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THIRD MEETING OF THE OCEAN MODELING FORUM WORKING GROUP ON MARINE MAMMAL BYCATCH

June 10 - 12, 2019, Reykjavík, Iceland

OVERVIEW

The Ocean Modeling Forum's Working Group on Marine Mammal Bycatch

The Ocean Modeling Forum has formed a Working Group to develop scientific tools to assess data sets and methods for evaluating the rates and impacts of bycatch on marine mammal populations, in support of nations working to comply with the Marine Mammal Protection Act (MMPA) Import Provisions issued by the National Oceanic and Atmospheric Administration (NOAA). Under this new rule, nations that export fish and fish products to the U.S. are asked to adhere to bycatch standards comparable to those of the U.S.

Working Group Charge

The Working Group will produce scientific tools aimed at assisting nations in their efforts to apply to NOAA for a comparability finding. Led by Dr. André Punt, University of Washington (UW) and the UW Ocean Modeling Forum, and co-chaired by Dr. Tessa Francis, UW Tacoma and Dr. Rob Williams, Oceans Initiative, the Working Group will identify and recommend data sets and methods that could be used to assess marine mammal bycatch and its impacts, with a focus on data-poor fisheries and/or poorly monitored marine mammals. The Working Group will meet four times over 2018 and 2019 and will also develop user-friendly software that nations can tailor to their needs and use to evaluate potential management strategies.

For detailed project outlines and a summaries from previous meetings, please [visit our project page](#).

THIRD MEETING SUMMARY

The Working Group members met for the third time on June 10 – 12, 2019 at the Iceland Marine and Freshwater Institute in Reykjavík, Iceland. Workshop participants included Working Group members, invited management experts from NOAA, and several observers from government and NGOs.

The first day of the agenda included presentations from each project lead to update the Working Group on their most recent drafts and products and facilitate additional feedback and discussion. Day two of the workshop began with a presentation from Kristy Long (invited expert from NOAA) on policy updates related to the import rule, and Charlotte Hudson (Lenfest Ocean Program) who presented a draft Communications Plan for the Working Group products. The afternoon consisted of break-out groups, where the project leads updated projects with group feedback, and others continued to discuss the Communications Plan. Margaret Siple also led a discussion focused on the Shiny App, including feedback received during app testing and overall usability. Finally, participants from both case studies, Maritza Sepulveda (Chile) and Gudjon Mar Sigurdsson (Iceland), input their respective country's data into the Shiny App to test the utility and efficiency of the product.

During the third and final day, the Working Group reviewed and expanded on the project Communications Plan. Within this review, the Working Group outlined a final document that aims to cohesively link all four products. This document will link Projects 1-4 and focus on providing basic information related to assessing marine mammal populations.

Working Group Project Updates

Project 1: Abundance estimation methods best practices

Lead: Philip Hammond

Product: A synthesis document

In this project, the Working Group will produce a comprehensive synthesis of methods that can be used to estimate marine mammal abundance, with the aim of providing a “best practices” resource for users.

During the third meeting, the Working Group continued to discuss the structure of Project 1, with a focus on direct application and intended audience. Discussion for this project focused on:

- Enhancing the accessibility and utility of the product for end-users.
- Reviewing document sections to ensure that the structure is comprehensive and meets working group goals.
- Identifying reviewers outside of the working group with different backgrounds, including policy makers and managers who may be designing an abundance estimation program.
- Incorporating a decision tree structured around taxonomy and the amount of information available.
- Finalizing writing deadlines for document sections.

Project 2: Best practices for marine mammal bycatch estimates

Lead: Dennis Heinemann and Jeff Moore

Product: A synthesis document

In this project, the Working Group will synthesize methods and provide an overview of best practices used to estimate rates and levels of marine mammal bycatch in fisheries, meaning the number of pinnipeds, cetaceans, and other marine mammals that die entangled in fishing nets or from interactions with other fishing gear. Projects 1 and 2 will have a similar structure so they can be used in concert and published as companion pieces.

During the third meeting, the Working Group continued to discuss the structure of Project 2, with a focus on direct application and intended audience. Discussion for this project focused on:

- Incorporating Observer Program alternatives into the document to address situations where an Observer Program is not an option to estimate bycatch.
- Enhancing the accessibility and utility of the product for end-users.
- Reviewing document sections to ensure that the structure is comprehensive and meets working group goals.
- Identifying reviewers outside of the working group with different backgrounds, including policy makers and managers who may be designing an abundance estimation program.

Project 3: A user-friendly app for exploring bycatch rates

Lead: Margaret Siple

Product: Web-based app

For this project, the Working Group is developing a user-friendly, interactive tool that allows users to visually explore the impacts of different bycatch-related management actions on marine mammal abundance, given varied amounts of information about the fishery or the marine mammal of interest (i.e., abundance, current bycatch, and productivity).

During the third meeting, project lead Margaret Siple presented the latest version of the app, then Working Group members from case study countries (Chile and Iceland) tested it using data from their respective country. Discussion for this project focused on:

- Adding a tab where users can simply calculate Potential Biological Removal (PBR) given population estimates.
- Incorporating a decision tree or an information flow into the app.
- Establishing test groups to evaluate app usability.
- Establishing user training and ways this Working Group can communicate about the app, and larger project, at future conferences and workshops.

Project 4: Extended evaluation of the PBR approach

Lead: André Punt

Product: A publication in an academic journal

The PBR approach is widely used to provide management benchmarks for human-induced removals of top predators, in particular marine mammals. In this project, we will further evaluate the PBR approach by exploring the implications of scenarios that include environmental as well as demographic stochasticity and trends in biological parameters such as carrying capacity and expected natural survival.

During the third meeting, the Working Group provided feedback on the model, scenarios to test and publication drafts. Discussion focused on:

- Life history parameters used in the model.
- Testing different scenarios, for example: do we need to include a catastrophe scenario?
- Comparing model outputs for each case study between Project 3 and Project 4.

Outreach and Communications

This workshop had multiple discussions centered around the Communications Plan, which aims to facilitate the broad use and applicability of the Working Group products. In collaboration with the Lenfest Ocean Program, the Working Group developed a multi-level communication strategy, which outlines product specific strategies as well as Working Group wide strategies, a roll out plan, and options for dissemination.

This discussion focused on:

- Identifying main audiences, messages and desired outcomes.
- Evaluating the impact of this Working Group on different time scales.
- Publishing all papers in open access journals accompanied by PDF resource library so references are accessible to users.



WORKSHOP PARTICIPANTS

Working Group Members

- André Punt, Chair, University of Washington
- Tessa Francis, Co-Chair, University of Washington Tacoma
- Rob Williams, Co-Chair (not present), Oceans Initiative
- Philip Hammond, University of St. Andrews
- Dennis Heinemann, Marine Mammal Commission
- Gudjon Mar Sigurdsson, Marine and Freshwater Research Institute
- Jeffrey Moore, NOAA Southwest Fisheries Science Center
- Andrew Read (not present), Duke University
- Randall Reeves, Okapi Wildlife Associates
- Maritza Sepulveda, University of Valparaiso
- Margaret Siple, University of Washington
- Genoa Sullaway (Project Support)
- Gisli Vikingsson, Marine and Freshwater Research Institute
- Paul Wade, NOAA National Marine Mammal Laboratory
- Alex Zerbini (not present), Contractor, NOAA National Marine Mammal Laboratory

Invited Experts

- Kristy Long (not present), NOAA Fisheries, Office of Protected Resources

Observers

- Charlotte Hudson, Lenfest Ocean Program
- Matt Gummery, Marine Stewardship Council
- Mike Osmond, World Wildlife Fund

Contact

The Marine Mammal Bycatch Working Group is a collaboration between the Ocean Modeling Forum and the Oceans Initiative and is funded by the Lenfest Ocean Program. For any questions, please contact Tessa Francis, Managing Director, the Ocean Modeling Forum, at tessa@uw.edu, or Emily Knight, Manager, Lenfest Ocean Program, at eknight@lenfestocean.org.

The next (and final) Working Group meeting will occur in September 2019 in Seattle, WA.

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AND COMMUNICATING
RESULTS.