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Moving Forward with the Modelling and Assessment of Whale-watching Impacts (MAWI)

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Abstract

Interactions with whale-watching vessels has been shown to impact the short-term behavior of a number of marine species. However, it has remained difficult to assess the long-term impact of disturbance. In 2013 the IWC Whale-watching sub-committee formed an intersessional working group to address the modelling and assessment of whale-watching impacts (MAWI) for large cetaceans in particular. This document is to serve as a summary of MAWI's actions to date and a discussion of its potential future direction.

Introduction

In 2013 at the International Whaling Commission Scientific Committee meeting the Whale-watching sub-committee founded an intersessional working group to investigate the modelling and assessment of whale-watching impacts (MAWI). In particular, the group was interested in defining the specific research questions and hypotheses that will most benefit our understanding of the impact of whale-watching, identifying those whale-watching locations that would be most suitable and amenable for targeted studies addressing these questions, and summarising the current modelling tools available to analyse the data that will be collected. In 2014 a paper was presented to the IWC addressing the currently available modelling tools.

Where MAWI Stands

In 2014 a symposium and focus group was held at the International Marine Conservation Congress (IMCC) to address MAWI. These sessions were aimed at diverse interest groups, including, but not limited to, conservation organizations, whale-watching companies, scientists and policy makers. Presenters in the symposium included this author, E.C.M. Parsons, Ailsa Hall, Greg Kaufmann and Robert Schick. Robert Harcourt was also meant to present, but was unable to attend. The topics included an introduction to MAWI, a history of whale-watching, behavioural responses to whale-watching, physiological responses to whale-watching, modelling techniques for assessing whale-watching's impact and the role of industry as platforms of opportunity. The symposium was well attended and received, in addition to attracting the attention of the scientific media (Cressey 2014).

Following the symposium was a focus group to discuss MAWI. By holding the symposium first it was possible to ensure that all participants had same base level of knowledge regarding the subjects that would be under discussion. The aim of the focus group was to discuss the research questions and hypotheses that would most benefit scientific understanding of the impacts of whale-watching on large cetaceans. The goal was to begin building a strong scientific platform from which to assess the potential effects of whale-watching, as well as address those issues most important for the conservation and management of the species of concern.

This discussion at the focus group was wide ranging and included topics such as the cost-benefits of whale-watching, the role of whale-watching in the cumulative impacts facing cetaceans and data and modelling needs, among others. One of the outcomes of MAWI's involvement in the IMCC was a paper discussing the symposium, focus group and its outcomes (New et al. 2015). The manuscript concluded that as a result of the symposium and focus group, there were six factors that were needed to begin building a scientific platform from which a unified approach the management of whale-watching might be achieved. These are (New et al. 2015):

- Standardizing data collection
- Defining key research questions
- Increasing communication between scientists, government, industry and other stakeholders
- Facilitating the uptake of new modelling techniques

- Improving the implementation and enforcement of regulations for all vessels interacting with cetaceans
- Identifying the role of whale-watching in the broader suite of disturbances and stressors affecting cetaceans to better assess their combined impacts

MAWI's Future

If a unified platform to the management, modelling and assessment of whale-watching is to take place, it requires the participation of more than just the members of MAWI's intersessional committee. Instead, there needs to be buy-in from the wider community of people interested in whale-watching, be it for research, industry, management or pleasure. To this end, if MAWI is to move forward a workshop needs to be held to begin constructing the platform first outlined in New et al. (2015).

Such a workshop would focus on three of the six components to the platform: standardizing data collection, defining key research questions and identifying the role of whale-watching in the broader suite of disturbances and stressors affecting cetaceans. Once these are agreed upon it will be easier to initiate communication with other stakeholders because the goals and needs of the scientific community will be better defined. The better communication and more clearly defined scientific stance may also help managers and government improve the implementation and enforcement of regulations. Facilitating the uptake of new modelling techniques can be done at a later date with focused workshops to teach the quantitative skills researchers may need.

Furthermore, to fully engage and encourage individuals to commit to such a platform it will be necessary to demonstrate its effectiveness in achieving the stated goals and answering the questions of ecological interest. As a result, once the key research questions and data standards are defined, it will be necessary to work with individuals at existing study sites, or develop new ones, to implement the beginnings of the unified platform. Without a practical application to support the conceptual developments resulting from MAWI it will never be possible to achieve its stated goals.

Obviously, funding is required to hold workshops and conduct research. A goal of the intersessional committee at this meetings of the IWC scientific committee meeting can be to identify potential sources of funding, be it grants, government, crowd-sourcing, the IWC or industry support. Indeed, the goals of MAWI are laudable, but cannot be achieved without monetary, intellectual and community support. This brief paper lays out the forms this support might take and how it would be utilized to construct and implement a unified platform for the management, modelling and assessment of whale-watching.

References

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