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|  <p>Agreement on the Conservation<br/>of Albatrosses and Petrels</p> | <p><b>Fifth Meeting of the Seabird Bycatch Working Group</b><br/><i>La Rochelle, France, 1-3 May 2013</i></p> <p><b>Seabird mitigation in New Zealand's scampi<br/>trawl fishery</b></p> <p><b><i>Johanna Pierre<sup>1</sup>, John Clea<sup>2</sup> &amp; Igor Debski<sup>3</sup></i></b></p> <p><b><i>1. Dragonfly Limited; 2 Clement &amp; Associates;<br/>3. Department of Conservation</i></b></p> <p><b><i>New Zealand</i></b></p> |
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### SUMMARY

Following relatively high recorded seabird bycatch rates in the New Zealand demersal scampi trawl fishery, a project was commissioned by the New Zealand government to identify and test mitigation methods for the fishery. Vessels in this fishery use fishing gear with multiple (two or three) nets deployed adjacently. High volumes of discards and gear types used are expected to be important factors contributing to seabird captures.

A review of existing information, and workshop of fishery experts, identified that net mouths being open during the haul is expected to be a key source of bycatch risk. A net restrictor was proposed by fishery experts, and is currently being subject to at-sea testing.

### **Mitigación para aves marinas en pesquería de arrastre de cigala de Nueva Zelanda**

A raíz de las tasas relativamente altas de captura accidental de aves marinas registradas en la pesquería de arrastre de cigala bentónica de Nueva Zelanda, el gobierno de Nueva Zelanda encomendó un proyecto para investigar y probar métodos de mitigación para la pesquería. Los buques de esta pesquería utilizan equipos de pesca con múltiples redes (dos o tres) distribuidas en forma contigua. Se espera que los altos volúmenes de desechos y los tipos de equipos utilizados sean factores importantes que contribuyan a la captura de aves marinas.

A través de una revisión de la información con que se cuenta en la actualidad y de un taller de expertos en pesquerías, se determinó que, según se prevé, las bocas de las redes que se encuentren abiertas durante el transporte serán un factor fundamental de riesgo de captura accidental. Los expertos en pesquerías propusieron incorporar un

mecanismo de reducción en las redes, que actualmente se está sometiendo a pruebas en el mar.

**Atténuation de la capture accidentelle des oiseaux marins dans la pêche chalutière à la langoustine de la Nouvelle-Zélande.**

Étant donné le taux élevé de capture accidentelle d'oiseaux marins enregistré dans la pêche chalutière démersale à la langoustine de la Nouvelle-Zélande, le gouvernement néo-zélandais a demandé qu'un projet soit lancé afin d'identifier et tester des méthodes d'atténuation propres à cette pêche. Les chalutiers utilisent des engins de pêche équipés de filets multiples (deux ou trois) déployés de manière adjacente. Il est probable que l'importante quantité de déchets et les types d'engins utilisés contribuent grandement au niveau de la capture des oiseaux marins.

L'examen des informations disponibles et la tenue d'un atelier rassemblant des experts halieutiques ont permis d'établir qu'un facteur important du risque de capture accidentelle réside dans le fait que l'embouchure du filet reste béante lors de la remontée du filet. Les experts halieutiques ont proposé d'utiliser un réducteur de filet qui est actuellement mis à l'essai en mer.

## 1. BACKGROUND

The New Zealand scampi trawl fishery has recently recorded relatively high seabird bycatch rates (e.g. Ramm 2012). Captures include species considered very high priority for seabird bycatch reduction (e.g. black petrel). Vessels in this fishery use fishing gear with multiple (two or three) nets deployed adjacently. High volumes of discards and gear types used are expected to be important factors contributing to seabird captures, which occur at relatively high rates in this fishery.

Given the high seabird bycatch rates observed, the New Zealand Department of Conservation commissioned a project that aims to develop methods to reduce these captures. The project has been contracted to Dragonfly Ltd and Clement and Associates. See Appendix 1 for a background paper.

The specific objectives of the project are:

1. To identify methods to mitigate the capture of seabirds in the commercial scampi trawl fishery,
2. To test the feasibility, and to the extent possible the effectiveness, of methods to mitigate the capture of seabirds in the commercial scampi trawl fishery, and,
3. To make recommendations for future work to develop and/or test the effectiveness of methods to mitigate the capture of seabirds in the commercial scampi trawl fishery.

## 2. METHODS

### 2.1. The project to date

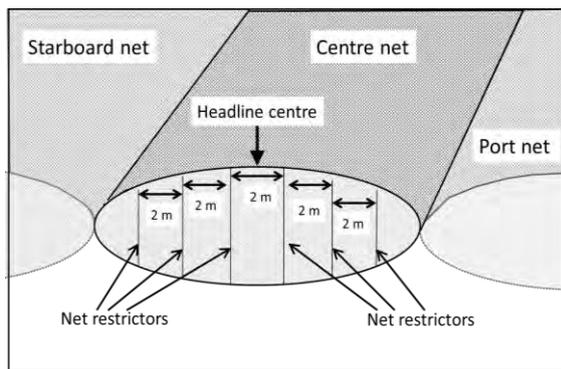
So far, the project has involved an analysis of historic data on seabird captures (including fisher-reported data), a review of possible mitigation measures, and a workshop with key players in the fishery including skippers and crews (see Appendix 1). Analysis of historic data showed that seabirds can be caught in scampi fisheries year-round. Data also confirms that while birds are captured in all nets, the presence of the centre net in triple rigs increased seabird catch rates. It was identified that net mouths being open during the haul is expected to be a key source of bycatch risk

At the workshop, Simon Gibb proposed an idea for the 'net restrictor' (Figures 1 and 2). This approach aims to stop the net mouth billowing wide open when the centre net is close to the water surface. This is thought to be when the risk of catching seabirds is greatest. Preliminary feedback is very positive from two vessels trialling the restrictor in the centre trawl for 3 to 4 months – it's cheap to construct, easy to fit to the trawl and the restrictors have not adversely affected fishing operations. Skippers using the device have commented that there is no reason not to use the restrictors, based on what they have seen to date. They can see restrictors reduce the headline opening while the trawl is at the back of the vessel. This should reduce the area birds can dive into, reducing the risk of captures. Now, the project team is conducting more detailed trials on New Zealand scampi vessels using triple rig gear to help test whether the net restrictor reduces seabird catch.

## 2.2. The net restrictor

The net restrictors are set up in the centre net of triple net scampi trawls as follows (see Figure 1):

1. one end of the restrictors is secured to the headline of the centre net
2. each restrictor rope is then taken across the net mouth
3. the other end of each restrictor is secured to the centre net's ground-rope.
4. restrictors (3 per side) are fitted to the centre trawl when using three trawls
  - a. Spacing: One restrictor is placed 1 m to each side of the headline centre, then 2 m apart for the next 2 restrictors on either side of the net (see Figure 1)
  - b. Each restrictor is comprised of 6 to 10mm nylon braid, with a loop each end, clove-hitched onto the headline and ground-rope with nylon twine (see Figure 2)
  - c. The height of the restrictor matches the trawl design headline height. So, the vertical length of restrictor ropes will vary.



**Figure 1.** Diagram of the net restrictor, showing restrictor spacings.



**Figure 2.** Photographs of the net restrictor, showing “clove-hitch”.

### **2.3. At-sea trials**

Trials are underway during the austral 2012-13 fishing year, using fisheries observers, that will record information on the deployment of the restrictor and seabird bycatch.

### **3. RESULTS**

Results of the trials will be reported at SBWG-6.

### **Reference**

Ramm, K. 2012. Conservation Services Programme Observer Report: 1 July 2010 to 30 June 2011. Draft report held by the New Zealand Department of Conservation, Wellington, New Zealand.

**APPENDIX 1. SEE ATTACHED PDF FILE**

**Background report: review and proposed methods.**

## **Seabird mitigation in New Zealand's scampi trawl fishery**

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Progress report for Department of Conservation  
MIT2011-02: Scampi Trawl - Mitigate seabird captures



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