



CICLO  
**CONFERÊNCIAS 20|21**  
ISPA - INSTITUTO UNIVERSITÁRIO

# GONE WITH THE WIND:

SEASONAL DISTRIBUTION AND HABITAT  
USE BY THE REEF MANTA RAY (*MOBULA ALFREDI*)  
IN THE MALDIVES, IMPLICATIONS FOR CONSERVATION



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Reef manta rays (*Mobula alfredi*) under increasing pressure from targeted and bycatch fisheries and are now listed as Vulnerable to Extinction on IUCN Red List of Threatened Species. The Maldives supports the world's largest known population that undergoes seasonal migrations, which are thought to be linked to peaks in ocean productivity induced by the South Asian Monsoon. Although the species is protected from targeted fisheries in the region, increasing pressures from habitat degradation and unsustainable tourism activities means their effective conservation relies upon knowledge of the species' habitat use, seasonal distribution, and the environmental influences on such movements. This research fills these knowledge gaps using 13 years of photographic identification data collected by the Manta Trust's Maldivian Manta Ray Project. Over 54 000 identification photographs of 4,411 individual reef manta rays taken throughout the archipelago identified 273 different aggregation sites, 48 of which were classified as key areas with >100 sightings at each of habitat use. These locations are utilised seasonally (either in the northeast or southwest monsoon). Modelling identified that the southwest monsoon winds drive these patterns during both seasons along with chlorophyll-a concentration on the down-current side of the atolls.

The identification of key areas of habitat uses and temporal changes in the use of these sites highlight the areas that should be prioritised for protection enabling more effective conservation management. By anticipating and mitigating potential adverse impacts to reef manta rays at these locations, this species, their habitat, and the tourist industry which depends on them can be safeguarded.

**4 MARÇO 2021**

17H00 | LIVESTREAM FACEBOOK

HOST  
**PETER MCGREGOR**

**ENTRADA LIVRE**



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