MARINE ANIMAL ECOLOGY GROUP

Optimising cetacean conservation management in Indonesia through governance refinement and habitat-use-based spatial planning using complementary methods and underused data

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PhD Candidate	Promotor	Co-Promotor
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Motivation

Cetacean are important top predators of the marine food chain and their presence indicates a healthy marine environment. However, several cetacean species are endangered. During their broad migration across the oceans, they encounter many risks. Although officially most of the cetacean species are protected by international and national regulations, in reality, they are not because their critical habitats and migration routes are hardly considered in conservation management (Fig. 1). The lack of information about their habitat requirements and threats make incorporation of critical habitats and migration routes in Marine Spatial Planning (MSP) and Marine Protected Areas (MPAs) a challenge. This PhD project aims to develop an approach to provide information to improve cetacean conservation management in Indonesia through suggestions for strengthening the governance and introduction of habitat-use-based spatial planning using complementary methods and underused data.

Research Questions

- What are the gaps and main shortcomings of the current legal framework in Indonesia for effective cetacean conservation, and what are priority aspects to improve?
- What is the cetaceans' spatial distribution in Indonesia and which environmental characteristics determine this?
- What are potential migratory corridors and habitats of selected cetacean species and how do these relate to marine conservation systems and anthropogenic threats?
- How can cost-effective survey techniques support cetacean conservation planning by providing insights into spatio-temporal distribution and abundance of cetaceans in information-poor situations?

Approach and Methods

First, we review the marine mammal conservation governance in Indonesia (Part 1). The spatial distribution, habitat use and habitat preference of cetaceans are then identified using habitat modelling approaches and different datasets including historical whaling data, current data, and telemetry data (Part 2). By using available telemetry data of selected species, their habitat and migratory corridors will be determined (Part 3). Cost-effective survey techniques are used to assess spatio-temporal occurrence and estimate relative abundance of cetaceans in an under-studied tropical marine park (Part 4). Finally, advise for improvement of cetacean conservation management will be formulated (Fig. 1).

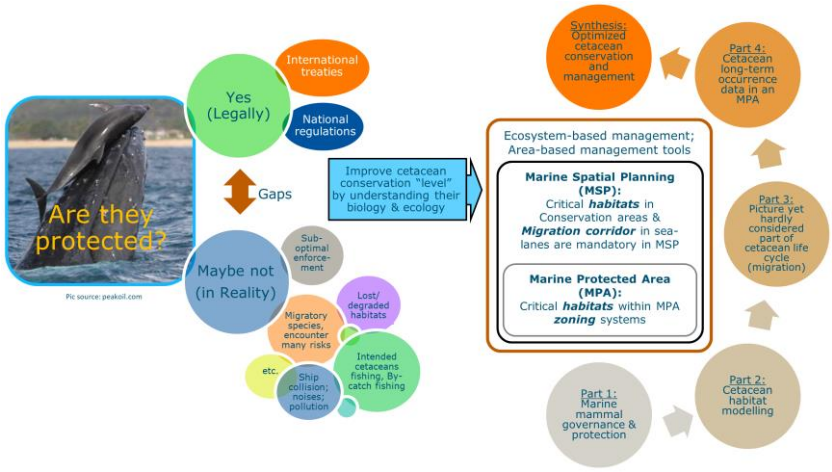

Fig. 1: Conceptual framework of the study

Curriculum Vitae

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