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Session 1E Oceanic Manta Ray (Mobula birstrosis): A Conservation Strategy

Cameron Marshall
University of Derby

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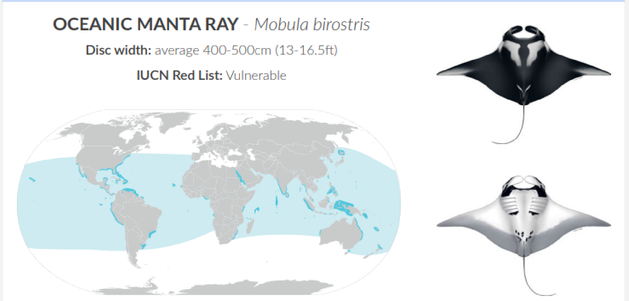
Contact: 100444820@unimail.derby.ac.uk

Introduction

The Oceanic Manta Ray (*Mobula birstrosis*) is the largest species of Ray on the planet (Graham et al., 2012). The species migrates circum-globally (Marshall et al., 2020). Figure 1, below shows the species size and (known) geographic range.



Constant migration has led to a low understanding of their behaviour (Stewart et al., 2016). This strategy is underlined by a three focus approach of: Research, Eco-Tourism and Fishery Regulations.

Figure 2 below, outlines the most prominent direct threats on the species population.

PRIORITY	THREAT	GOAL	METRICS
1	Targeted fishing	No demand for mobulid products	Volume of landings; gill plates (in markets); other body parts (in markets).
2	Bycatch	Limited bycatch	Levels of catch & release; mitigation measures in gear (gear, spatial, temporal); policies.
3	Tourism	Well-managed tourism	Boat strikes; in-water interactions; code of conduct.

Conservation Strategy Overview

RESEARCH

The strategy will be underlined by producing data on Oceanic Manta Ray movements bolstering knowledge of their migratory patterns. This will identify regions/ times of year Rays are most at risk from their main threats: targeted fishing and Bycatch.

Figure 3, left, shows a satellite tag used to track Manta Ray movements (Manta Trust, 2020).

ECO-TOURISM

Global Manta Ray tourism is worth $100 million dollars as an industry with room for growth (Ender et al., 2020). Also, 90% of tourists said they preferred sustainable coastal tourism focused on aquatic megafauna experiences (Kessel et al., 2017).

Developing Reefs and tourist/ ray hotspots into protected areas will positively impact ray populations and promote sustainable tourism (Shannon et al., 2018).

FISHERY REGULATIONS

Manta Ray Fisheries and Bycatch are the two biggest threats to Oceanic Manta (Ender et al., 2020).

Protecting areas of high Manta productivity through 'Manta Sanctuaries' as Indonesia has done for a 6 million square Km area will rapidly decrease impacts of fishing on Oceanic Manta Rays (National Geographic, 2020).

Conclusion

In conclusion, this conservation strategy will help proliferate higher and more stable Oceanic Manta Ray populations via a 3 method approach implementing research, ecotourism and fishery regulations.

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