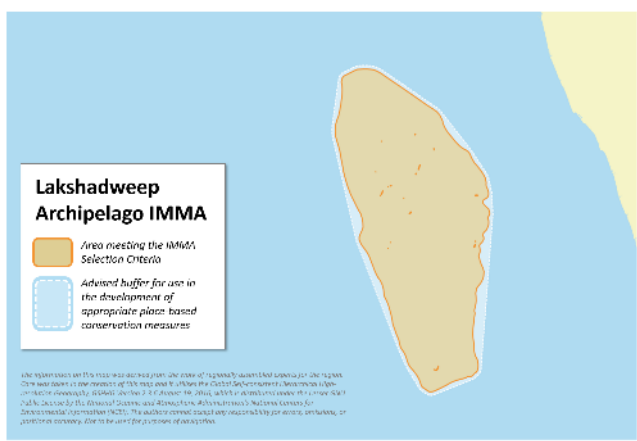
atolls. However, further research is required to determine their population status. Additional research is also recommended on the possible connections between the species complexes and populations in the Maldives, which are also part of the larger Chagos-Laccadives plateau.

Description

The highly variable bathymetry and diverse oceanographic habitats within the Lakshadweep Archipelago IMMA create the perfect environment for a vast diversity of marine life. The proximity of the Lakshadweeps to the Maldives suggests an overlap in biodiversity of marine megafauna and possible genetic relationships between cetacean populations. In a recent study, the most commonly sighted species was the spinner dolphin, *Stenella longirostris* (22 sightings; group size ranged from 1 to 600 with mean group size of 96.1 ± 35.7) followed by bottlenose dolphins, *Tursiops spp.* (18 sightings; group size ranged from 1 to 10 with mean group size of 4.52 ± 0.67) and short finned pilot whales, *Globicephala macrorhynchus* (13 sightings; Group size ranged from 2 to 40 with mean group size of 17.46 ± 3.6) (Panicker et al., 2020).

Criterion D: Special Attributes Sub-criterion D2: Diversity

The complex bathymetry of the Lakshadweep Archipelago supports at least 14 cetacean species. The shallow waters around the islands are used by spinner dolphins and bottlenose dolphins throughout the year. In dedicated research surveys including almost 3900 km of survey distance, over 129 hours, were undertaken, resulting in 139 cetacean sightings (Panicker et al., in 2020). Cetacean species with confirmed sightings within the IMMA are Risso's dolphins, bottlenose dolphins (species not determined), striped dolphins, spinner dolphins, Cuvier's beaked whales, dwarf sperm whales, short-finned pilot whales, sperm whales, false killer whales,



Area Size

86,717 km²

Qualifying Species and Criteria

Criterion D(2) – Marine Mammal Diversity

Balaenoptera musculus, *Feresa attenuata*,
Globicephala macrorhynchus, *Grampus griseus*,
Kogia sima, *Orcinus orca*, *Physeter
macrocephalus*, *Pseudorca crassidens*, *Stenella
attenuata*, *Stenella coeruleoalba*, *Stenella
longirostris*, *Tursiops aduncus*, *Tursiops truncatus*,
Ziphius cavirostris

Summary

The Lakshadweep Archipelago is a complex of coral atolls located 220-440 km to the southwest of the Indian mainland. The area consists of diverse habitat types: coral reefs, seagrass beds, rocky and sandy shores, mangrove creeks, deep-water canyons and trenches that offer a vast biodiverse marine landscape for cetaceans. Deep-water slopes like the ones found around Lakshadweep generate currents and upwelling of nutrients that aggregate plankton and attract a diversity of marine life. Based on confirmed sightings, carcasses washed ashore and anecdotal information at least 14 species of cetaceans have been documented throughout the area. The two most commonly observed species are Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) and spinner dolphins (*Stenella longirostris*), which are present year-round inside and at the edge of the

panropical spotted dolphins, pygmy killer whales, killer whales, sperm whales, as well as other unidentified baleen whales (Panicker, 2017). Nearshore areas include rich seagrass beds used by green sea turtles, olive ridley turtles and several species of elasmobranchs. Fisher reports suggest seasonal occurrence of large whales identified by blows that can be seen from a distance. Given the limited survey effort, the cetacean diversity from this region may be underestimated, with deep-diving, cryptic or rare species under-represented. See Figure 1 for sightings information.

Supporting Information

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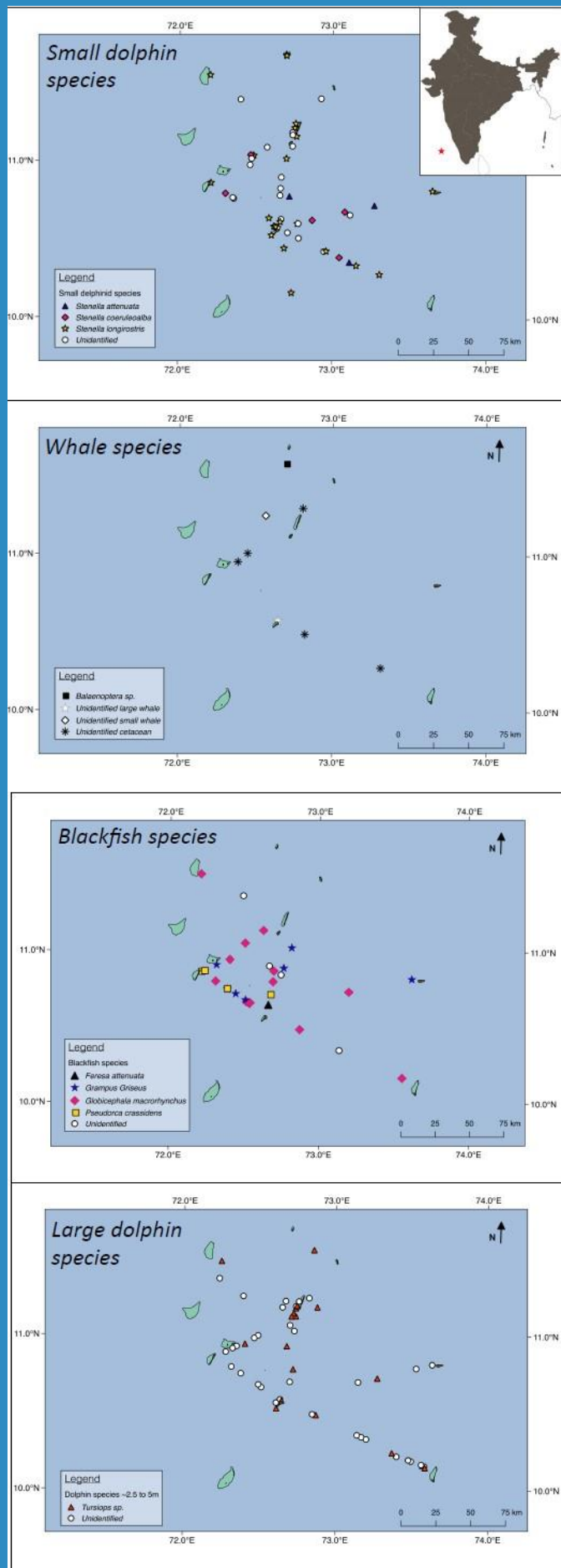


Figure 1: Cetacean sightings in the Lakshadweep waters categorized by species and class. From Panicker et al., 2020.

Acknowledgements

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IMMA

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