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Intertek Fisheries Certification (IFC)

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**Surveillance Report  
New Zealand Hoki Fishery**

Certificate No.: **MML-F-030**

**Intertek Fisheries Certification Ltd**

April 2014

Authors:

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**J. P. Pierre**

## 1.0 GENERAL INFORMATION

**Scope against which the surveillance is undertaken:** MSC Principles and Criteria for Sustainable Fishing as applied to the New Zealand Hoki Fishery

**Species:** New Zealand Hoki (*Macruronus novaezealandiae*)

**Area:** New Zealand Exclusive Economic Zone

**Method of capture:** Trawl

|   |  |                 |                                   |                 |
|---|--|-----------------|-----------------------------------|-----------------|
| <b>Date of Surveillance:</b>            | <b>April 2014</b>  |                 |                                   |                 |
| <b>Initial Certification</b>            | <b>Date: March 2001</b>  |                 | <b>Certificate Ref:</b> MML-F-030 |                 |
| <b>First Recertification</b>            | <b>Date: October 2007</b>  |                 |                                   |                 |
| <b>Second Recertification</b>           | <b>Date: September 2012</b>  |                 |                                   |                 |
| <b>Surveillance stage</b>               | 1 <sup>st</sup>  | 2 <sup>nd</sup> | 3 <sup>rd</sup>                   | 4 <sup>th</sup> |
| <b>Surveillance team:</b>               | <b>Lead Assessor:</b> J.M. Akroyd<br><b>Assessor(s):</b> J. P. Pierre      |                 |                                   |                 |
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## 2.0 RESULTS, CONCLUSIONS AND RECOMMENDATIONS

This report contains the findings of the second surveillance cycle in relation to this fishery. This was a reduced surveillance audit (see table in Annex 3).

The second recertification of this fishery occurred in September 2012. One condition was placed on the fishery at that time.

### Condition 1:

Improve management of habitat impacts of the hoki fishery, such that by the end of third surveillance audit, it can be shown that the fishery is highly unlikely (i.e. there should be no more than a 30% probability) to reduce habitat structure and function to a point where there would be serious or irreversible harm.

At the first surveillance audit, the PI relating to the condition (PI 2.4.1) rescored at 90 and the single condition on the recertification was closed out. In addition, two recommendations were raised.

### Recommendations:

1. At the next annual surveillance the audit team will assess the results of the ongoing monitoring of seabird captures, particularly of those species identified as being bycaught at levels above their sustainability limit in New Zealand fisheries (Richard et al. 2011, and update in preparation).

2. At the next annual surveillance the audit team will evaluate the work and the ongoing monitoring to cumulatively assess bottom trawl footprint by BOMEK habitat class (or an improved tool, when one becomes available).

The surveillance audit methodology, as defined in the current version of the MSC Certification Requirements is followed in this audit and so the MSC criteria for determining the level of surveillance audit that the fishery requires is followed (see Annex 3).

In reviewing the new information available and progress against the two recommendations raised in the first surveillance audit, the audit team noted the slight reduction in the estimated total captures of seabirds in 2011/12 and the ongoing captures of seabird species categorised as “Very high” and “High” risk of experiencing bycatch in New Zealand commercial fisheries at levels beyond their sustainability limits. Seabird captures will be reviewed again as part of the next audit. No new information was available to the audit team to evaluate progress on the second recommendation, although the trawl footprint for the fishery in 2011/12 was plotted. This recommendation will be revisited at the 2015 audit.

### Information Sources:

#### Meetings

This audit was conducted remotely. No meetings were held.

All stakeholders from the full assessment were contacted prior to the surveillance audit taking place.

#### Reports etc

Reports were made available by the client to all interested parties and are available on the website: [www.deepwater.co.nz/our-species/hoki/msc-second-surveillance-audit-2014-supporting-documents/](http://www.deepwater.co.nz/our-species/hoki/msc-second-surveillance-audit-2014-supporting-documents/)

#### References

Black, J. 2014. Trawl Ground Analysis: New Zealand Hoki Fisheries 2011-12. Available at: <http://deepwater.hosting.outside.net/wp-content/uploads/2014/03/Black-2014-Analysis-of-New->

Zealand%E2%80%99s-Trawl-Grounds-for-New-Zealand-hoki-fisheries-2011-12..pdf

Bull, B., Francis, R.I.C.C., Dunn, A., Gilbert, D.J., Bian, R., Fu, D. 2012. CASAL (C++ algorithmic stock assessment laboratory): CASAL User Manual v2. 30-2012/03/21. NIWA Technical Report 135.

IUCN 2013. The IUCN Red List of Threatened Species. Version 2013.2. <<http://www.iucnredlist.org>>.

McKenzie A. 2013. Assessment of hoki (*Macruronus novaezelandiae*) in 2012. New Zealand Fisheries Assessment Report 2013/27.

Ministry of Fisheries. 2008. Harvest Strategy Standard for New Zealand Fisheries. Ministry of Fisheries – October 2008. Ministry of Fisheries, Wellington.

Ministry for Primary Industries. 2013a. Annual Review Report for Deepwater Fisheries for 2012/13. Ministry for Primary Industries, Wellington.

Ministry for Primary Industries. 2013b. Fisheries Assessment Plenary May 2013. Stock Assessments and Yield Estimates Volume 1: Introductory sections to jack mackerel. Ministry for Primary Industries, Wellington.

Ministry for Primary Industries. 2013c. National Plan of Action – 2013 to reduce the incidental catch of seabirds in New Zealand fisheries. Ministry for Primary Industries, Wellington.

Ministry for Primary Industries. 2013d. National Plan of Action for the Conservation and Management of Sharks 2013. Ministry for Primary Industries, Wellington.

Richard, Y, Abraham, E.R. and Filippi, D. 2011. Assessment of the risk to seabird populations from New Zealand commercial fisheries. Final Research Report for Ministry of Fisheries projects IPA2009/19 and IPA2009/20. Ministry of Fisheries, Wellington.

Richard, Y. and Abraham, E.R. 2013. Risk of commercial fisheries to New Zealand seabird populations New Zealand Aquatic Environment and Biodiversity Report No. 109. Ministry for Primary Industries, Wellington.

**Standards and Guidelines used:**

1. MSC Principles and Criteria
2. MSC Certification Requirements v1.3
3. Guidance to the MSC Certification Requirements, v 1.0, August 15 2011 and MSC Guidance to the Certification Requirements 1.3 2013 (as applied to PI 2.4.1).

| <b>Stock status and Catch Data</b>                             |   |
|--|---|
| <b>Update on Stock Status</b>                                  | <p>In 2013, the 2012 stock assessment model used for hoki was revised. The approach to the model was similar to the 2012 assessment (McKenzie 2013), e.g., using Bayesian estimation, but additional information incorporated into the 2013 assessment included two new trawl surveys (from the Chatham Rise, January 2013, and Southern Plateau, December 2012), one acoustic survey (West Coast South Island, winter 2012), and updated catch at age data. As before, the assessment was developed using CASAL (Bull et al. 2012).</p> <p>For the western stock, <math>B_{2013}</math> was estimated to be 45-65% <math>B_0</math> and more than 90% likely to be above the lower end of the management target bound (35-50% <math>B_0</math>). The stock was considered to be exceptionally unlikely (<math>P &lt; 1\%</math>) to be below the soft (20% <math>B_0</math>) or hard (10% <math>B_0</math>) limits. According to MPI's Harvest Strategy Standard (Ministry of Fisheries 2008), the western stock is therefore now considered to be fully rebuilt (i.e., there is at least a 70% probability that the [lower bound of the target] has been achieved for at least the last three years) (MPI 2013b).</p> <p>For the eastern stock, <math>B_{2013}</math> was estimated to be 50-57% <math>B_0</math>, more than 90% likely to be at or above the lower end of the management target's bounds, and 40-60% likely to be at or above the upper end of the target range's bounds. The stock was considered to be exceptionally unlikely (<math>P &lt; 1\%</math>) to be below the soft (20% <math>B_0</math>) or hard (10% <math>B_0</math>) limits (MPI 2013b).</p> <p>The next assessment is scheduled for 2014.</p> |
| <b>Total Allowable Catch (TAC) in most recent fishing year</b> | Total Allowable Commercial Catch (TACC) for the fishing year ending in 2013 was 130,000 t.  |
| <b>Unit of Certification share of TAC</b>                      | 100%  |
| <b>Client share of TAC</b>                                     | 94-96%  |
| <b>Green Weight<sup>1</sup> of catch taken by client group</b> | <p>Most recent calendar year (Y): 131,568 t taken in the fishing year ending in 2013</p> <p>Previous year (Y-1): 118,805 t taken in the fishing year ending in 2012</p>   |

<sup>1</sup> The weight of a catch prior to processing

| <b>Recommendation from first annual audit</b> | PI 2.3.1: At the next annual surveillance the audit team will assess the results of the ongoing monitoring of seabird captures, particularly of those species identified as being bycaught at levels above their sustainability limit in New Zealand fisheries (Richard et al. 2011, and update in preparation).   |             |            |              |                      |                  |                      |                  |              |            |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
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| <b>Client Progress</b>                        | <p>In 2013, an update to Richard et al. (2011) was completed. This work (Richard and Abraham 2013) found that of the seabird species at “Very high risk” of experiencing bycatch in New Zealand commercial fisheries at levels beyond their sustainability limits, the following species have been reported caught in the hoki fishery: Salvin’s albatross, flesh-footed shearwater, southern Buller’s albatross, Chatham Island albatross, and New Zealand white-capped albatross. Amongst “High risk” species, Cape petrel are caught in the hoki fishery. “Medium risk” species reported caught in the hoki fishery are southern royal albatross, Westland petrel, white-chinned petrel, Campbell albatross, northern giant petrel, and grey petrel.</p> <p>Of the “Very high risk” species identified, Salvin’s albatross, southern Buller’s albatross, and white-capped albatross appear to be of greatest concern for management based on the numbers reported caught (Table 1), while recognising that the threat classifications differ amongst these species (IUCN 2013).</p> <p>In accordance with the NPOA-Seabirds 2013 (MPI 2013c), seabird species identified as at very high or high risk of having commercial fisheries bycatch exceed population sustainability limits should be managed to a lower risk category by 2018.</p> <p>Table 1. Number of observed seabird captures in hoki trawl fisheries, 2002–03 to 2011–12, by species and area. The risk ratio is an estimate of aggregate potential fatalities across trawl and longline fisheries relative to the Potential Biological Removals, PBR (from Richard et al. 2013 where full details of the risk assessment approach can be found). It is not an estimate of the risk posed by fishing for hoki. Other data, version 20130304. (Source: MPI 2013b).</p> <table border="1" data-bbox="411 1171 1428 1742"> <thead> <tr> <th>Species</th> <th>Risk Ratio</th> <th>Cook Strait</th> <th>ECSI</th> <th>Chatham Rise</th> <th>Stewart Snares Shelf</th> <th>Auckland Islands</th> <th>Subantarctic</th> <th>Fiordland</th> <th>WCSI</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Salvin's albatross</td> <td>Very high</td> <td>10</td> <td>34</td> <td>36</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>82</td> </tr> <tr> <td>Southern Buller's albatross</td> <td>Very high</td> <td>0</td> <td>5</td> <td>4</td> <td>4</td> <td>0</td> <td>0</td> <td>9</td> <td>26</td> <td>48</td> </tr> <tr> <td>Chatham Island albatross</td> <td>Very high</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>NZ white capped albatross</td> <td>Very high</td> <td>2</td> <td>6</td> <td>4</td> <td>14</td> <td>0</td> <td>1</td> <td>3</td> <td>22</td> <td>52</td> </tr> <tr> <td>Southern royal albatross</td> <td>Medium</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>Campbell black-browed albatross</td> <td>Medium</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>5</td> <td>6</td> </tr> <tr> <td>Unidentified albatross</td> <td>N/A</td> <td>2</td> <td>6</td> <td>2</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>11</td> </tr> <tr> <td><b>Total albatrosses</b></td> <td><b>N/A</b></td> <td><b>14</b></td> <td><b>53</b></td> <td><b>46</b></td> <td><b>21</b></td> <td><b>0</b></td> <td><b>3</b></td> <td><b>12</b></td> <td><b>54</b></td> <td><b>201</b></td> </tr> <tr> <td>Flesh footed shearwater</td> <td>Very high</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>Cape petrels</td> <td>High</td> <td>10</td> <td>4</td> <td>3</td> <td>2</td> <td>0</td> <td>0</td> <td>6</td> <td>13</td> <td>38</td> </tr> <tr> <td>Westland petrel</td> <td>Medium</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>12</td> </tr> <tr> <td>Northern giant petrel</td> <td>Medium</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>4</td> </tr> <tr> <td>White-chinned petrel</td> <td>Medium</td> <td>3</td> <td>14</td> <td>9</td> <td>9</td> <td>1</td> <td>1</td> <td>2</td> <td>0</td> <td>39</td> </tr> <tr> <td>Grey petrel</td> <td>Medium</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>2</td> </tr> <tr> <td>Sooty shearwater</td> <td>Very low</td> <td>1</td> <td>121</td> <td>6</td> <td>23</td> <td>0</td> <td>0</td> <td>6</td> <td>0</td> <td>157</td> </tr> <tr> <td>Black-bellied storm petrel</td> <td>-</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>Common diving petrel</td> <td>-</td> <td>2</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>3</td> <td>0</td> <td>6</td> </tr> <tr> <td>Fairy prion</td> <td>-</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>2</td> <td>3</td> </tr> <tr> <td>Grey-backed storm petrel</td> <td>-</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>Unidentified seabird</td> <td>N/A</td> <td>1</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>6</td> <td>9</td> </tr> <tr> <td><b>Total other birds</b></td> <td><b>N/A</b></td> <td><b>18</b></td> <td><b>145</b></td> <td><b>19</b></td> <td><b>38</b></td> <td><b>1</b></td> <td><b>2</b></td> <td><b>17</b></td> <td><b>33</b></td> <td><b>273</b></td> </tr> </tbody> </table> <p>Across all species, estimated seabird captures were slightly lower in the fishing year ending in 2012 (the most recent for which preliminary estimates are available<sup>2</sup>). Estimated captures were, on average, 335 (95% confidence interval: 241-481) and 265 (95% CI: 207-347) in the fishing years ending 2011 and 2012, respectively. 2013 estimates are expected to be available by the next surveillance audit.</p> <p>Amongst seabird captures for the fishing year ending in 2012, there were 61 captures</p> | Species     | Risk Ratio | Cook Strait  | ECSI                 | Chatham Rise     | Stewart Snares Shelf | Auckland Islands | Subantarctic | Fiordland  | WCSI | Total | Salvin's albatross | Very high | 10 | 34 | 36 | 1 | 0 | 1 | 0 | 0 | 82 | Southern Buller's albatross | Very high | 0 | 5 | 4 | 4 | 0 | 0 | 9 | 26 | 48 | Chatham Island albatross | Very high | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | NZ white capped albatross | Very high | 2 | 6 | 4 | 14 | 0 | 1 | 3 | 22 | 52 | Southern royal albatross | Medium | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Campbell black-browed albatross | Medium | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | Unidentified albatross | N/A | 2 | 6 | 2 | 1 | 0 | 1 | 0 | 1 | 11 | <b>Total albatrosses</b> | <b>N/A</b> | <b>14</b> | <b>53</b> | <b>46</b> | <b>21</b> | <b>0</b> | <b>3</b> | <b>12</b> | <b>54</b> | <b>201</b> | Flesh footed shearwater | Very high | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Cape petrels | High | 10 | 4 | 3 | 2 | 0 | 0 | 6 | 13 | 38 | Westland petrel | Medium | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 9 | 12 | Northern giant petrel | Medium | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | White-chinned petrel | Medium | 3 | 14 | 9 | 9 | 1 | 1 | 2 | 0 | 39 | Grey petrel | Medium | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | Sooty shearwater | Very low | 1 | 121 | 6 | 23 | 0 | 0 | 6 | 0 | 157 | Black-bellied storm petrel | - | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Common diving petrel | - | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 6 | Fairy prion | - | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | Grey-backed storm petrel | - | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Unidentified seabird | N/A | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 9 | <b>Total other birds</b> | <b>N/A</b> | <b>18</b> | <b>145</b> | <b>19</b> | <b>38</b> | <b>1</b> | <b>2</b> | <b>17</b> | <b>33</b> | <b>273</b> |
| Species                                       | Risk Ratio   | Cook Strait | ECSI       | Chatham Rise | Stewart Snares Shelf | Auckland Islands | Subantarctic         | Fiordland        | WCSI         | Total      |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Salvin's albatross                            | Very high  | 10          | 34         | 36           | 1                    | 0                | 1                    | 0                | 0            | 82         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Southern Buller's albatross                   | Very high  | 0           | 5          | 4            | 4                    | 0                | 0                    | 9                | 26           | 48         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Chatham Island albatross                      | Very high  | 0           | 0          | 0            | 1                    | 0                | 0                    | 0                | 0            | 1          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| NZ white capped albatross                     | Very high  | 2           | 6          | 4            | 14                   | 0                | 1                    | 3                | 22           | 52         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Southern royal albatross                      | Medium   | 0           | 1          | 0            | 0                    | 0                | 0                    | 0                | 0            | 1          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Campbell black-browed albatross               | Medium   | 0           | 1          | 0            | 0                    | 0                | 0                    | 0                | 5            | 6          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Unidentified albatross                        | N/A  | 2           | 6          | 2            | 1                    | 0                | 1                    | 0                | 1            | 11         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| <b>Total albatrosses</b>                      | <b>N/A</b>   | <b>14</b>   | <b>53</b>  | <b>46</b>    | <b>21</b>            | <b>0</b>         | <b>3</b>             | <b>12</b>        | <b>54</b>    | <b>201</b> |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Flesh footed shearwater                       | Very high  | 0           | 1          | 0            | 0                    | 0                | 0                    | 0                | 0            | 1          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Cape petrels                                  | High   | 10          | 4          | 3            | 2                    | 0                | 0                    | 6                | 13           | 38         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Westland petrel                               | Medium   | 1           | 1          | 1            | 0                    | 0                | 0                    | 0                | 9            | 12         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Northern giant petrel                         | Medium   | 0           | 1          | 0            | 0                    | 0                | 0                    | 0                | 3            | 4          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| White-chinned petrel                          | Medium   | 3           | 14         | 9            | 9                    | 1                | 1                    | 2                | 0            | 39         |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Grey petrel                                   | Medium   | 0           | 0          | 0            | 1                    | 0                | 1                    | 0                | 0            | 2          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Sooty shearwater                              | Very low   | 1           | 121        | 6            | 23                   | 0                | 0                    | 6                | 0            | 157        |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Black-bellied storm petrel                    | -  | 0           | 0          | 0            | 1                    | 0                | 0                    | 0                | 0            | 1          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Common diving petrel                          | -  | 2           | 0          | 0            | 1                    | 0                | 0                    | 3                | 0            | 6          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Fairy prion                                   | -  | 0           | 1          | 0            | 0                    | 0                | 0                    | 0                | 2            | 3          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Grey-backed storm petrel                      | -  | 0           | 0          | 0            | 1                    | 0                | 0                    | 0                | 0            | 1          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| Unidentified seabird                          | N/A  | 1           | 2          | 0            | 0                    | 0                | 0                    | 0                | 6            | 9          |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |
| <b>Total other birds</b>                      | <b>N/A</b>   | <b>18</b>   | <b>145</b> | <b>19</b>    | <b>38</b>            | <b>1</b>         | <b>2</b>             | <b>17</b>        | <b>33</b>    | <b>273</b> |      |       |                    |           |    |    |    |   |   |   |   |   |    |                             |           |   |   |   |   |   |   |   |    |    |                          |           |   |   |   |   |   |   |   |   |   |                           |           |   |   |   |    |   |   |   |    |    |                          |        |   |   |   |   |   |   |   |   |   |                                 |        |   |   |   |   |   |   |   |   |   |                        |     |   |   |   |   |   |   |   |   |    |                          |            |           |           |           |           |          |          |           |           |            |                         |           |   |   |   |   |   |   |   |   |   |              |      |    |   |   |   |   |   |   |    |    |                 |        |   |   |   |   |   |   |   |   |    |                       |        |   |   |   |   |   |   |   |   |   |                      |        |   |    |   |   |   |   |   |   |    |             |        |   |   |   |   |   |   |   |   |   |                  |          |   |     |   |    |   |   |   |   |     |                            |   |   |   |   |   |   |   |   |   |   |                      |   |   |   |   |   |   |   |   |   |   |             |   |   |   |   |   |   |   |   |   |   |                          |   |   |   |   |   |   |   |   |   |   |                      |     |   |   |   |   |   |   |   |   |   |                          |            |           |            |           |           |          |          |           |           |            |

<sup>2</sup> <https://data.dragonfly.co.nz/psc/v20130304/birds/hoki-trawl/all-vessels/eez/all/>

|                                 | <p>reported from observers at sea, of which 37 were on the trawl warps or doors. Another 24 captures were in the trawl net. The final 10 captures were from other or unknown sources. Both albatrosses and petrels were caught on trawl warps and in trawl nets.</p> <p>While it is not possible to identify the proximate causes of captures without additional information, warp captures are typically exacerbated by the discharge of fish processing waste. They can be reduced using effective waste management practices and bycatch reduction devices, for example, holding waste onboard for batch discharge (or ideally discharging when gear is not in the water) and the use of tori lines to minimise seabird strikes on trawl warps.</p> <p>In the 2012/13 fishing year, 9 seabird species and two species groups were reported captured in trawl tows targeting hoki (Table 2).</p> <p>Table 2. Seabirds observed captured in trawl tows targeting hoki in the 2012/13 fishing year. (Source: MPI/DOC unpublished data).</p> <table border="1" data-bbox="403 712 1436 1126"> <thead> <tr> <th>Species or species group</th> <th>Number observed caught</th> </tr> </thead> <tbody> <tr> <td>Buller's albatross</td> <td>21</td> </tr> <tr> <td>Cape petrels</td> <td>3</td> </tr> <tr> <td>Common diving petrel</td> <td>1</td> </tr> <tr> <td>Great albatross</td> <td>2</td> </tr> <tr> <td>NZ white-capped albatross</td> <td>16</td> </tr> <tr> <td>Petrels, prions and shearwaters</td> <td>2</td> </tr> <tr> <td>Prions (unidentified)</td> <td>4</td> </tr> <tr> <td>Salvin's albatross</td> <td>21</td> </tr> <tr> <td>Sooty shearwater</td> <td>17</td> </tr> <tr> <td>Westland petrel</td> <td>1</td> </tr> <tr> <td>White-chinned petrel</td> <td>9</td> </tr> <tr> <td>White-faced storm petrel</td> <td>2</td> </tr> </tbody> </table> <p>Other protected species captures reported by observers in the 2012/13 fishing year included basking sharks (2), dusky dolphin (1), New Zealand fur seal (37), New Zealand sea lion (1), and pilot whale (1) (DOC/MPI unpublished data).</p> | Species or species group | Number observed caught | Buller's albatross | 21 | Cape petrels | 3 | Common diving petrel | 1 | Great albatross | 2 | NZ white-capped albatross | 16 | Petrels, prions and shearwaters | 2 | Prions (unidentified) | 4 | Salvin's albatross | 21 | Sooty shearwater | 17 | Westland petrel | 1 | White-chinned petrel | 9 | White-faced storm petrel | 2 |
|---------------------------------|--|--------------------------|------------------------|--------------------|----|--------------|---|----------------------|---|-----------------|---|---------------------------|----|---------------------------------|---|-----------------------|---|--------------------|----|------------------|----|-----------------|---|----------------------|---|--------------------------|---|
| Species or species group        | Number observed caught   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Buller's albatross              | 21   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Cape petrels                    | 3  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Common diving petrel            | 1  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Great albatross                 | 2  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| NZ white-capped albatross       | 16   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Petrels, prions and shearwaters | 2  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Prions (unidentified)           | 4  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Salvin's albatross              | 21   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Sooty shearwater                | 17   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| Westland petrel                 | 1  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| White-chinned petrel            | 9  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| White-faced storm petrel        | 2  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| <b>Observations</b>             | <p>The audit team notes the slight reduction in estimated seabird captures in the hoki fishery between the 2011 and 2012 fishing years and that estimates should be available for 2013 at the next audit. Captures of Salvin's, Buller's and white-capped albatross continued in 2013, emphasising the appropriateness of ongoing management to reduce these captures, e.g., the use of effective warp strike mitigation devices and processing waste management strategies.</p>   |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |
| <b>Conclusion</b>               | <p>Seabird captures will be reviewed at the next audit especially captures of those species deemed to be at very high risk or high risk of experiencing bycatch in New Zealand commercial fisheries at levels beyond their sustainability limits. Information including the 2012/13 estimates of seabird captures, and the outputs of new work planned or underway on cryptic mortality of seabirds in trawl fisheries and the seabird risk assessment will also be relevant.</p>  |                          |                        |                    |    |              |   |                      |   |                 |   |                           |    |                                 |   |                       |   |                    |    |                  |    |                 |   |                      |   |                          |   |

|   |  |
|---|--|
| <b>Recommendation from first annual audit</b> | PI 2.4.1: At the next annual surveillance the audit team will evaluate the work and the ongoing monitoring to cumulatively assess bottom trawl footprint by BOMECE habitat class (or an improved tool, when one becomes available).  |
| <b>Client Progress</b>                        | Information provided to the audit team did not include new material relating to this recommendation specifically. However, 2011/12 trawl tracks were evaluated in relation to the fishable area, the probability of hoki capture, specific depth categories, and the extent of the area trawled at least once in 2011/12 in relation to the combined area of the territorial sea and Exclusive Economic Zone of New Zealand (Black 2014). In addition, past work relating to the trawl footprint of the fishery has been incorporated into new publicly available documents (e.g., the Annual Review Report for Deepwater Fisheries for 2012/13 (MPI 2013a)).  |
| <b>Observations</b>                           | <p>The team noted the findings of the work undertaken by Black (2014).</p> <p>At the 2013 audit, the BOMECE classification was considered by MPI and NIWA scientists as still being the best available information for delineating habitat types throughout the New Zealand Exclusive Economic Zone and including the areas in which hoki occur. At the 2014 audit, the team did not receive information on the further development of this classification tool, or alternatives (comparable in purpose) that were intended to supersede it.</p> <p>At the 2013 audit, the intent to review Benthic Protected Areas was identified, with the review to commence the same year. This review has not progressed as a specific item of work. However, DOC is undertaking broader scale work on marine protected areas with a view to developing a more flexible range of tools for marine protection than allowed for under the current legislative regime.</p> |
| <b>Conclusion</b>                             | No new information was available with which to progress this recommendation, i.e., cumulative bottom trawl footprint in relation to BOMECE habitat class. This recommendation will be considered again at the next audit.  |

**Any complaints against the certified operation; recorded, reviewed and action taken.**

No complaints were reported to the audit team.

**Any relevant changes to legislation or regulation.**

No changes to legislation or regulation were reported to the audit team.

**Any relevant changes to management regime.**

Since the last audit, structural and staffing changes have taken place at MPI. A new Chief Executive is in place. The role of Manager - Deepwater Fisheries is currently open for recruitment and an Acting Manager from the Deepwater team is in place during this transition.

As an outcome of the Foreign Charter Vessel (FCV) review, 100% observer coverage will continue on all vessels operating under non-New Zealand flags until 2016. MPI also requires FCVs to have completed compliance plans which may be audited.

A new forum for engaging with stakeholders on environmental issues has been initiated by MPI. This forum

**Any relevant changes to management regime.**

is called the Inshore and Deepwater Environmental Engagement Forum (EEF) and is an opportunity for engagement that is additional to (and separate from) formal consultation processes operated by MPI (and DOC).

A new NPOA-Seabirds (MPI 2013c) and a new NPOA-Sharks (MPI 2013d) are also in place.

**Overall Conclusions.**

No changes in management have taken place that would detrimentally affect the performance of this fishery against the MSC standard and the fishery continues to meet the requirements of the MSC Standard.

No destructive fishing practices or controversial unilateral exemptions have been introduced into the fishery.

MSC Certification should therefore continue with annual audits.

**Annex 1**

**Written stakeholder submissions to the surveillance audit and IMM responses to points raised.**

None received

**Annex 2****Notification of surveillance audit**

**Marine Stewardship Council (MSC) Fishery Certification Assessment  
NZ Hoki Fishery  
Certification Body: Intertek Fisheries Certification**

**Surveillance Audit**

Following the second recertification, we are now continuing the process of annual surveillance audits of the fishery. Following recertification it was determined that the appropriate surveillance level for this fishery would be alternate years off -site and on -site surveillance audits. As this is Year 1 an off site audit will take place

This off-site audit still has two principal functions:

1. To review any changes in the management of the fishery, including regulations, key management or scientific staff, or stock evaluation
2. To evaluate the progress of the fishery against any Conditions of Certification raised during the Full Assessment

We invite stakeholders to make written submissions on the above or any relevant issues related to this fishery

The audit team is:

|                       |                          |
|-----------------------|--------------------------|
| <b>Jo Akroyd</b>      | <b>Coordinator / L/A</b> |
| <b>Johanna Pierre</b> | <b>P1</b>                |
| <b>Johanna Pierre</b> | <b>P2</b>                |
| <b>Jo Akroyd</b>      | <b>P3</b>                |

(see details of the team membership below).

Should you have any information on this fishery that you feel should be considered in the assessment, please put these in writing with

- a) your name and contact details
- b) your association with the fishery

Please send to the Lead Assessor Jo Akroyd ([jakroyd@xtra.co.nz](mailto:jakroyd@xtra.co.nz)) by the **28<sup>th</sup> March 2014**

Lead Assessor Jo Akroyd  
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**Audit Team Members:****Jo Akroyd**

Jo is a fisheries management and marine ecosystem consultant with extensive international and Pacific experience. She has worked at senior levels in both the public and private sector as a fisheries manager and marine policy expert. Jo was with the Ministry of Agriculture and Fisheries in New Zealand for 20 years. Starting as a fisheries scientist, she was promoted to senior chief fisheries scientist, then Fisheries Management Officer, and the Assistant Director, Marine Research. She was awarded a Commemoration Medal in 1990 in recognition of her pioneering work in establishing New Zealand's fisheries quota management system. Among her current contracted activities, she is involved internationally in fishery certification of offshore, inshore and shellfish fisheries as Fisheries Management Specialist and Lead Assessor for the Intertek Fisheries Certification audit team. She has carried out the Marine Stewardship Councils' (MSC) certification assessment for sustainable fisheries. Examples include NZ (hoki, southern blue whiting, albacore, scallops), Fiji (longline albacore) Japan (pole and line tuna, flatfish, snowcrab, scallops), China (scallops) Antarctica (Ross sea tooth fishery).

**Johanna Pierre**

Johanna completed her BSc (Hons) in Zoology at the University of Canterbury, New Zealand, and followed that with a PhD in ecology and environmental biology at the University of Alberta, Canada. In the course of conducting her PhD research on the ecological impacts of forestry activities in northern Canada, she became especially interested in working at the environment – economic interface. After completing a post-doctoral fellowship in biodiversity science at the University of Tokyo, Japan, Johanna returned to New Zealand to work at the Department of Conservation (DOC). During her time at DOC, Johanna focussed on the environmental effects of fishing. This included leading a team producing science, policy and management tools for the New Zealand commercial fisheries environment. As well as working with New Zealand-based stakeholders, Johanna maintained extensive international engagement, including with Regional Fisheries Management Organisations, as New Zealand representative for the Agreement on the Conservation of Albatrosses and Petrels, and as a practising scientist. Johanna went on to lead New Zealand's science and innovation engagement with Asia for the Ministry of Science and Innovation. She now consults fulltime on freshwater and marine science and policy, with a particular focus on fisheries sustainability.

Full CVs of the team members are available on request from IFC

Jo Akroyd and Johanna Pierre were members of the assessment team for the recertification of this fishery.

### Annex 3

#### Determination of surveillance level

A surveillance audit may be conducted as either an “on-site” or “offsite audit”. This is determined by using criteria set out by the MSC:

| Criteria                      | Surveillance Score | NZ Hoki Fishery |
|-------------------------------|--------------------|-----------------|
| 1. Default Assessment Tree    |                    |                 |
| Yes                           | 0                  | 0               |
| No                            | 2                  |                 |
| 2. Number of Conditions       |                    |                 |
| Zero Conditions               | 0                  | 0               |
| 1-5 Conditions                | 1                  |                 |
| >5 Conditions                 | 2                  |                 |
| 3. Principle Level Scores     |                    |                 |
| ≥ 85                          | 0                  | 0               |
| <85                           | 2                  |                 |
| 4. Conditions on outcome PIs? |                    |                 |
| Yes                           | 2                  |                 |
| No                            | 0                  | 0               |
| <b>Total</b>                  |                    | <b>0</b>        |

The score for the fishery is used to determine the surveillance level appropriate to the fishery using the table below:

| Surveillance score | Surveillance level   | Years after certification or re-certification |                             |                             |  |  |
|--------------------|----------------------|---|-----------------------------|-----------------------------|--|--|
|                    |                      | Year 1  | Year 2                      | Year 3                      | Year 4   |  |
| 2 or more          | Normal surveillance  | On-site surveillance audit                    | On-site surveillance audit  | On-site surveillance audit  | On-site surveillance audit & recertification visit |  |
| 1                  | Remote surveillance  | Option 1                                      | Off-site surveillance audit | On-site surveillance audit  | Off-site surveillance audit                        | On-site surveillance audit & recertification visit |
|                    |                      | Option 2                                      | On-site surveillance audit  | Off-site surveillance audit | On-site surveillance audit                         |  |
| 0                  | Reduced surveillance | Review new information                        | On-site surveillance audit  | Review new information      | On-site surveillance audit & recertification visit |  |

The NZ Hoki fishery scores 0, as no Conditions remain open and the Principle 1 score is >85. A review of information was carried out this year (2014) and so an on site surveillance audit will be undertaken next year (2015).