

## Marine megafauna hotspots revealed by large scale tracking in the Indian Ocean

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Marine megafauna species are threatened worldwide, yet they are of prime importance for conservation biology. The assessment of marine megafauna distribution patterns is an important component for designing efficient spatially explicit conservation measures. In this study we focused on the marine megafauna in the Indian Ocean (IO), where many species are endangered and some of them are endemic. We compiled available tracking data from previous tracking programs on 17 species of seabirds, sea turtles and marine mammals to investigate their distribution, and to identify high density and high diversity hotspots. Using a spatial estimation of human impact on the ocean, we investigated the spatial overlap between marine megafauna distribution and threats, to identify biodiversity hotspots in the region. Our study revealed 7 density hotspots for marine megafauna. Among these areas, some sectors over the occidental IO and in the centre of the tropical IO hosted an important diversity of species, with until 65% of the species richness of the marine megafauna tracked in this study. We highlighted several oceanic structures (seamounts and sea banks) that concentrated marine megafauna species. High-density areas reflected important breeding and foraging grounds in the IO, and overlapped with significant levels of human activities, which may jeopardize marine megafauna. Our results should give important insights to help the implementation of management and conservation measures.