

Review of Mitigation Methods in Setnet Fisheries CSP Project 4438

Simon Childerhouse

www.blueplanetmarine.com

1.0 Introduction

- Presentation of methodology for Review of Mitigation Methods in Setnet Fisheries, CSP Project 4438
- To identify and assess the current mitigation techniques for both marine mammal and seabird capture employed in setnet fisheries both domestically and internationally and make recommendations as to their applicability to the New Zealand situation

1.1 Project requirements

- Review current and historic research; including, but not limited to, international scientific literature, government agency commissioned reports, conference proceedings, commercial research and industry trials
- Identify mitigation methods and analyse each in terms of the scientific rigor of any reported trials, the level of proven efficacy in any reported trials, and their relevance to the New Zealand situation
- Describe in detail these methods and outline and compare costs and benefits of each mitigation technique, highlighting uncertainties and caveats of reported trials, and making recommendations for areas of future research

1.2 Project outputs

- Written report detailing the mitigation techniques available to setnet fisheries in New Zealand and assessment of the costs and benefits associated with these techniques highlighting uncertainties and caveats of reported trials, particularly in respect to the protected species assemblages likely to be effected in New Zealand
- A set of recommendations for areas of future research

2.0 Literature review

- This review will build on the previous DOC-funded reviews by Bull (2007) and Rowe (2007), as well as the recent global review by Waugh et al. (2011)
- Comprehensive literature review of international scientific literature, government agency-commissioned reports, conference proceedings, commercial research, results from industry and scientific trials, and grey literature

2.1 Literature review

- Electronic search engines and databases will be used, such as Web of Science, Current Contents, Google Scholar, and general internet searches, using keywords such as: gillnet, setnet, mitigation, and bycatch
- We will also review grey literature through direct searching of conference, workshop, meeting and observer programme reports which are often not well referenced in electronic databases

2.2 Literature review

- Supplement literature review with searches of two specific and highly relevant databases:
 - ▶ Bycatch Reduction Techniques Database
 - hosted by www.bycatch.org. This is managed by The Consortium for Wildlife Bycatch Reduction which is group of researchers and fishers who work together to solve bycatch issues.
 - ▶ Project GLoBAL
 - Global Bycatch Assessment of Long-lived Species (<http://bycatch.nicholas.duke.edu>) which contains an extensive bibliography and recent publications (i.e. over 1,500 catalogued references)

2.3 Literature review

- Direct contact with key people involved in the field of setnet mitigation as these researchers are often the best source of the most up-to-date information
- Assessment of data records will be summarised in a database for CSP

2.4 Literature review

- Reviewing each data source against the following criteria:
 1. Description of the fishing technique
 - a. Target fish species
 - b. Region of interaction
 - c. Gear configuration (e.g. bottom, mid water, pelagic)
 - d. Relevance to the New Zealand setnet fishery
 - e. Relevance to the protected species assemblages likely to be affected in New Zealand

2.4 Literature review

2. Description of the mitigation technique
 - a. Level of scientific rigor of any reported trials
 - b. Level of proven efficacy in any reported trials (i.e. in both reducing protected species bycatch but also in maintaining target fish catch)
 - c. Any caveats or uncertainties in the methods
 - d. Relevance to the New Zealand setnet fishery
 - e. Relevance to the protected species assemblages likely to be affected in New Zealand
 - f. Costs and benefits
3. Recommendations for future research in New Zealand

5. Comments?

- Simon Childerhouse
 - ▶ Mob. +61-409-982-658
 - ▶ Email: simon@blueplanetmarine.com
- Thanks to
 - ▶ Kris Ramm, DOC