HOK2015P1E1

Ministry for Primary Industries
Manatū Ahu Matua

Annual Review Report for Deepwater Fisheries for 2013/14

MPI Technical Paper No: 2015/07

Prepared by the Ministry for Primary Industries

ISBN No: 978-0-908334-06-3 (online)
ISSN No: 2253-3923 (online)

April 2015

New Zealand Government

Growing and Protecting New Zealand

Disclaimer

While every effort has been made to ensure the information in this publication is accurate, the Ministry for Primary Industries does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decisions based on this information. Any view or opinion expressed does not necessarily represent the view of the Ministry for Primary Industries.

Requests for further copies should be directed to:

Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526
WELLINGTON 6140

Email: brand@mpi.govt.nz

Telephone: 0800 00 83 33

Facsimile: 04-894 0300

This publication is also available on the Ministry for Primary Industries website at http://www.mpi.govt.nz/news-resources/publications.aspx

Contents

Page

Introduction

Overview of New Zealand's deepwater fisheries

New Zealand's Deepwater and Middle-depth fisheries (deepwater fisheries) are the fisheries which predominantly occur in offshore waters beyond the 12 nautical mile (nm) limit of the territorial sea. Deepwater fishing activity occurs out to the 200nm limit of New Zealand's exclusive economic zone (EEZ). Deepwater fisheries include six of New Zealand's ten largest export earning natural harvest fisheries, which together accounted for over NZ$450 million in export earnings in 2012.

The management of New Zealand's deepwater fisheries is a collaborative process between the Ministry for Primary Industries (MPI) (representing the Crown and its statutory obligations to the public) and the deepwater sector of the commercial fishing industry, represented by the Deepwater Group Ltd (DWG). Management Objectives are achieved by drawing on the combined knowledge, experience, capabilities and perspectives of both MPI and DWG.

Within deepwater fisheries portfolio, fishstocks have been ranked into three tiers, primarily according to their commercial importance (see Table 1). Tier 1 fisheries are high volume and/or high value fisheries and traditionally are targeted. These are important export revenue earners, which is reflected in the high quota value associated with these species. Tier 2 fisheries are typically less sizable or valuable bycatch species or are only target fisheries at certain times of the year or in limited volumes. Tier 3 species are those caught as incidental bycatch that are not managed through the quota management system (QMS).

Table 1: Categorisation of deepwater species

	Stocks included the National Deepwater Plan[1] (Tier 1 plan)	Stocks not currently included in National Deepwater Plan (date of expected inclusion or Tier 1 plan containing species)
Tier 1 Species	Hoki : All Orange Roughy: All Southern Blue Whiting: All Ling: LIN3 - LIN7 Hake: All Jack Mackerel: JMA3 and JMA7 only Oreo: All	Scampi: All (2015) Squid: All (2015)
Tier 2 Species	Silver warehou: All (HOK) Spiny dogfish: SPD4, SPD5 (HOK) Frostfish: FRO3-FRO9 (HOK) White warehou: All (HOK) Lookdown dory: All (HOK) Black cardinalfish: All (ORH) Ribaldo: RIB3-RIB8 (LIN) Patagonian toothfish: All (LIN) Redbait: All (JMA) English mackerel: EMA3, EMA7 (JMA) Rubyfish: All (OEO) Alfonsino: All (OEO)	Barracouta: BAR4, BAR5, BAR7 (SQU) Prawn killer: All (SCI) Sea perch: SPE3-SPE7 (SCI) Pale ghost shark: All (tbc) Dark ghost shark: GSH4-GSH6 (tbc) Deepwater crabs (KIC/GSC/CHC): All (tbc) Gemfish: SKI3, SKI7 (tbc)
Tier 3 Species		Non-QMS species

[1] For some species (e.g. ling), management of some stocks falls under the National Deepwater Plan while the remainder are managed under the National Inshore Finfish Plan.

Overview of the National Deepwater Plan

From 1 July 2011 the management of New Zealand's deepwater fisheries has been implemented through the National Fisheries Plan for Deepwater and Middle-depth Fisheries (National Deepwater Plan), which collectively consists of three parts (Figure 1).

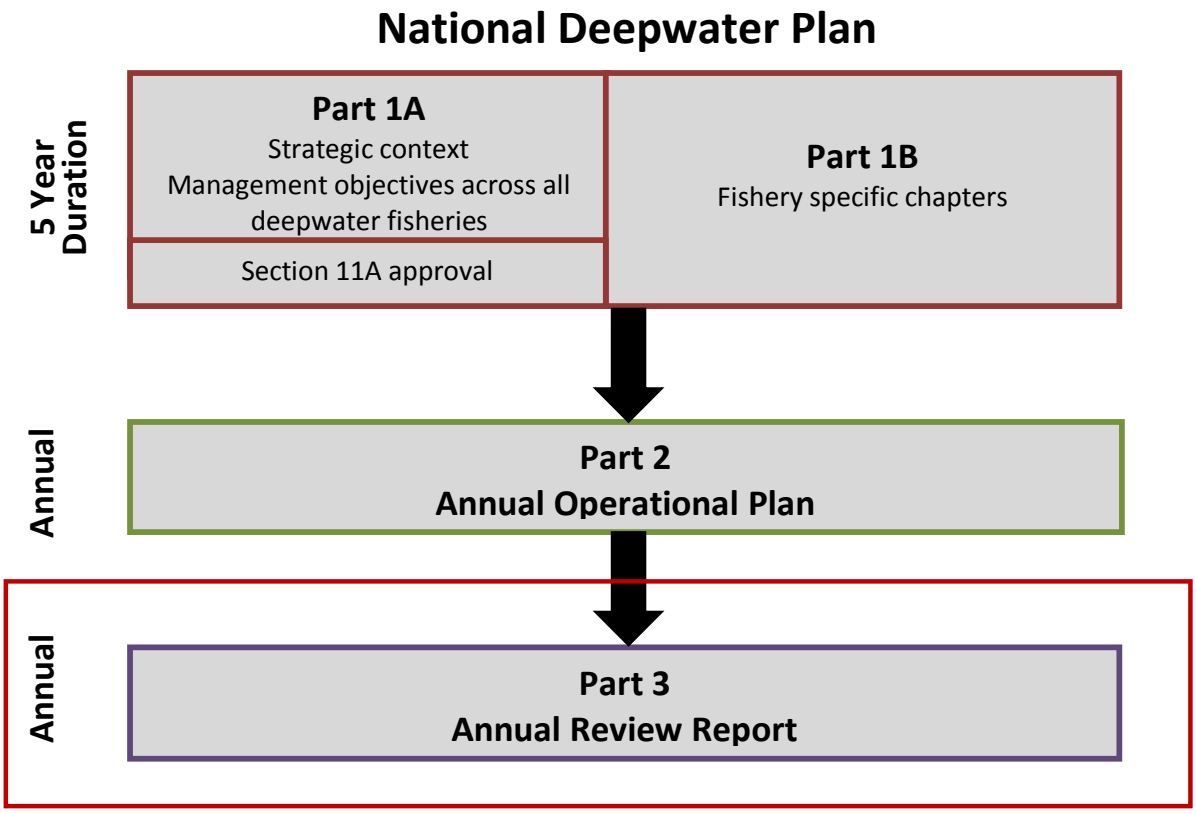


Figure 1: The three components of the National Deepwater Plan.

Part 1 of the National Deepwater Plan establishes the five year enabling framework for the management of New Zealand's deepwater fisheries. It is further divided into two parts – Part 1A and Part 1B.

Part 1A details the overall strategic direction for New Zealand's deepwater fisheries. Specifically it describes:

1. The wider strategic context that fisheries plans are part of, including *Fisheries 2030*
2. The description and status of the management objectives that will apply across all deepwater fisheries
3. How the National Deepwater Plan will be implemented and how stakeholders will be engaged during the implementation phase.

Part 1A of the National Deepwater Plan was approved by the Minister of Fisheries under Section 11A of the Fisheries Act 1996. Consequently, it must be considered each time the Minister makes decisions or recommendations concerning regulation or control of fishing or any sustainability measures relating to deepwater fisheries.

Part 1B comprises the fishery-specific chapters of the National Deepwater Plan which provide greater detail on how deepwater fisheries will be managed at the fishery level, in line with the management objectives specified in the National Deepwater Plan. To date, fishery-specific chapters have been completed for the hoki, orange roughy, southern blue whiting, ling, hake, jack mackerel, and oreo fisheries.

The fishery-specific chapters describe the operational objectives for each target fishery and their key associated bycatch species, as well as how performance against both the management and operational objectives will be assessed at the fishery level. These chapters also describe any agreed harvest strategy in place for the relevant species.

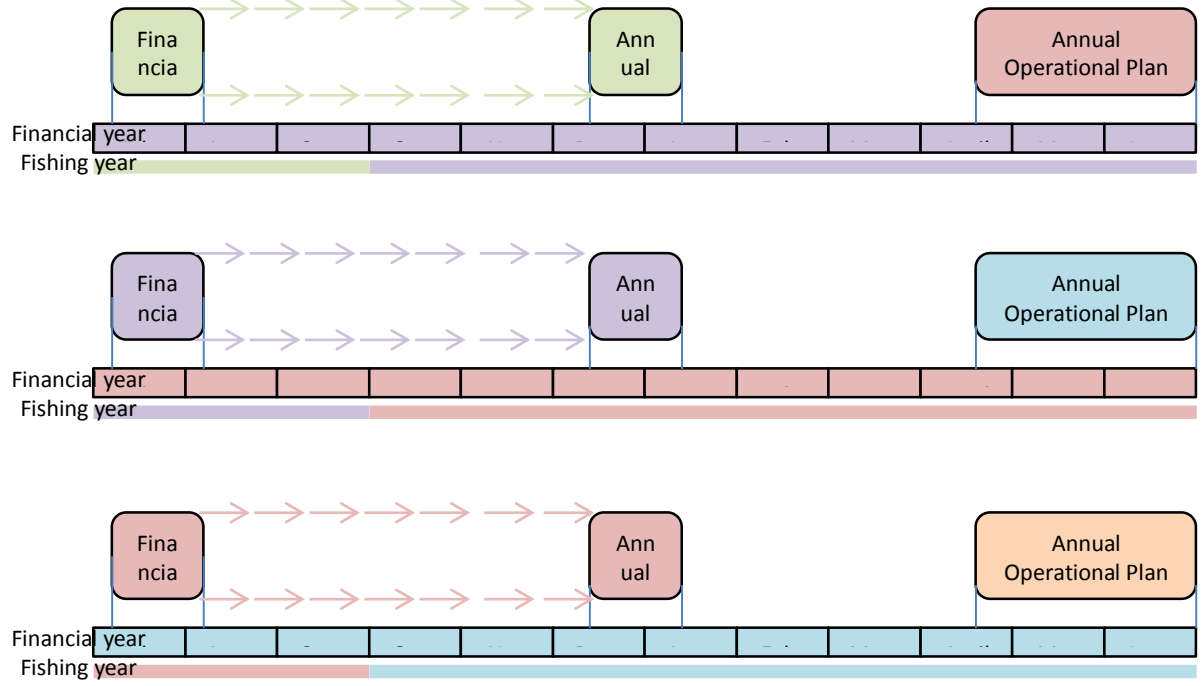
Parts 2 and 3 of the National Deepwater Plan are delivered annually and form the Annual Fisheries Planning Process. Figure 2 shows a schematic of three years of this annual cycle, which incorporates planning and reporting by both financial year (1 July – 30 June) and fishing year (1 October – 20 September).

All Annual Operational Plans and Annual Review Reports are provided to MPI's Director Fisheries Management for approval, but are not approved under section 11A. Statutory interventions required to regulate deepwater fisheries will be identified in the Annual Operational Plan.

Part 2 of the National Deepwater Plan consists of the five Annual Operational Plans (AOPs). Each Annual Operational Plan details the Management Actions and Services scheduled for delivery over the next financial year. All Management Actions and Services aim to contribute to meeting the Management Objectives and Operational Objectives specified in Part 1 of the National Deepwater Plan. Up-to-date management overviews are also provided for all the deepwater fisheries within completed chapters in Part 1B.

Part 3 of the National Deepwater Plan consists of the five Annual Review Reports (ARRs). Each ARR assesses progress during the previous financial year towards meeting the year's management priorities, by reviewing delivery of the relevant AOP. Each Annual Review Report also reports on the annual performance of deepwater fisheries in relation to environmental interactions and impacts and against the management actions specified in the AOP.

Figure 2: The Annual Fisheries Planning Process in relation to the financial year (1July – 30 June) and the fishing year (1 October-30 September). Each colour indicates a single cycle of the process.



The 2013/14 Deepwater Annual Review Report

This Annual Review Report is split into three parts:

Part 3A describes the progress that has been made during the 2013/14 financial year towards delivering the Management Actions set out in the 2013/14 Annual Operational Plan.

Achievement of these annual priorities aims to contribute towards meeting the five year high level Management Objectives and Operational Objectives set out in Part 1 of the National Deepwater Plan.

Part 3B provides detail on delivery of Fisheries Services relevant to deepwater fisheries management that are planned by financial year (1 July – 30 June). These processes include the planning and contracting of fisheries and conservation research projects, planning observer coverage on the deepwater fleet and the cost recovery regime.

Part 3C provides a summary report of the combined environmental impacts of deepwater fishing activity, and on the deepwater fleet's adherence to the suite of non-regulatory management measures in place during the 2013/14 fishing year (1 October 2013 – 30 September 2014).

Part 3A: Progress on Management Actions

The 2013/14 Annual Operational Plan included 27 Management Actions that aimed to progress delivery of the Management Objectives and Operational Objectives specified in Part 1 of the National Deepwater Plan. Table 2 summarises progress relating to each of these Management Actions.[2]

For reference, the 2013/14 Management Actions are listed in the grey boxes in Table 2, taken verbatim from the 2013/14 AOP, reflecting the situation in July 2013.

The report on progress made between 1 July 2013 and 30 September 2014 is provided in the white boxes in Table 2.

Table 2: Management Actions for deepwater Fisheries Management for 2013/14 financial year

<table>
<tr><td>1</td><td colspan="2">Review stocks for the 1 October and 1 April sustainability rounds, including deemed values</td></tr>
<tr><td></td><td colspan="2">Sustainability decisions consist primarily of catch limit (TAC & TACC) and deemed value reviews. These are completed in two rounds, one for stocks with a 1 October fishing year and another for stocks with a 1 April fishing year. In addition to stock-specific reviews, the deemed value rates for all deepwater stocks will be assessed against the criteria in the deemed value standard.
• October 2013: HOK1, ORH3B, SCI2, LIN5, LIN6, LIN7
• April 2014: tbc</td></tr>
<tr><td></td><td>Action linked to Management Objectives 1.1, 1.3, 2.1, 2.2, 2.4, 2.5, and 2.6</td><td>Operational Objective(s): HOK 2.2 and 2.3, ORH 2.3, SBW, LIN and all deepwater fisheries</td></tr>
<tr><td></td><td colspan="2">For the 1 October 2013 sustainability round, TAC & TACCs were reviewed and changed for six deepwater stocks:
• Hoki (HOK 1)
• Ling (LIN 5, LIN 6, LIN 7)
• Orange roughy (ORH 3B)
• Scampi (SCI 2)
No deemed value rates were reviewed for deepwater stocks for the 1 October 2013 sustainability round.
One stock was reviewed for the 1 April 2014 sustainability round:
• Southern blue whiting (SBW 6I)</td></tr>
<tr><td>2</td><td colspan="2">Continue the implementation of the National Deepwater Plan</td></tr>
<tr><td></td><td colspan="2">Implementation of the National Deepwater Plan for the 2013/14 financial year includes:</td></tr>
<tr><td></td><td>Actions for 13/14
• Completion/development of fishery-specific chapters for SCI, OEO, and SQU
• Integrating actions resulting from the NPOA-Seabirds into Fisheries Plan process</td><td>Business as usual:
• Annual Operational Plan for 2014/15
• Annual Review Report 2012/13</td></tr>
<tr><td></td><td>Action linked to all Management Objectives</td><td>Operational Objective(s): HOK1.4, ORH 1.1 and 1.2 and all deepwater fisheries</td></tr>
<tr><td></td><td colspan="2">In the 2013/14 financial year, the fishery-specific chapter for oreos, the Annual Review Report for 2012/13 was completed, and the 2014/15 AOP has been drafted but is not yet finalised due to internal resourcing pressures. Actions to implement the NPOA-Seabirds have been incorporated into the Annual Operational Plan for 2014/15. The scampi and squid fishery plan chapters are still in development. All National Deepwater Plan documents may be found online here: http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm</td></tr>
</table>

[2] More detail on any Management Action in Table 2 is available in the 2013/14 Annual Operational Plan (available online here: http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm).

3	**Ensure completion of Ministerial communications including briefings, Ministerials,[3] Special Permits, and Official Information Act (OIA) requests within designated timeframes**
	This Management Action will require significant attention throughout the year. As such the Ministry has responsibility to: • Provide quality advice and information to the Minister for Primary Industries • Maintain an open relationship with the public and respond to all OIA requests and letters to Government regarding fisheries issues • Review and assess any deepwater special permits
	Action linked to all Management Objectives / Operational Objective: N/A
	During the 2013-14 financial year, the deepwater fisheries management team completed eight Ministerials, eight Briefing papers, 12 Aide Memoirs, seven OIA requests, three Cabinet Papers, and 18 Written Parliamentary Questions. In addition, seven special permits or amendments to existing special permits were approved by the Manager Deepwater Fisheries.
4	**Ensure sufficient and appropriate engagement with tangata whenua through the integration of Iwi Fisheries Plans (IFPs) and Forum Fisheries Plans (FFPs) into the National Deepwater Plan and its components**
	The IFP strategy was established in 2011/12, and is designed to provide for those iwi recognised under Schedule 3 of the *Treaty of Waitangi (Fisheries Claims) Settlement Act 1992*. Currently there are five completed FFPs: CIFF @ 44 representing Chatham Island Iwi, Te Waka a Maui me ona Toka representing South Island Iwi, Te Hiku o te Ika representing Far North Iwi, Mai i nga Kuri a Wharei ki Tihirau representing the Bay of Plenty Iwi and Te Taihauaururu representing the Manawatu/Horowhenua/Kapiti/Taranaki Iwi. One IFP is completed by Rangitane who represent the Manawatu/Wairapa Iwi.
	Business as Usual: • Continue engagement with tangata whenua and address any issues as necessary through the FFPs
	Action linked to Management Objectives 1.6 and 1.7 / Operational Objective(s): HOK 1.4, 1.10, 1.11, 1.12, ORH 1.3, 1.9, 1.10, and all deepwater fisheries
	No new Iwi Fisheries Plans or Forum Fisheries Plans were finalised in the 2013/14 year. Directed efforts were made to engage with tangata whenua for all deepwater fisheries consultations throughout the year including the distribution of all sustainability round advice papers to iwi and iwi forums. In addition, relevant specific objectives from IFPs and FFPs were incorporated into sustainability round advice to the Minister.
5	**Ensure continued implementation of registration process and risk-based observer coverage for foreign charter vessels (FCVs)**
	Amendments to the Fisheries Act 1996, requiring FCVs to change their flag to New Zealand, are being considered by Parliament. The usual registration process will continue until new fishing legislation requires a different process.
	Business as Usual: • Aid where needed in the risk profiling, registration, and subsequent observer coverage process
	Action linked to all Management Objectives / Operational Objective: N/A
	Advice has been provided to inform the ongoing FCV registration process as required. In the 2013/14 financial year, 23 applications were received to consent to the registration of FCVs to fish in New Zealand. All applications were approved with 14 designated low risk, 6 medium risk, and 3 high risk.
6	**Monitor management regime for SQU6T fishery to address interactions with sea lions**
	Actions for 13/14 • Implement any relevant outcomes from the independent review of the Breen-Fu-Gilbert model **Business as Usual:** • Collaborative monitoring and reporting of effort within SQU6T between Ministry and DWG

[3] Ministerials are responses to the public on behalf of the Minister for Primary Industries or the Prime Minister.

	Action linked to Management Objectives 1.1, 1.3, 1.5, and 2.5	Operational Objective(s): N/A
	The 2014 squid fishery at the Auckland Islands (SQU 6T) commenced on 20 January 2014. The fishery was managed in accordance with the 2012-2016 SQU 6T Operational Plan (OP). The fishery concluded for the season after two weeks with no tows on the 29th of June 2014. More detail on the SQU 6T management regime may be found in Part 3 of this Report (p66). The OP may be found on the deepwater fisheries management website at http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm The review of the Breen-Fu-Gilbert model was completed in July 2013, the model was generally considered appropriate, with the majority of recommendations being related to technical matters. All recommendations will be considered alongside other priorities for research and resourcing.	
7	**Maintain an open and transparent management environment by ensuring that all management information is available and easily accessible for stakeholder and tangata whenua consideration**	
	Actions for 13/14: • Work with the Communications and Channels Directorate to further develop a webpage for deepwater fisheries management • Work with Aquatic Environment and Biodiversity Science group to develop Science Information sheets to communicate results of research in more layman terms	**Business as Usual:** • Increase and uphold transparency of deepwater fisheries management through distribution of the AOP, ARR, new chapters within the National Deepwater Plan, and general information relating to the management of deepwater fisheries on the Ministry's website
	Action linked to Management Objectives 1.6 and 1.7	Operational Objective(s): HOK 1.4, ORH 1.8, and all deepwater fisheries
	The deepwater fisheries management website was implemented in August 2013. The website now contains up-to-date key documents and external links relating to the management of New Zealand's deepwater fisheries. The website may be found at: http://www.fish.govt.nz/en-nz/Deepwater/default.htm. No Science Information Sheets have been developed to communicate results of research due to resourcing being prioritised to other work.	
8	**Monitor and measure the level of seabird interactions with deepwater fishing activity**	
	Seabird interactions are managed using regulatory and non-regulatory measures, including Vessel Management Plans (VMPs) which outline vessel-specific seabird mitigation practices.	
	Actions for 13/14: • Work with the DWG to ensure observers receive effective training on the VMP process and seabird mitigation	**Business as Usual:** • Monitor interactions with seabirds, at-sea risk mitigation activities, and continue to support the industry's education programme • Audit compliance with mitigation measures to ensure the non-regulatory management regime remains effective and is reported transparently to stakeholders through the ARR
	Action linked to Management Objectives 2.5 & 1.6	Operational Objective: HOK 2.10 and 2.13; LIN 2.3; and all deepwater fisheries
	Interactions between seabirds and the deepwater fishing fleet continued to be monitored at-sea by MPI observers, including through auditing performance against the industry-led Vessel Management Plans (VMPs) which aim to minimise the risk of seabird captures during fishing activity. Adherence to VMP guidelines, and seabird interaction statistics are reported on in Part 3C of this Report. Seabird interactions reported by MPI observers are statistically modelled each year to account for unobserved effort. All interactions are assessed in the wider context of New Zealand fisheries through quantitative risk assessment (Level 2 and some Level 3). The education programme delivered by the DWG Environmental Liaison Officer (ELO) continued in 2013/14, including crew training on 33 vessels >28m and 17 vessels <28m (some vessels were visited twice). The ELO also delivered training to new MPI observers on the VMP process and seabird mitigation techniques. MPI will continue to progress the specific action targeted at ensuring MPI observers are effectively trained in the VMP process and have a good understanding of seabird mitigation techniques.	

9 Monitor and measure the level of marine mammal interactions with deepwater fishing activity

Marine mammal interactions are managed using regulatory and non-regulatory measures, including a Marine Mammal Operation Procedure (MMOP) which outlines vessel-specific risk mitigation practices and proper handling of incidental marine mammal captures.

Actions for 13/14:	**Business as Usual:**
• Work with DWG as they lead on increasing communication with coastal vessel operators to better understand the level of interactions between these fisheries and marine mammals	• Monitor interactions with marine mammals, at-sea risk mitigation activities, and continue to support the industry's education programme • Audit adherence to MMOP to ensure the non-regulatory management regime remains effective and is reported transparently to stakeholders through the ARR
Action linked to Management Objectives 1.6 and 2.5	Operational Objective: HOK 2.11 and 2.13, SBW2.2 and 2.3 and all deepwater fisheries

Interactions between marine mammals and the deepwater fishing fleet continued to be monitored at-sea by MPI observers, including auditing of performance against the industry-led Marine Mammal Operational Procedure (MMOP) which aims to minimise the risk of marine mammal captures during fishing activity.
Marine mammal interactions reported by MPI observers are statistically modelled each year by research providers to account for any unobserved effort.
Details of marine mammal interactions in deepwater fisheries in 2013/14 are provided in Part 3C of this Report.

10 Monitor the level of shark interactions with deepwater fishing activity

There are many different shark species which reside or transit through New Zealand waters. To better manage the impacts of fishing on these populations more information is needed about the incidental and targeted interactions of sharks with deepwater fishing activity

Business as Usual:

- Continue to increase our information about shark interactions through observer debriefs
- Continue to minimise the use of generic reporting codes through observer training and circulation of the updated identification guide

Action linked to Management Objectives 2.5 & 1.6	Operational Objective: N/A

Identification guides for sharks have been distributed to MPI observers, and information on shark interactions is now collected during observer debriefs by the deepwater fisheries management team.
In addition, Deepwater Group Ltd has introduced a trigger (1) for basking shark captures to enable real-time response where these sharks are captured. ID guides have also been distributed across the fleet for commonly caught deepwater shark species to improve information on the level of captures.

11 Monitor non-regulatory management measures relating to sub-QMA catch limits and Hoki Management Areas (HMAs)

In conjunction with industry, the Ministry has implemented non-regulatory sub-area catch limits in the hoki, orange roughy, and oreo fisheries. HMAs, also non-regulatory, have been created to protect important areas for juvenile hoki.

Business as Usual:

- Ensure continued monitoring to confirm effectiveness of these measures
- Communicate monitoring results with stakeholders through the ARR

Action linked to all Management Objectives	Operational Objective: HOK 2.3, 2.5, ORH 2.1

Internal quarterly monitoring reports have been produced detailing performance against all non-regulatory management measures including hoki management area reporting and sub-area catch limits in hoki, orange roughy and oreo. This information is summarised for the 2013/14 fishing year in Part 3C of this Report and in the species management summaries in Appendix I.

12	**Monitor and measure the nature and extent of benthic interactions from deepwater fishing activity**	
	As benthic habitats can be important breeding grounds, foraging areas, or refuges, it is important to ensure that any impact is carefully managed and remains within acceptable limits.	
	Actions for 13/14: • Take inventory of all available information on benthic communities found within Benthic Protected Areas	**Business as Usual:** • Continue to monitor the trawl footprint of Tier 1 species in relation to BOMEC classes • Report the benthic footprint of deepwater fishing and volume of benthic species captured in the ARR • Work with the wider Ministry as legislation is developed to manage activities within New Zealand's EEZ
	Action linked to Management Objective 2.7	Operational Objective: HOK 2.15, ORH 2.9, SBW2.4 and all deepwater fisheries
	MPI contracted a research provider to map the annual trawl footprint for all Tier 1 species, and for deepwater fisheries overall. Delivery on this project is currently running behind the reporting schedule. The latest information available includes the trawl footprint up to the end of the 2010/11 fishing year. This information, as well as interactions with benthic species reported by MPI Observers, is provided in Part 3C of this ARR. Further work is ongoing to determine the best way to monitor and evaluate benthic interactions in deepwater fisheries. No progress has been made on an inventory of all available information on benthic communities within BPAs, this may be progressed in future.	
13	**Assist the wider Ministry in implementing the Fisheries (Foreign Charter Vessels and Other Matters) Amendment Bill**	
	The Fisheries Amendment Bill has completed the first reading	
	Actions for 13/14: • Support the implementation of the Fisheries Amendment Bill when required • Work with the Ministry of Business, Innovation, and Employment and Maritime New Zealand throughout the process	
	Action linked to Management Objective 1.1, 1.2, 2.1	Operational Objective: NA
	The Fisheries Amendment Bill was passed in early August 2014. An interagency group will progress the work necessary to ensure that regulatory amendments are made as required and policies are in place to support the implementation of the Bill.	
14	**Assist in finalising and implementing the National Plan of Action for Sharks (NPOA Sharks)**	
	The NPOA - Sharks is scheduled to be finalised in the 2013/14 financial year. Resources from the Deepwater Team will be required in finalising, communicating the goals of, and implementing the NPOA-Sharks in a deepwater context.	
	Actions for 13/14: • Implement the NPOA Sharks within the Deepwater Fisheries management annual process with a procedural focus on the five year objectives (yet to be finalised at this time).	
	Action linked to all Management Objectives 1.6, 2.5, and 2.6	Operational Objective: HOK 2.12 , 2.13, and all deepwater fisheries
	The revised NPOA-Sharks was released in January 2014. One of the objectives of the NPOA-Sharks was to eliminate shark finning in New Zealand by 2016. After public consultation, the implementation of this objective was brought forward and a ban on shark finning (as defined in the NPOA-Sharks) was introduced in all New Zealand fisheries from 1 October 2014. Work is underway to develop an implementation plan for the NPOA-Sharks and incorporate relevant actions into future AOPs.	

15	**NPOA Seabirds: Work to achieve the five year practical, biological, research and development, and international objectives within deepwater fisheries**
	The Seabird Risk Assessment identified five most at risk seabird species and identified which fisheries composed the highest proportion of that risk. This Management Action is focused on addressing and minimising those identified risks.
	Actions for 13/14: • Monitoring seabird interactions in the bottom long-line fishery, particularly incidental interactions with Chatham Island and Salvin's albatross • Re-assessment of potential mortality estimates of Southern Buller's albatross by squid trawlers and large meal trawl vessels in light of the Level 2 Risk Assessment • Work with industry to develop vessel-specific Vessel Management Plans (VMPs) for scampi vessels which will outline procedures for seabird mitigation and offal management. • Work with Science Teams and DOC to contract the development of a bird handling video for deepwater trawlers
	Action linked to Management Objective 2.5 / Operational Objective: All deepwater fisheries
	150 observer days were delivered in the 2013/14 financial year in the deepwater bottom longline fisheries, which exceeds the planned level of coverage of 98 days. This is likely to increase confidence in estimates of seabird interactions with these fisheries. The Level 2 Risk Assessment has been updated, including recalculation of potential mortality estimates of Southern Buller's albatross in deepwater fisheries. This work indicates a reduction in the potential mortality estimates for these fisheries. The Environmental training resource has been delivered to and VMPs have been implemented on all scampi vessels. Adherence is monitored through MPI observers. A bird handling video has not been progressed. This action will not be carried over to future deepwater AOPs, but will be prioritised as part of the Directorate-wide implementation of the NPOA Seabirds.
16	**Facilitate continued Marine Stewardship Council (MSC) Certification of deepwater fisheries, including closing Conditions of Certification (CoCs) and passing annual surveillance audits**
	The Hoki and SBW fisheries were audited in 12/13 and were recertified without conditions. Industry stakeholders are interested in continuing the certification of three other deepwater fisheries in the 13/14 year.
	Actions for 13/14: • Aid DWG in compiling necessary information for LIN, HAK, and ORH MSC certifications • Aid DWG in compiling necessary information for the preliminary MSC assessment for ORH including any documents for an Assessment of the Environmental Effects of Fishing (AEEF)
	Action linked to Management Objectives 1.1 and 1.5 / Operational Objective: HOK 1.1, SBW 1.1, LIN 1.1
	MPI continues to support the DWG in their work to achieve and retain certification of priority deepwater fish stocks. In 2013/14, an expedited audit took place on the performance of the Campbell Island southern blue whiting stock in relation to PI2.3.2, in addition to the annual surveillance audits for hoki and southern blue whiting. Three hake stocks (HAK 1, HAK 4, and HAK 7) and five ling stocks (LIN 3, LIN 4, LIN 5, LIN 6, and LIN 7) were certified as sustainable by the Marine Stewardship Council (MSC). No conditions were placed on the hake certification but three conditions were placed on the LIN certification. Conditions were related to the level of observer coverage on small trawl and BLL vessels and the potential impacts of those fleets on seabirds. Assessment of identified orange roughy fisheries against the MSC Certification Requirements is underway, with a target certification date of late 2015. In addition, DWG has initiated Fisheries Improvement Projects for the arrow squid and key oreo fisheries. These projects aim to develop these fisheries so that they meet the MSC Certification Requirements.
17	**Develop and implement specific harvest strategies for Tier 1 species, which enable economically viable deepwater and middle-depth fisheries over the long-term**
	A harvest strategy defines a management target, soft and hard limits, a rebuild strategy, and a harvest control rule for a stock. Often in developing a harvest strategy, a management strategy evaluation will be undertaken which assesses a range of different management strategies, including those which incorporate economic aspects of the fishery.

Actions for 13/14:

- Continue to assess the relevance of the default Harvest Strategy for ORH, SBW, HAK, LIN, and SCI
- Where necessary, develop and implement alternative harvest strategies for Tier 1 species

Action linked to Management Objective 1.1, 1.2, 2.1	Operational Objective: HOK 1.3, HOK2.5, ORH 1.11, ORH 2.1, SBW 2.1, LIN2.1, and all deepwater fisheries

The default Harvest Strategy was agreed to be appropriate for hake and ling fisheries until a management strategy evaluation is completed. A management strategy evaluation was completed for three orange roughy fisheries and a new harvest strategy and accompanying harvest control rule were agreed by quota owners. A management strategy evaluation is scheduled for southern blue whiting fisheries in 2014/15, and additional management strategy evaluations are scheduled to be completed for all tier 1 deepwater stocks and selected "low information " stocks through the next iteration of the 10 Year Research Programme for Deepwater Fisheries (10YP). This work will inform the ongoing development of stock specific harvest strategies and harvest control rules.

18 Update observer sampling protocols to ensure sufficient and appropriate data are collected in line with deepwater research requirements

Drawing on outcomes from the observer optimisation project, there is a need to ensure that observer sampling protocols match research needs within the Deepwater 10 Year Research Programme.

Actions for 13/14:

- Update observer briefing documents for all Tier 1 species to ensure that appropriate sampling regime is undertaken
- Work to identify what and how samples for Tier 2 species should be taken by observers

Action linked to Management Objective 1.4	Operational Objective: HOK 1.6, ORH 1.2 and all deepwater fisheries

Limited progress has been made on this action. Updating briefing documents and identifying what samples should be taken by observers requires documenting sampling needs for each fishery/area, and the most appropriate monitoring method for Tier 2 fisheries.
This work has been prioritised for 2014/15 and work is underway to better define sampling needs for each species and subsequently to update observer sampling protocols and better spatially and temporally target observer deployments to ensure that samples are collected efficiently to effectively support implementation of the 10YP.

19 Whilst working to achieve credible third party certification, provide information and communication to improve market assurance for New Zealand's seafood exports

The focus on this Management Action is to research credible third party certification schemes and increase the availability of accurate consumer information to refute inaccuracies about the fisheries management regime in the media or in consumer marketing campaigns.

Actions for 13/14: • Work to increase international markets' knowledge of New Zealand's MSC Certified products • Work with wider Ministry to improve seafood export market assurance	**Business as Usual:** • Update and publish information sheets on key issues as needed
Action linked to all Management Objectives	Operational Objective: N/A

MPI has supported DWG in the development and publication of information reports on key MSC Certified species. In 2013/14, such reports were produces for hake and ling, with updates to the existing reports for southern blue whiting and orange roughy in progress.
Much of the work that falls under this management action will be progressed by MPI's Policy Branch

20 Engage on environmental issues relating to management of deepwater fisheries through the Environmental Engagement Forums

In order to provide increased engagement beyond the section 12 consultation requirements, the Ministry established the Environmental Engagement Forums (EEFs). The EEFs will focus on Inshore, Deepwater, and National environmental issues.

Actions for 2013/14:

- Improve EEFs alignment with Inshore and Deepwater annual management processes

Action linked to Management Objectives 1.6 and 1.7	Operational Objective(s): HOK 1.4, 1.10, 1.11, ORH 1.3, 1.9, 1.10 and all deepwater fisheries

Four EEF meetings were held in 2013/14 to review the 2012/13 ARR, the draft NPOA-Sharks, operational objectives within the scampi fish plan chapter, and to provide detail on the annual deepwater fish plan process.

21 Develop and implement a process for identifying additional research, including a formalised process for tender evaluations and long term contracts

The 10 Year Research Programme recognises that not all research required can be planned in advance. For this reason, the 10 Year Research Programme allows for annual planning and prioritisation of additional research.

Actions for 13/14:

- Advance work started in 12/13 on formalising an additional research process for identifying, prioritising, and contracting additional research with the Finance Property and Procurement Team

Action linked to Management Objectives 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.4, 2.5, 2.6, and 2.7	Operational Objective(s): HOK1.6, ORH1.5, SBW1.4, LIN1.4, and All deepwater fisheries

No formal process has been developed to identify, prioritise, and contract additional research projects. This item remains active and will be progressed as part of the work in 2014/15 to develop the next iteration of the 10YP.

22 Assess how best to use completed Tier 2 characterisations in the development of management procedures for Tier 2 species

Management of Tier 2 species is often limited by information availability, therefore management procedures may range from developing components of a Harvest Strategy to analysis of CPUE trends or signals from a trawl survey.

Actions for 13/14:

- Identify most appropriate way to draw on completed characterisations, to develop management protocols for Tier 2 Species. Species with completed characterisations include: BYX, FRO, EMA, SPE, WWA
- Work with science team to resume the Middle-depth Working Group as a workshop to review characterisations and identify most appropriate monitoring tool

Action linked to Management Objective 2.1	Operational Objective: HOK 2.4, ORH 2.1, LIN2.2

MPI has not yet convened any workshops to determine the best use of characterisations of the Tier 2 species. It is intended that a meeting of the Middle-depth Working Group will be used as the forum to progress this work during early 2015.
Summaries of each characterisation are being incorporated into management summaries for each species and will be used to inform future characterisations, estimations of stock status, and potential research. Working Group Reports for the Fisheries Assessment Plenary are in the process of being updated to reflect the best available information on stock status of Tier 2 stocks and recommendations on the most appropriate monitoring method for future.

23 Identify meaningful compliance metrics and align current compliance monitoring to meet these

The Ministry's Compliance Directorate has developed a suite of performance indicators and performance targets for the deepwater sector. When performance targets for the deepwater fishing sector are not met, or when a risk profile identifies areas of compliance concern, appropriate management action will be taken. A Level 1 risk profile was conducted on the hoki fishery in 2011/12. Risk profiling for 2013/14 will focus on SBW and ORH fisheries

Actions for 13/14:	**Business as Usual:**
• Work with wider Ministry and industry to implement any recommendations from previous risk profiling • Work with Compliance to finalise risk profiles for SBW and ORH • Resume the Deepwater Compliance Committee	• Ensure transparent and appropriate action is taken when compliance levels drop below agreed benchmarks or where compliance risks are identified. • Continue to communicate results through Compliance Committee and to stakeholders through the ARR
Action linked to Management Objective 1.5	Operational Objectives: HOK 1.9, HOK 1.10, ORH 1.6, ORH1.7, SBW1.3, LIN1.3

Risk profiling during 2013/14 focussed on SBW, with observers being deployed on all SBW vessels during the 2013 season and given specific tasking to inform the risk profiling. The risk profile, together with implementation of some of the recommendations, was completed at the conclusion of the 2013/14 year.
During 2013/14 the use of information reported on interim trip reports was trialled as compliance metric. Aside from that the same metrics were used as for previous years.
One meeting of the Deepwater Compliance Committee and one Operator's Briefing were held during 2013/14.

24 Ensure that all information used in management decisions meets the requirements of the Research and Science Information Standard for New Zealand Fisheries (the Research Standard)

The 10 Year Research Programme Statements of Work were finalised in 2011/12 and detail research projects that will be carried out each year over the next 10 years. These projects were developed to help inform management decisions.

Business as Usual:

- Assist Fisheries Science as necessary to implement the 13/14 research projects as listed in Table 4
- Assist Fisheries Science as necessary to ensure that all science research used to support management of deepwater fisheries is assessed against the Research Standard
- Contract any annual "additional research" projects, consistent with process developed through MA 21

Action linked to Management Objectives 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.4, 2.5, 2.6, and 2.7	Operational Objective(s): HOK1.6, ORH1.5, SBW1.4, LIN1.4, and All deepwater fisheries

All science information used to support management was reviewed by Fisheries Assessment Working Groups and determined to have met the Research Standard. Information on all deepwater research contracted during the 2013/14 financial year (including additional projects), and all Final Research Reports relevant to deepwater fisheries published in the 2013/14 year are listed in Part 3 of this Report.

25 Finalise the risk assessment framework for Deepwater fish species and conduct a spatially explicit risk assessment for Tier 2, Tier 3, and any other protected fish species

A risk assessment is conducted to identify and evaluate the risk of undesirable consequences to fish species due to anthropogenic impacts. Developing this technique supports an ecosystem-based approach of fisheries management as it better enables management to prioritise and reduce risk across fisheries.

Actions for 13/14:

- Finalise the risk assessment methodology
- Continue to monitor catch of Tier 2 and Tier 3 species through commercial catch records, surveys, and observer data, and report through the ARR
- Pilot methodology on Tier 2, Tier 3, and any other fish that are protected species

Action linked to Management Objectives 2.2, 2.3, 2.4, 2.5, 2.6, and 2.7	Operational Objective: HOK 2.14, ORH 2.6, and all deepwater fisheries

During 2013/14, a risk assessment was contracted to cover Tier 3 species caught in deepwater fisheries. This project is underway, beginning with the development of a spatially-explicit model to underpin the risk assessment. In addition, a qualitative risk assessment has been contracted to cover all elasmobranch species in New Zealand, including those caught in deepwater fisheries.

26 Assist the Ministry's Policy Branch with review of policy developments and any necessary fisheries management information

Actions for 13/14:

- The Policy Branch within the Ministry may from time to time need information, feedback, and review of working documents that relate to New Zealand fisheries

Action linked to Management Objectives 1.2, 1.5	Operational Objective(s):N/A

Deepwater fisheries management has provided assistance as requested to the policy branch. In the 2013/14 year, this has been focused on providing input to MPI involvement in and feedback to marine consent applications by Trans-Tasman Resources and Chatham Rock Phosphate to extract resources in New Zealand's marine environment.

Finalise the definition of 'habitats of particular significance' for deepwater fisheries management

27	Section 9 of the Fisheries Act 1996 specifies that decisions relating to the utilisation of fisheries resources or ensuring sustainability are required to take into account protecting 'habitat of particular significance for fisheries management'.
	Actions for 13/14: • Finalise the Fisheries Management definition of 'habitats of particular significance' • Work to identify potential habitats of particular significance for deepwater fisheries
	Action linked to Management Objective 2.3 / Operational Objective: HOK 2.8
	The development of the definition of 'habitats of particular significance for fisheries management' is a cross-Directorate project currently led by the Inshore Fisheries Management Team. A draft definition was developed, however final sign-off has been delayed due to more pressing priorities across the Directorate. This action will remain open, but will be subject to prioritisation across the Directorate.

Management Actions Initiated by Industry

	When required, work with industry to :
	Possible Actions for 13/14: • Assess the QMA boundaries with a focus on Tier 2 species • Respond to any industry requests for changes to stock boundaries • Observer requests for vessel specific conversion factors trips • Development of the deepwater crab fishery • Development of the Patagonian toothfish fishery
	Action linked to Management Objective 1.1, 1.2, 1.3, 2.4, 2.6 / Operational Objective(s): LIN 1.5 and all deepwater fisheries
	No stock boundary changes were requested by industry in 2013/14. All requests for observers on vessel specific conversion factor trips were met. A new purpose special permit was issued for deepwater crab fishing around the North Island. The special permit includes a research programme and has resulted in increased information on deepwater crabs and their potential to support a commercial fishery. No special permits were issued for the Patagonian toothfish fishery.

A.1 National Plans of Action

NPOA-Seabirds

Management Action 15 outlined specific actions that were planned for the 2013/14 financial year to address the objectives of the NPOA. These actions were informed by the April 2013 Seabird Risk Assessment which identified six seabird species as being at 'very high risk' from fishing activity.

Activities planned for the 2013/14 fishing year focussed on increasing the available data to inform future iterations of the risk assessment, particularly for species identified as being at risk from deepwater and ling bottom longline fishing. This included more emphasis on delivering observer coverage in bottom longline fisheries, and re-assessing the estimates of potential mortality for Southern Buller's albatross in the squid fishery and on large meal trawl vessels. Both of these actions were achieved.

In addition, to support the practical objective of continuously improvement mitigation and reducing incidental mortality of seabirds, vessel-specific Vessel Management Plans were developed and implemented for all scampi vessels. These contain offal management procedures and mitigation requirements, including the introduction of the newly developed 'net restrictor' to minimise the risk to seabirds.

More broadly, work continues across MPI to develop a collaborative, cohesive implementation plan for the NPOA-Seabirds, and the Seabird Advisory Group has met to discuss the next steps for implementation of the NPOA-Seabirds. Deepwater fisheries management has participated in these discussions, and additional Management Actions have been defined for the 2014/15 year as a result of this process.

NPOA-Sharks

The NPOA-Sharks was released in January 2014 after a collaborative development process with environmental groups and the fishing industry. The NPOA includes six long term goals supported by relevant 5-year objectives.

The first priority following the release of the NPOA was to progress the objective to ban shark finning by 1 October 2015 with one exception. Following a public consultation, the implementation date was advanced, and shark finning was banned in all fisheries in New Zealand from 1 October 2014.

In addition, to support the goal of continuously improving the information available to manage sharks, MPI worked with DWG to provide better information to fishers to identify a number of deepwater dogfish species. This work has reduced the usage of generic reporting codes and allows for more detailed understanding of sharks caught in deepwater fisheries.

A.2 Summary of progress against Management Actions in 2013/14

All 'business as usual' Management Actions (1-12) were progressed appropriately throughout the 2013/14 year. All of these Actions remain open as they represent ongoing requirements of deepwater fisheries management that are delivered each year.

One Management Action has been closed off entirely, the development of the risk assessment framework for Tier 3 species (Management Action 25). This risk assessment has been contracted and no further development of the framework is required.

Several further Management Actions relate to broader work programmes that will be delivered over several years, including:

- implementation of the NPOA Seabirds,
- implementation of the NPOA Sharks,
- supporting third party certification for New Zealand's deepwater fisheries.

The specific management actions listed have, for the most part, been achieved during 2013/14. New actions that relate to each of these projects will be included in subsequent AOPs.

The project to improve the planning and specification of deepwater observer services (Management Action 18) was not progressed during 2013/14 due to lack of resourcing. This action will be given an increased level of priority during 2014/15.

Part 3B: Deepwater Fisheries Research, Compliance, Observer Coverage and Cost Recovery Levies

This section of the Annual Review Report provides detail on MPI fisheries and conservation services that are relevant to deepwater fisheries management and is planned by financial year (1 July – 30 June).

These processes include the planning and contracting of fisheries and conservation research projects, planning observer coverage on the deepwater fleet and the cost recovery regime.

B.1 Observer Coverage

Biological sampling and environmental monitoring is informed by the requirements of the National Deepwater Plan and carried out by the Ministry's Observer Programme. Data collected by the Observer Programme is used by MPI:

- As an input to monitor key fisheries against harvest strategies
- As an input to monitor biomass trends for bycatch species
- To assess fishery performance with regards to environmental interactions
- To enable real-time responses to sustainability and environmental impact issues

Observer coverage is planned by both the Ministry and the Department of Conservation (DOC), based on management objectives of both agencies. DOC requires observer coverage to collect information regarding fisheries interactions with protected species.

2013/14 Coverage Performance

Overall in 2013/14, more observer days were achieved than were planned. The level of coverage in relation to the coverage target for each fishery area is shown in Table 3. A number of reasons may account for instances where coverage targets for individual fisheries has not been met, including:

1. vessel's actual fishing behaviour does not always match the notified intentions,
2. vessel operators occasionally do not agree to observer coverage in the five days before the vessel sails making the observer programme unable to issue a placement notice in time, and
3. requested observer presence on certain vessels may affect the availability of observers in other areas.

2013/14 is the second year in which a Cabinet directive has been in place requiring all FCVs to have at least one observer on every trip. The observer programme has increased capacity to meet this requirement, but coverage has remained somewhat skewed towards fisheries with a large FCV component. Fisheries that are dominated by domestic vessels have struggled to achieve coverage targets as a result. Coverage by target species is detailed on the fishery summaries in Appendix I.

The coverage planning for 2013/14 did not include any specified days for domestic vessels fishing in the sub-Antarctic area. The was amended following additional coverage requirements for both the southern blue whiting fishery at Campbell Island and the squid fishery at Auckland Islands in to monitor interactions with New Zealand sea lions. Coverage in these fisheries was moved out of the days that were allocated to FCV coverage as the fishstocks were identical to those levied for the FCV days.

Additional days were delivered on domestic vessels on the Chatham Rise in response to industry requests for further coverage to increase the sampling effort of the strong 2011 hoki year class.

MPI is moving towards planning observer coverage based on samples required to support the ongoing management of the deepwater fisheries. This involves specification of samples required, and targeting both observer deployment and sampling protocols appropriately. While this work is still in the early stages, Table 4 provides some information on the numbers of length frequency and otolith samples collected for Tier 1 species in 2013/14. In future, samples collected will be reported against sampling targets set prior to the fishing year.

Table 3: Planned and achieved observer coverage for 2013/14 financial year

Fishery	Fisheries covered	Days Planned	Days Achieved	MPI/DOC cost recovery %
Deepwater trawl fisheries:				
ORH 1		55	20	90/10
East Coast NI Deepwater	ORH2A BYX2 CDL2	175	0 (0%)	90/10
Chatham Rise Deepwater	ORH3B OEO3A, OEO4 BYX3	250	140 (56%)	90/10
Sub-Antarctic Deepwater	ORH3B OEO1, OEO6	80	35 (44%)	90/10
West Coast NI Deepwater	ORH7A	20	20	90/10
Hoki & Middle Depth trawl fisheries:				
West Coast SI -Inside the line (FMA7)	HOK1 HAK7 LIN7 SWA1 JMA7 EMA7	65	40 (62%)	85/15
Cook Strait	HOK1	80	85 (106%)	85/15
Chatham Rise Domestic (FMA3/FMA4)	HOK1 HAK1, HAK4 LIN3, LIN4 SWA3, SWA4 JMA3 EMA3	140	394 (281%)	85/15
Sub-Antarctic Domestic (FMA5/FMA6)	HOK1 SBW All SQU1T, SQU6T	0	467 (467%)	85/15
Foreign Charter Vessels (FCVs):				
Sub-Antarctic (FMA5/FMA6) West Coast NI (FMA8) West Coast SI (FMA7) Chatham Rise (FMA3/FMA4)	HOK1 HAK All BAR All LIN3-7 SBW All SWA All WWA All SWA All SQU1T, SQU6T JMA3-7	5750	5986 (104%)	85/15
Deepwater bottom longline fisheries:				
Bottom longline	LIN3, LIN4	98	150 (153%)	85/15
Shellfish:				
Scampi	SCI (all)	150	129 (86%)	80/20
Total cost-recovered days		**6963**	**7466**	
Non-cost recovered days				
VSCF			378	
Medium/High Risk FCV days			536	
Other requests			107	
Total days:		**6963**	**8487**	

Table 4: Numbers of length frequency samples (multiple fish/sample) and otoliths collected by observers in 2013/14 financial year for Tier 1 deepwater species by area

Species		Area	Length frequency samples	Otoliths collected
Hoki		Sub-Antarctic	860	7,140
		Chatham Rise	340	3,170
		WCSI	1,000	9,400
		Cook Strait	60	400
Orange roughy		ORH 1	2	10
		ORH 7A + WB	10	130
		ORH 3B/3A	10	100
Southern blue whiting		SBW 6I	150	2,440
		SBW 6B	190	2,970
Hake		HAK 1	120	450
		HAK 4	25	120
		HAK 7	480	2,630
Ling		LIN 3 & 4	290	1,430
		LIN 5 & 6	230	1,210
		LIN 7	146	740
Oreos	Black	BOE 3A	31	160
		BOE 4	30	170
	Smooth	SSO 3A	26	180
		SSO 4	44	460
		SSO 6	1	10
Jack mackerel	Declivis	JMD 3	140	710
		JMD 7	650	3,860
	Murphyi	JMM 3	170	750
		JMM 7	280	810
	NZ	JMN 3	4	4
		JMN 7	432	2,010
Squid		SQU 1T	620	N/A
		SQU 6T	390	
Scampi		SCI 1	40	N/A
		SCI 2	1	
		SCI 3/4A	35	
		SCI 7	10	
All Tier 2 species		All areas	4,027	13,028

B.2 Deepwater Fisheries Research

Research needs for deepwater fisheries are driven from the Objectives within the National Deepwater Plan and delivered through the 10 Year Research Programme for Deepwater Fisheries (10YP). This research programme focuses on obtaining comprehensive, consistent and robust information in a cost-effective manner. To accomplish this, the 10YP specifies the routine research and data collection necessary to meet Management Objectives. The 10YP recognises that not all research required can be planned in advance and also allows for annual planning/prioritisation and delivery of one-off research projects.

Research projects contracted for the 2013/14 financial year, which are detailed in Table 3, included six stock assessments, and trawl and acoustic surveys. All research projects contracted through the 10YP are reviewed by the Ministry's Science Working Groups and assessed against the Ministry's Research and Science Information Standard for New Zealand Fisheries. This review process aims to ensure the quality of the research is sufficient to underpin deepwater fisheries management. Delivery of quality research is driven through Management Objective 1.4 within the Deepwater Plan which

aims to ensure the availability of appropriate, accurate and robust information to underpin the management of New Zealand's deepwater fisheries.

Table 5: Research contracted for the 2013/14 financial year[4] in the 10 Year Research Programme

Project code	Title	Time Frame
Trawl surveys		
HOK2010/04	Estimation of hoki and middle depth fish abundance on the West Coast South Island using combined trawl and acoustic surveys	July 2014
HOK2010/05	Estimation of hoki and middle depth fish abundance on the Chatham Rise using trawl surveys	Oct 2013-Sept 2014
Acoustic surveys		
SBW2010/04	Biomass estimation of SBW using acoustic surveys (Campbell Island	June 2013-Sept 2014
SBW2010/02	Biomass estimation of southern blue whiting using acoustic surveys (Bounty Platform)	July 2013-June 3014
HOK2010/03	Estimation of spawning hoki biomass using acoustic surveys (Cook Strait)	June 2013-June 2014
ORH2010/04	Biomass estimation of the ORH7A plumes	June 2013-June 2014
DWR2013/06	Biomass estimation of the ORH3B and ORH MEC plumes	June 2013-June 2014
Ageing projects		
MID2010/01	Routine age determination of hoki and middle depth species from commercial fisheries and trawl surveys (Table	Nov 2013-Sept 2014
Stock Assessment		
DEE2010/02	Stock assessment of deepwater and middle depth fish stocks (HOK1, LIN6B, JMA7, SSO6, SSO4 , SCI6A, SBW6I, SBW6B)	Dec 2013-Sept 2014
Stock characterisations		
DEE2010/07	Characterisation and fishery monitoring of deepwater and middle depth species (CDL, SKI, LDO, PRK, RIB)	Aug 2013-June 2014
Scampi camera surveys		
SCI2010/02	Estimating the abundance of scampi in SCI3 using photographic surveys	Aug 2013-Nov 2013
Aquatic environment		
DAE2010/01	Taxonomic identification of benthic samples	July 2013-July 2014
DAE2010/02	Bycatch monitoring and quantification of deepwater stocks (HOK/HAK/LIN)	Dec 2013-Sept 2014
DAE2010/04*	Monitoring the trawl footprint for deepwater fisheries	Jan 2013-May 2014
PRO2010/01	Estimating the nature and extent of incidental captures of seabirds, marine mammals and turtles in New Zealand commercial fisheries	Jan 2013-July 2014

Table 6: Additional Research that was contracted or ongoing during the 2013/14 financial year

Project code	Title	Time Frame
DEE2011/03	Level 1 Risk Assessment for Tier 3 stocks	2013-14*
DWR2013/01	Estimation of the abundance of orange roughy in selected areas	2013-14

Research reports

[4] Progress on projects is not available, reports should be made publically available at the conclusion of each project.

Final research reports from previously contracted work that were published in the 2013/14 year that relate to deepwater fisheries are shown in Table 6 below. Links to these documents are provided where possible, but all published reports can be found on the MPI NZ Fisheries InfoSite (www.fs.fish.govt.nz).

Table 5: Final research reports published during the 2013/14 financial year

Doc #	Title
Annual Documents	
2013 Nov. Plenary	Ministry for Primary Industries (2013): Fisheries Assessment Plenary, November 2013: Stock Assessments and Yield Estimates. 531p. Compiled by the Fisheries Science Group, Ministry for Primary Industries, Wellington, New Zealand. 611p. http://mpi.govt.nz/news-resources/publications.aspx
2014 May Plenary	Ministry for Primary Industries (2014). Fisheries Assessment Plenary, May 2014: stock assessments and stock status. Compiled by the Fisheries Science Group, Ministry for Primary Industries, Wellington, New Zealand. 1381 p. http://mpi.govt.nz/news-resources/publications.aspx
2013 AEBAR	Ministry for Primary Industries (2013). Aquatic Environment and Biodiversity Annual Review 2013. Complied by the Fisheries Management Science Team, Ministry for Primary Industries, Wellington, New Zealand. 538 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2122
Aquatic Environment and Biodiversity Reports (AEBRs)	
119	Berkenbusch, K; Abraham, E R; Torres, L G. (2013) New Zealand marine mammals and commercial fisheries. New Zealand Aquatic Environment and Biodiversity Report No. 119. 113 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2096
120	A. Rowden; J Guinotte; S. J. Baird; D. M. Tracey; K. A. Mackay; S.Wadhwa (2013) Predictive modelling of the distribution of vulnerable marine ecosystems in the South Pacific Ocean region. New Zealand Aquatic Environment and Biodiversity Report No. 120. 74 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2119
122	Black, J.; Wood, R. (2014). Analysis of New Zealand's Trawl Grounds for Key Middle depths and Deepwater Tier 1 Fisheries. New Zealand Aquatic Environment and Biodiversity Report No. 122. 35 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2130
126	Bowden, D.A.; Hewitt J.; Verdier, A-L.; Pallentin, A. (2014). Assessing the potential of multibeam echosounder data for predicting benthic invertebrate assemblages across Chatham Rise and Challenger Plateau. New Zealand Aquatic Environment and Biodiversity Report No. 126. 35 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2254
127	Tuck, I.D.; Pinkerton, M.H.; Tracey, D.M.; Anderson, O.A.; Chiswell, S.M. (2014). Ecosystem and environmental indicators for deepwater fisheries. New Zealand Aquatic Environment and Biodiversity Report No. 127. 143 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2238
128	Robinson, K.V.; Pinkerton, M.H.; Hall, J.A; Hosie, G.H. (2014). Continuous Plankton Recorder sampling between New Zealand and the Ross Sea, 2006–2013. New Zealand Aquatic Environment and Biodiversity Report No. 128. 70 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2273
130	Morrison, M.A.; Jones, E.; Consalvey, M.; Berkenbusch, K. (2014). Linking marine fisheries species to biogenic habitats in New Zealand: a review and synthesis of knowledge. New Zealand Aquatic Environment and Biodiversity Report No. 130. 156 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2298
131	Opresko, D.; Tracey, D.; Mackay, E. (2014). ANTIPATHARIA (BLACK CORALS) FOR THE NEW ZEALAND REGION. A field guide of commonly sampled New Zealand black corals including illustrations highlighting technical terms and black coral morphology. New Zealand Aquatic Environment and Biodiversity Report No. 131. 20 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2322
132	Williams, G.; Tracey, D.; Mackay, E. (2014). PENNATULACEA (SEA PENS) ESCRIPTIONS FOR THE NEW ZEALAND REGION. A field guide of commonly sampled New Zealand sea pens including illustrations highlighting technical terms and sea pen morphology. New Zealand Aquatic Environment and Biodiversity Report No. 132. 22 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2323
Fisheries Assessment Reports (FARs)	
2013/65	Clarke, S.C.; Francis, M.P.; Griggs, L.H. (2013). Review of shark meat markets, discard mortality and pelagic shark data availability, and a proposal for a shark indicator analysis. New Zealand Fisheries Assessment Report 2013/65. 77 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2078
2013/66	MacGibbon, D.J.; Stevenson, M.L. (2013). Inshore trawl survey of the west coast South Island and Tasman and Golden Bays, March-April 2013. New Zealand Fisheries Assessment Report 2013/66. 119 p.

2013/69	Cole R.G.; Dunn A.; Hanchet S.M. (2013) Review of the time series of input data available for the assessment of southern blue whiting (Micromesistius australis) stocks. New Zealand Fisheries Assessment Report 2013/69. 45 p.
2014/1	Doonan, I.J.; McMillan, P.J.; Hart, A.C.; Dunford, A. (2014). Black oreo abundance estimates from the November-December 2011 acoustic survey of the south Chatham Rise (OEO 3A). New Zealand Fisheries Assessment Report 2014/01. 26 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2129
2014/2	Stevens, D.W.; O'Driscoll, R.L.; Oeffner, J.; Ballara, S.L.; Horn, P.L. (2014). Trawl survey of hoki and middle depth species on the Chatham Rise, January 2013 (TAN1301). New Zealand Fisheries Assessment Report 2014/02. 110 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2139
2014/3	McKenzie, J.; Smith, M.; Watson, T.; Francis, M.; Ó Maolagáin, C.; Poortenaar, C.; Holdsworth, J. (2014). Age, growth, maturity and natural mortality of New Zealand kingfish (Seriola lalandi lalandi). New Zealand Fisheries Assessment Report 2014/03. 36 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2128
2014/4	McKenzie, J.R. (2014). Review of productivity parameters and stock assessment options for kingfish (Seriola lalandi lalandi) New Zealand Fisheries Assessment Report 2014/04. 17 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2150
2014/5	Ballara, S.L.; O'Driscoll, R.L. (2014). Catches, size, and age structure of the 2011–12 hoki fishery, and a summary of input data used for the 2013 stock assessment. New Zealand Fisheries Assessment Report 2014/05. 117 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2151
2014/6	Horn, P.L.; Sutton, C.P. (2014). Catch-at-age for hake (Merluccius australis) and ling (Genypterus blacodes) in the 2011–12 fishing year and from trawl surveys in 2012–13, with a summary of all available data sets. New Zealand Fisheries Assessment Report 2014/06. 64 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2152
2014/8	Francis, M.P.; McKenzie, J.; Ó Maolagáin, C. (2014). Attempted validation of the first annual growth zone in kingfish (Seriola lalandi) otoliths. New Zealand Fisheries Assessment Report 2014/08. 19 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2154
2014/9	O'Driscoll, R.L.; Bagley, N.W.; Ballara, S.L.; Oeffner, J. (2014). Trawl and acoustic survey of hoki and middle depth fish abundance on the west coast South Island, July–August 2012 (TAN1210). New Zealand Fisheries Assessment Report 2014/09. 102 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2155
2014/12	Bagley, N.W.; O'Driscoll, R.L.; Oeffner, J. (2014). Trawl survey of hoki and middle-depth species in the Southland and Sub-Antarctic areas, November–December 2012 (TAN1215). New Zealand Fisheries Assessment Report 2014/12. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2163
2014/15	Hampton, I.; Boyer, D.C.; Leslie, R.W.; Nelson, J.C. (2014) Acoustic and trawl estimates of orange roughy (Hoplostethus atlanticus) biomass on the southwest Challenger Plateau, June/July 2012. New Zealand Fisheries Assessment Report 2014/15. 43 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2252
2014/22	O'Driscoll, R.L.; Dunford, A.J.; Ladroit, Y. (2014). Acoustic estimates of southern blue whiting from the Campbell Island Rise, August–September 2013 (TAN1309). New Zealand Fisheries Assessment Report 2014/22 46 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2253
2014/23	Hampton, I.; Nelson, J.C. (2014). Acoustic estimates of the biomass in aggregations of southern blue whiting (Micromesistius australis) on Pukaki Rise (SBW6R) and Campbell Island Plateau (SBW6I) from a commercial vessel in September 2012. New Zealand Fisheries Assessment Report 2014/23. 28 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2275
2014/24	Doonan, I.J.; Horn, P.L.; Ó Maolagáin, C. (2014). Orange roughy age estimates: Chatham Rise (ORH 3B) spawning plumes in 2012, and mid-east coast North Island (ORH 2A) fishery from 1989–91 and 2010. New Zealand Fisheries Assessment Report 2014/24. 19 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2277
2014/25	Bentley, N.; Kendrick, T.H.; MacGibbon, D.J. (2014). Fishery characterisation and catch-per-unit-effort analyses for frostfish (Lepidopus caudatus), 1989–90 to 2009–10. New Zealand Fisheries Assessment Report 2014/25. 131 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2278
2014/27	Bentley, N., Kendrick, T.H., MacGibbon, D.J. (2014). Fishery characterisation and catch-per-unit-effort analyses for sea perch (Helicolenus spp.) in New Zealand, 1989–90 to 2009–10. New Zealand Fisheries Assessment Report 2014/27. 41 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2280
2014/32	Cordue, P.L. (2014). A 2013 stock assessment of Mid-East Coast orange roughy. New Zealand Fisheries Assessment Report 2014/32. 54 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2328
2014/33	Tuck, I.D. (2014). Characterisation and length-based population model for scampi (Metanephrops challengeri) in the Bay of Plenty (SCI 1) and Hawke Bay/Wairarapa (SCI 2). New Zealand Fisheries Assessment Report 2014/33. 173 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2329
2014/37	Dunn, A.; Hanchet, S.M (2014). Review and summary of the time series of input data available for the assessment of southern blue whiting (Micromesistius australis) stocks in 2013. New Zealand Fisheries Assessment Report 2014/37. 44 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2326

2014/38	McKenzie, J.R.; Smith, M.; Hartill, B. (2014). Review of stock monitoring options for kingfish (Seriola lalandi lalandi) based on an analysis of the commercial and recreational fisheries up to 2006. New Zealand Fisheries Assessment Report 2014/38. 23 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2327
2014/39	Horn, P.L.; Sutton, C.P. (2014). Catch-at-age for hake (Merluccius australis) and ling (Genypterus blacodes) in the 2012–13 fishing year and from trawl surveys in 2013–14, with a summary of all available data sets from the New Zealand EEZ. New Zealand Fisheries Assessment Report 2014/39. 64 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2352
2014/41	Ballara, S.L.; O'Driscoll, R.L. (2014). Catches, size, and age structure of the 2012–13 hoki fishery, and a summary of input data used for the 2014 stock assessment. New Zealand Fisheries Assessment Report 2014/41. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2369
2014/46	Doonan, I.J.; Fu, D.; McMillan, P.J.; Hart, A.C.; Dunford, A.J.: Oeffner, J. (2014). Smooth oreo abundance estimates from the November 2012 acoustic survey of the south Chatham Rise (OEO 4). New Zealand Fisheries Assessment Report 2014/46. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2403
2014/50	Cordue, P.L. (2014). The 2014 orange roughy stock assessments. New Zealand Fisheries Assessment Report 2014/50. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2370
2014/57	Horn, P.L.; Hulston, D.; Ó Maolagáin, C. (2014). Commercial catch sampling for species proportion, sex, length, and age of jack mackerels in JMA 3 in the 2012–13 fishing year. New Zealand Fisheries Assessment Report 2014/57. 16 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=2411
2014/58	Horn, P.L.; Ó Maolagáin, C.; Hulston, D. (2014). Commercial catch sampling for species proportion, sex, length, and age of jack mackerels in JMA 7 in the 2012–13 fishing year, with a summary of all available data sets. New Zealand Fisheries Assessment Report 2014/58. 24 p.
2014/59	Doonan, I.J.; Horn, P.L.; Ó Maolagáin, C. (2014). Age composition of orange roughy from ORH 3B (Chatham Rise: northwest,1994, and northeast,2013), and from ORH 7A (Challenger Plateau in 1987, 2006 and 2009). New Zealand Fisheries Assessment Report 2014/59.
Department of Conservation Reports: Conservation Services Research Summary 2013/14	
POP2013-04	Bell, E., Mischler, C., et al. 2013. At-sea distribution and population parameters of the black petrels (*Procellaria parkinsoni*) on Great Barrier Island (Aotea Island), 2013/14. http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/meetings/pop2013-04-black-petrel-population-final-report-2014.pdf
POP2012-06	Baker, B., Jensz, K., Sagar, P. 2014. 2013 Aerial survey of Salvin's albatross at the Bounty Islands. Report prepared for Department of Conservation. http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/reports/pop2012-06-salvins-aerial-population-estimate.pdf
POP2013-03	Elliott, G. And Waker, K. 2014. Gibson's wandering albatross at Adams Island - population study. http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/meetings/pop2013-03-gibsons-albatross-final-report-2013-14.pdf
POP2011-02	Waugh, S., Jamieson, S., et al. 2014. Flesh-footed shearwater – population study and foraging areas. http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/meetings/pop-2011-02-flesh-footed-shearwater-final-report.pdf
MIT2012-05	Protected Species bycatch Newsletter - Bycatch Bylines http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/reports/mit2012-05-final-report-protected-species-bycatch-newsletter.pdf

B.3 Compliance

Successfully delivering on Management Objectives for deepwater fisheries is dependent upon high levels of compliance with the various sustainability and environmental regulations defined in legislation. The Ministry's Compliance Directorate is responsible for providing the intervention services to achieve cost-effective compliance with all regulations.[5] This Directorate has monitored compliance in deepwater fisheries and reported performance against some high level performance indicators.

Adherence to all non-regulatory measures is reported in the relevant section of the next part of this report.

[5] Function is now under the Compliance Directorate in the Compliance and Response Branch of MPI.

Overall, 70 inspections were completed covering 24 vessels. Many vessels were inspected more than once for different aspects of compliance. Outcomes of inspections are reported in Tables 6 and 7 below.

Table 6: Summary of performance indicators

Performance indicator	Components of indicator	Performance target
1. Pre-fishing preparation	Includes, but not limited to: -valid fishing permit -valid certificate of registration -fishing gear meets requirements -seabird mitigation devices SLED meets requirements -vessel has VMP on board	100%
2. Fishing documentation	Accurate and timely completion of all relevant returns	90%

Table 7: Summary of 2013/14 performance against Indicator 1 (pre-fishing preparation)

Inspection detail	# of inspections	# of breaches	Compliance rate
Certificate of registry	43	1*	95%
Fishing gear	25	0	100%
Fishing permit	52	0	100%
SLED	16	0	100%

It is important to note that SLED inspections are likely to include more than one SLED per inspection. The breach recorded with regards to the Certificate of registry was a vessel that was inspected while unloading catch with a certificate of registry that had just expired. This was not technically a breach, as the vessel did not fish between certificates.

Table 8: Summary of 2013/14 performance against Indicator 2 (fishing documentation)

Inspection detail	# of inspections	# of breaches	Compliance rate
Effort returns	27	0	100%
Landing documents	11	0	100%
Landing return book	23	1	94%

One breach was reported against Indicator 2 which involved a vessel that had not completed a CLR for a particular landing.

Near the end of the 2013 calendar year, MPI introduced 'interim observer trip reports'. These reports are sent to vessel operators within a few days of the completion of an observed trip. 15 questions are answered by the observer to provide more immediate feedback to vessel operators on a variety of factors. Questions are answered with a rating of A, B, C or N/A. It is considered that ratings of A and B are acceptable performance. The interim trip report template is attached in Appendix V. Overall, 143 interim trip reports were completed in the 2013/14 year. The majority of factors were rated A (76%) or B (10%), however over the year, 17 C ratings were given by observers.

Table 8: Summary of 2013/14 interim trip reports where a 'C' rating was given

Factor	# of 'C' ratings
Offal management	4
Non-fish bycatch reporting	4
QMS discarding procedures	2
Product weight testing	2
Bird mitigation	2
Other	3

B.4 Cost Recovery Levies

Research, compliance activities, observers, and registry services are funded, at least partially, by levies recovered from the fishing industry.

The cost recovery regime, which is legislated under Part 14 of the Fisheries Act 1996, enables the Crown to recover its costs in respect of the provision of fisheries and conservation services, as far as practicable, from those people who have requested services, who benefit from the provision of those services or cause the adverse effects that the services are designed to avoid, remedy or mitigate.

MPI uses the Fisheries (Cost Recovery) Rules 2001 to calculate the levies to be applied to each fish stock, based on the total amount to be cost recovered from the commercial fishing industry and the under or over-recovery of levies in the previous year.

The proposed levies are consulted on with industry as per statutory requirements.

Table 8 shows the total cost recovery levies for 2013/14 financial year from stocks managed under the National Deepwater Plan.

Table 9: Cost recovery levies for deepwater stocks and all New Zealand fisheries 2013/14 financial year

		Total levied ($) for stocks managed in National Deepwater Plan	Total levied ($) for all New Zealand fisheries
Compliance		4,670,538	10,170,821
Registry		2,304,899	5,019,276
Observers	MPI	2,569,627	3,874,230
	DOC	507,433	1,134,908
Research	MPI	10,041,810	15,417,983
	DOC	698,953	1,026,946
Unders & Overs	MPI	-1,013,096	962,317
	DOC	-221,997	-496,524
Total		19,558,167	35,185,322

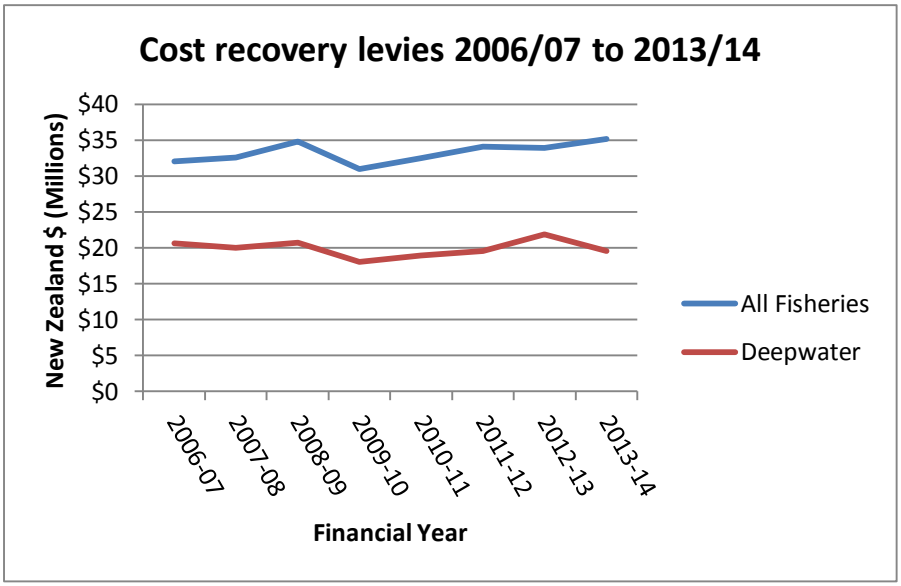


Figure 2: Cost recovery levies 2006/07 to 2013/14

Part 3C: General environmental reporting and adherence to non-regulatory management measures

This part of the ARR summarises the overall impacts of deepwater fishing on the marine environment, and reports adherence to non-regulatory environmental mitigation measures for the 2013/14 fishing year. Species-specific environmental interactions are reported in Appendix I.

C.1 Environmental reporting

New Zealand's deepwater fisheries are known to interact with the marine environment including protected species, the benthic habitat, and other bycatch species. In order to achieve Management Objective 2.5, DWG and the Ministry work together to monitor adherence to non-regulatory management measures and environmental interactions.

Non-regulatory measures include vessel-specific management plans for mitigating incidental seabird captures (VMPs), Marine Mammal Operational Procedures (MMOP), and notification requirements for certain numbers of seabird or mammal captures (trigger points).

Vessel operators are required by law to report all captures of protected species to the Ministry on Non-fish/Protected Species Catch Returns. For reasons of increased reliability however, analyses of protected species interactions and adherence to non-regulatory measures is based on information collected on fishing trips carrying a Ministry observer.

Observers from each observed fishing trip are debriefed by MPI to determine the vessel's adherence to all non-regulatory measures. In any instance where issues were reported by observers, further follow up action is taken by DWG (discussed below).

The table below summarises the number of observed trips on trawl vessels >28m completed during the 2013/14 fishing year and the results of the audit of vessel adherence.

Table 10: Summary of MPI Observer audits of adherence to non regulatory measures

Fishing year	Observed trips	Reviews by DWG	Trips with no issues raised	Trips requiring follow up
2012/13	191	152	120	32
2013/14	183	162	128	34

C.2 Seabirds

Total seabird captures in deepwater fisheries are estimated using statistical models that are informed by data on observed captures, fishing effort location data and seabird species distribution data. Estimated captures provide an estimate of the total number of captures that would be observed if all effort was observed. They do not take into account any seabird mortalities that may take place due to interactions with fishing gear but are not observed (cryptic mortalities). Cryptic mortalities are considered in the level 2 seabird risk assessment which informs the management of seabirds in New Zealand.

Information regarding observed captures of seabirds is available throughout each fishing year, whereas modelled total capture estimates take some time to process. Information presented here represents the best available information at time of publication.

Table 11 reports all observed seabird captures by species from tows targeting Tier 1 deepwater species for the 2013/14 fishing year.[6]

Table 12 shows industry reported seabird captures from 2013/14 fishing year. Tables 13 and 14 show the observed and model estimated total captures from all trawl fisheries, and by deepwater vessels

[6] This table uses raw data from MPI Observers; species identifications have not yet been verified and are subject to change after specimens are necropsied.

targeting species in the National Deepwater Plan for the 2012/13 fishing year (includes some effort from vessels <28m).

Table 15 shows the observed captures and rate for ling longline fisheries for the 2008/09 to 2012/13 fishing years. Only bottom longline with a target species of ling is reported as it is the only Tier 1 deepwater species fished using bottom longline.

Seabird interactions by fishery are reported in Appendix I.

Table 11: Observed seabird captures[7] for the 2013/14 fishing year from the core deepwater fleet and any vessels targeting Tier 1 species (Other includes decomposed or unknown life status)

Seabird species	Alive	Dead	Other	Total
Albatrosses (Unidentified)	2	12	1	15
Black (Parkinson's) petrel	3			3
Black-browed albatross (Unidentified)	1			1
Buller's albatross	8	22	1	31
Buller's and Pacific albatross	1	6		7
Cape petrels	3			3
Chatham Island albatross	1	2		3
Common diving petrel	2	1		3
Fairy prion	3	1		4
Flesh-footed shearwater	11	1		12
Giant petrels (Unidentified)	2			2
Great albatrosses	1	1		2
Grey petrel	4	5		9
Grey-headed albatross	1			1
Mid-sized Petrels & Shearwaters	1		1	2
Northern giant petrel	2			2
Petrel (Unidentified)	39	7		46
Petrels, Prions and Shearwaters	4	1		5
Prions (Unidentified)	7	1		8
Procellaria petrels	9	5		14
Salvin's albatross	11	31		42
Shearwaters	1	3		4
Smaller albatrosses	3	2	1	6
Sooty shearwater	49	71		120
Storm petrels		2		2
Wandering albatross (Unidentified)	2			2
Westland petrel	4	6		10
White-capped albatross	24	50	1	75
White-chinned petrel	35	58	1	94
White-faced storm petrel	1			1
White-headed petrel		1		1
Grand Total	**235**	**289**	**6**	**530**

Table 12: Industry-reported seabird interactions from 2013/14 fishing year from the core deepwater fleet and any vessels targeting Tier 1 deepwater species (includes BLL)[8]

	Alive	Dead
Large seabirds	82	246
Small seabirds	198	297
Total	280	543

[7] This table uses raw data from MPI Observers; species identifications have not yet been verified and are subject to change after specimens are necropsied.
[8] From Non-fish and Protected Species Bycatch forms.

Table 13: Observed seabird captures and modelled estimates of total captures* in all New Zealand trawl fisheries by vessels >28m[9] from 2008/09 to 2012/13

		Observed				Estimated		
	Tows	Tows observed	% of tows observed	Observed captures	Capture rate	Estimated total captures	95% confidence interval	Estimated capture rate
2008/09	29,978	7,406	24.7	373	5.04	1,120	963-1,314	3.74
2009/10	29,506	7,675	26.0	235	3.06	816	687-980	2.77
2010/11	27,393	6,211	22.7	308	4.96	1,196	972-1,413	4.37
2011/12	25,593	8,266	32.3	228	2.76	742	632-880	2.90
2012/13	23,970	11,817	49.3	703	5.95	974	903-1,065	4.06

* Does not include estimates of cryptic mortality

Table 14: 2012/13 Observed seabird captures and modelled estimates of total captures for New Zealand deepwater and middle-depth fisheries (includes effort by vessels <28m)

		Observed			Estimated	
	Tows	Tows observed	% of tows observed	Observed captures	Estimated total captures	95% confidence interval
Hoki	11,682	4,515	38.6	96	265	215-333
Hake	710	528	74.4	5	7	5-12
Ling (trawl)	1,149	269	23.4	4	21	10-42
Squid (trawl)	2,646	2,273	85.9	450	505	477-553
Southern blue whiting	792	791	99.9	20	20	20-20
Jack mackerel	2,208	1,935	87.6	34	34	33-36
Scampi	4,566	270	6	5	221	140-354
Deepwater (ORH/OEO/CDL)	3,098	346	11	2	16	7-31
Tier 2 mid-depth*	6,451	1,241	19	92	335	228-521
Total	**33,302**	**12,168**	**37**	**708**	**1,424**	

* Includes all target fishing for Tier 2 species

Table 15: Observed seabird captures and capture rate in deepwater bottom longline fisheries (LIN target only, includes some vessels <28m)

		Observed				Estimated		
	Hooks	Hooks observed	% of hooks observed	Observed captures	Capture rate	Estimated total Captures	95% confidence interval	Estimated capture rate
2008/09	17,587,714	3,706,550	21.1	9	0.002	417	280-624	0.002
2009/10	18,395,093	1,717,425	9.3	10	0.006	334	239-453	0.002
2010/11	18,303,212	1,453,540	7.9	27	0.019	571	411-784	0.003
2011/12	17,013,093	1,701,100	10.0	8	0.005	365	252-513	0.002
2012/13	12,968,684	226,550	1.7	0	0.000	361	239-538	0.003

More detailed information for captures and estimated captures of individual bird species may be found on the protected species website https://data.dragonfly.co.nz.

Seabird interactions in 2012/13 were noticeably higher than recent years as demonstrated by the high observed capture rates in Table 13. Anecdotal information from fishers indicated that seabird numbers around vessels were higher than previous years. In response to the elevated captures numbers from 2012/13, the environmental liaison officer worked with vessels in the deepwater fleet to deploy a new style of tori lines, to identify times when birds are at higher risk of capture and deploy two mitigation devices, and to adhere more stringently to offal management procedures detailed in VMPs. The result

[9] From https://data.dragonfly.co.nz

of this work may be seen in the lower capture numbers in 2013/14 which are likely to result in lower observed capture rates and overall estimated capture rates for 2013/14.

Vessel Management Plans (VMPs)

The following section summarises information provided through observer audits of vessel performance in relation to measures within VMPs. Measures within VMPs that vessels are audited against include the use of bird mitigation devices, the removal of fish 'stickers' from the net before shooting, avoiding shooting gear near congregations of marine mammals, and employing offal management techniques. Offal management is intended to reduce the amount of 'food' in the water for seabirds and marine mammals while fishing gear may pose a risk to those animals.

Issues which required follow-up by DWG were identified on 9 trips (see Table 10). Issues are categorised into three general categories (Table 16):

I. **Administrative** – Relating to misunderstandings about requirements i.e. the need for observers to be shown live seabirds prior to release
II. **Seabird trigger reporting** – relating to the reporting of trigger points
III. **Seabird scaring devices** – relating to the need to employ an additional seabird mitigation device when experiencing seabird captures, or when mitigation devices need to be replaced or repaired.
IV. **Offal management issues** – see below

Table 16: Breakdown of reviews with VMP-specific issues during 2012/13 and 2013/14

Type of issue	2012/13	2013/14
Administrative	2	2
Seabird trigger not reported	2	2
Seabird scaring devices	8	6
Offal management issues	19	21

Offal management issues

The management of offal is a contributing factor to both seabird and marine mammal captures and therefore issues with offal management onboard vessels could be considered to be relevant to both VMPs and the MMOP. During the 2013/14 fishing year there were 21 trips identified that required follow up for offal management issues. Issues are divided into four broad categories: general offal management, net cleaning, floor wash, and primary offal management break-down procedures. Table 17 provides information on the number of trips that required follow up for each category.

Table 17: Breakdown of reviews for VMP/MMOP issues during 2012/13 and 2013/14

Type of issue	2012/13	2013/14
General offal management	15	14
Net cleaning	2	1
Floor wash	1	3
Break-down procedures	1	3

Seabird bycatch trigger point notifications

All trawl vessels over 28 metres are required to notify DWG any time they capture more than a given number of seabirds within a defined time period. These are known as trigger point notifications. There were 8 trigger point activations for seabird captures in the 2013/14 fishing year. Trigger point specifics and activations are summarised in Table 18 below.

Table 18: Number of trigger point activations for seabirds in 2012/13 and 2013/14 fishing years from vessels >28 m LOA or targeting scampi

Species	Trigger points		2012/13	2013/14
	Captures in any 24 hr period	Captures in any 7 day period		
Seabirds - large	3 or more	10 or more of any species	7	3
Seabirds - small	5 or more		18	5

C.3 Marine Mammals

Total marine mammal interactions and captures in deepwater fisheries are estimated using statistical models that are informed by data on observed interactions, fishing effort location data from each deepwater fishery and marine mammal distribution data. The estimates of total captures do not include any estimates of cryptic mortality, although this will be included in the risk assessment modelling.

Information regarding observed captures of marine mammals is available shortly after the completion of each fishing year, whereas modelled total capture estimates take some time to process. Table 19 reports all observed and industry-reported marine mammal captures in deepwater fisheries for the 2013/14 fishing year.

Table 20 shows the model estimated total captures from trawl fisheries for the 2008/09 to 2012/13 fishing years and Table 21 shows capture estimates from fishing activity targeting species in the National Deepwater Plan. Marine mammal interactions by fishery are reported in Appendix I.

Table 19: Observed and industry reported captures of marine mammals in deepwater fisheries in the 2013/14 fishing year [10]

Species	Observed captures		Industry reported captures	
	Alive	Dead	Alive	Dead
Baleen whales				1
Common dolphin	2	17		29
Dolphins and toothed whales				
Dusky dolphin				
New Zealand fur seal	3	94	3	114
New Zealand sea lion	0	4		4
Seals and sealions[11]				1
Pilot whale				
Risso's dolphin				

Table 20: Model estimated total captures of marine mammals for the 2008/09 to 2012/13 fishing years from trawl vessels >28m (this represents the most up to date information available)

	Fishing effort			Observed captures		Estimated captures		
	All tows	Observed tows	% tows observed	Number	Rate	Mean captures	95% c.i.	% tows included
New Zealand Fur Seal								
2008/09	29,978	7,406	25	56	0.76	330	173-680	100
2009/10	29,506	7,675	26	61	0.79	295	159-656	100
2010/11	27,393	6,211	23	57	0.92	235	133-461	100
2011/12	25,593	8,263	32	67	0.81	267	142-554	100
2012/13	23,970	11,817	49	86	0.73	239	129-515	100
Common dolphin								

[10] These are not cumulative, an observed capture will also have been reported by the vessel (i.e. the NZ sea lion observed captures are the same events as the industry reported NZ sea lion capture).
[11] This is a generic description; captures reported under this code are not reported at the species level.

2008/09	29,978	7,406	25	11	0.15	27	13-49	12.7
2009/10	29,506	7,675	26	4	0.05	26	6-60	11.0
2010/11	27,393	6,211	23	8	0.13	60	24-113	8.7
2011/12	25,568	8,266	32	5	0.06	7	5-14	10.4
2012/13	23,970	11,817	49	16	0.14	16	16-20	11.7
New Zealand Sea Lion								
2008/09	29,978	7,406	25	3	0.04	13	7-24	100
2009/10	29,506	7,675	26	15	0.20	41	27-59	100
2010/11	27,393	6,211	23	6	0.10	23	13-35	100
2011/12	25,568	8,266	32	1	0.01	8	3-14	100
2012/13	23,970	11,817	49	25	0.21	27	25-31	100

Table 21: 2012/13 Observed NZ fur seal captures and modelled estimates of total captures for New Zealand deepwater and middle-depth fisheries (this represents the most up to date information available)

		Observed			Estimated	
	Tows	Tows observed	% of tows observed	Observed captures	Estimated total captures	95% c.i.
Hoki	11,682	4,515	39	58	242	114-534
Hake	710	528	74	8	11	8-21
Ling (trawl)	1,149	269	23	4	15	5-42
Squid (trawl)	2,646	2,273	86	6	8	6-17
Southern blue whiting	792	791	100	26	26	26-26
Jack mackerel	2,208	1,935	88	3	4	3-8
Scampi	4,566	270	6	0	4	0-17
Deepwater (ORH/OEO/CDL)	3,098	346	11	0	0	0-1
Tier 2 mid-depth*	6,451	1,241	19	9	78	29-189
Total	**33,302**	**12,168**	**37**	**114**	**388**	

***** Includes all effort targeting Tier 2 middle depths species.

Marine Mammal Operational Procedures

The Marine Mammal Operational Procedure (MMOP) aims to reduce the risk of incidental captures of marine mammals during deepwater fishing activity. Measures included in the MMOP include removing stickers from the net before shooting it, moving away from large congregations of marine mammals before shooting if possible, and always be on the lookout for marine mammals around fishing gear. Specific measures are included to minimise the risk of dolphin captures including information on the time of day and areas where the risk of dolphin captures is highest. It also includes trigger points which should be reported to DWG within 24 hours.

Two observed trips during 2013/14 were identified as having issues with adherence to measures within the MMOP that required follow up from DWG (see Table 10). One of these related to a large capture event of common dolphins. The vessel was advised on additional measures that could be taken to avoid dolphins whilst the vessel was still at sea. This included moving away from the area where the captures had occurred and communicating the capture locations to the rest of the fleet. The second issue was regarding the non-reporting of a fur seal trigger.

Marine mammal trigger point notifications

All trawl vessels over 28 metres are required to notify DWG any time they capture more than a given number of marine mammals within a defined time period. There were 21 trigger point activations for marine mammal captures in the 2013/14 fishing year. These are summarised in Table 22 below.

Table 22: Marine mammal trigger point activations for the 2012/13 and 2013/14 fishing years

Species	Trigger Points		Trigger activations 2012/13	Trigger activations 2013/14
	Captures in any 24 hr period	Captures in any 7 day period		
Fur seals	2	5	12	9
Dolphins	1	n/a	10	7
Sea lions	1	n/a	15	5
Basking shark	1	n/a	N/A	6

Five of the fur seal triggers in 2013/14 relate to the capture of two or more fur seals in a 24 hour period. The remaining four trigger breaches were related to instances where more than five captures over a seven day period.

C.4 Elasmobranchs

Management Objectives 2.4 and 2.5 in the National Deepwater Plan address the need to manage and monitor shark interactions with deepwater fishing activity. The management of sharks in New Zealand is guided by the National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks) which was revised in 2013. The new NPOA-Sharks sets out goals and five-year objectives to guide the conservation and management of sharks for the next five years in New Zealand. The NPOA Sharks objectives that are most immediately relevant to deepwater fisheries are the objective to eliminate shark finning in New Zealand and to reduce the use of generic reporting codes.

In 2013, a trigger point was added to the Deepwater Fisheries Operational Procedures which requires vessels to report any basking shark captures to Deepwater Group Ltd within 24 hours. Six triggers were reported for basking shark captures during the 2013/14 fishing year. One basking shark trigger was not reported, this was followed up by the ELO with the vessel involved.

Elasmobranchs can be split into three classifications: rays and skates, sharks and dogfish, and chimaeras. Within these three classifications, some species are protected, some are included in the QMS, and some are reported using generic codes which does not allow for species determination.

Reporting for sharks in connection with deepwater fisheries includes information on the total interactions with shark species during deepwater fishing activity, interactions with protected shark species, the level of the use of generic reporting codes, and some information about the utilisation and processing of sharks in deepwater fisheries. All information regarding 'landings' is based on a 'core deepwater fleet' which includes all trawl vessels over 28 metres, scampi fishing vessels, and bottom longline vessels over 28 metres. Information is also reported from observer records, this information is based on Tier 1 target fishing.

Table 23: Observed and industry reported captures (by number) of protected shark species from the core deepwater fishing fleet in the 2013/14 fishing year [12]

	Observed Captures	Industry-reported
Basking shark	5	7
Spine-tailed devil ray	0	1
Smalltooth sandtiger shark	0	0
Manta ray	0	0
White pointer shark	0	0
Whale shark	0	0

[12] These are not cumulative, an observed capture will also have been reported by the vessel (i.e. the basking shark observed captures are the same events as the industry reported basking shark captures).

Table 24: Reported in-zone landings (tonnes) of three categories of elasmobranchs from the core deepwater fishing fleet in 2013/14

	Chimaeras	Rays & Skates	Sharks & Dogfish	Total
Generic reporting code	2	7	293	302
QMS species	1,317	440	4,141	5,809
Other	128	18	995	1,141
Total	1,448	465	5,429	7,342

Generic reporting codes make it impossible to accurately quantify the captures of specific shark species. The NPOA-Sharks identified the use of generic reporting codes for shark catches as an area in need of attention from the Ministry in future. Table 25 reports the percentages of shark landings and observed catches reported using generic species codes.

Table 25: Use of generic reporting codes from both observer data and reported landings 2004/05 to 2013/14 as a percent of total reported elasmobranch landings/catches in the core deepwater fleet.

	% shark landings with generic codes	% of observed shark catches with generic codes
2004/05	8.4	7
2005/06	10.0	6
2006/07	10.3	5
2007/08	9.7	6
2008/09	10.7	8
2009/10	11.0	8
2010/11	9.6	4
2011/12	11.6	3
2012/13	9.3	3
2013/14	4.1	1.5

Only four species of sharks caught in deepwater fisheries were reported with fins as the primary landed state in 2013/14. Landings reported as finned and proportion of total catch for those four species are detailed in Table 26. Of all elasmobranch landings reported in the core deepwater fleet, <1% overall (by weight) was reported as being finned.

Table 26: Primary processed state for elasmobranchs landed in 2013/14 fishing year by the core deepwater fleet (does not include Schedule 6 – live releases, does include SPD returns)

	Total landings (tonnes greenweight)	% of total landings of that species	Landed with finned as primary state (t)	Proportion of total landings finned for that species in core deepwater fleet
Blue shark	9.4	7.8%	3.7	39.5%
Mako shark	21.0	37.0 %	7.6	40%
Porbeagle shark	41.7	58.6%	5.3	12.8%
School shark	160.9	4.9%	0	0
Spiny dogfish	3,880.6	64.3%	4.3	0.1%
Spiny dogfish (no Sch. 6)	1,945	79.7%	4.3	0.2%

C.5 Tier 3 species

Tier 3 species are non-QMS species that are caught during fishing activity for QMS species. The top 40 Tier 3 species landed are reported in Table 27, full details of all Tier 3 species caught in deepwater fisheries can be found in Appendix III.

Table 27: Landings (tonnes) of top 40 Tier 3 species from core deepwater fleet in 2013/14 and four years of catch history

	Common Name	2009/10	2010/11	2011/12	2012/13	2013/14
JAV	Javelinfish	4,981	4,000	3,298	4,071	3,926
RAT	Rattails	3,685	3,193	3,243	4,047	3,381
STU	Slender tuna	53	108	74	262	582
ETB	Baxter's lantern dogfish	44	47	30	41	300
SND	Shovelnose dogfish	149	127	97	135	283
OSD	Sharks & Dogfish not otherwise specified	583	580	656	546	226
SDO	Silver dory	416	194	189	127	225
NCB	Smooth red swimming crab	565	586	203	717	169
BSH	Seal shark	243	143	145	198	128
LCH	Long-nosed chimaera	130	95	99	113	123
SSI	Silverside	196	144	164	105	98
CSQ	Leafscale gulper shark	17	13	9	32	96
WSQ	Warty squid	105	79	81	96	93
CON	Conger eel	54	63	37	66	91
FHD	Deepsea flathead	96	92	84	102	78
SLK	Slickhead	127	39	58	44	65
CDO	Capro dory	52	54	46	35	61
DWD	Deepwater dogfish (Unspecified)	234	98	78	35	59
RUD	Rudderfish	55	36	32	53	55
SUN	Sunfish	8	15	15	13	51
BEN	Scabbardfish	34	23	14	18	49
SRH	Silver roughy	64	32	24	127	48
BEL	Bellowsfish	102	162	81	51	45
HCO	Hairy conger	72	71	14	48	45
SFI	Starfish	64	60	73	47	44
RHY	Common roughy	146	92	153	119	41
CAR	Carpet shark	27	68	43	32	40
HAG	Hagfish	14	14	2	5	40
CBE	Crested bellowsfish	5	3	11	21	39
CYP	Longnose velvet dogfish	2	1	0	9	38
MOD	Morids	140	19	27	28	37
CRB	Crab (Unspecified)	167	81	103	72	35
ALB	Albacore tuna	0	2	2	11	35
POP	Porcupine fish	42	26	40	33	32
THR	Thresher shark	9	15	14	17	25
NSD	Northern spiny dogfish	17	22	10	20	25
TOA	Toadfish	34	30	23	28	24
ETL	Lucifer dogfish	26	17	25	32	21
JFI	Jellyfish (Unspecified)	6	30	16	25	19
UNI	Unidentified fish	1	3	2	7	19

C.6 Benthic Interactions

Benthic bycatch

Many deepwater fisheries are undertaken by fishing gear that makes contact with the seabed. This can lead to catches of benthic organisms including species of corals, sponges, and sea anemones as a bycatch in these fisheries. In New Zealand all black corals, gorgonian corals, stony corals, and hydrocorals are protected under the Wildlife Act 1953. Benthic bycatch organisms and quantities reported by Ministry observers are shown in Table 28.

Table 28: Observed and industry reported catch of benthic species from the core deepwater fleet and all vessels targeting Tier 1 species in the 2013/14 fishing year

Phyla	Common name	Total amount observed (kg wet weight)	Industry-reported (kg wet weight)
Cnidaria	Corals (protected species)	424	112
	Corals (generic codes)	3,033	3,294
	Soft corals	1	11
	Anemones	77	5,268
	Sea pens	90	
	Hydroids	159	
Porifera	Sponges	38,758	76,434

Trawl footprint

Each year, the total trawl footprint is calculated for eleven main deepwater species, as well as the cumulative footprint since 1989. The reporting is based on TCEPR reporting forms, and is reviewed each year through the Aquatic Environment Working Group. Trawled area is reported against the 'fishable area', which is defined as the area shallower than 1600m and not closed to bottom trawling (by BPAs, seamount closures or marine reserves). Figure 2 below shows the cumulative swept area from 1989/90 – 2010/11 relative to the fishable area. Figure 3 shows only the 2009/10 swept area.

Swept area for each individual Tier 1 species is reported in Appendix I.

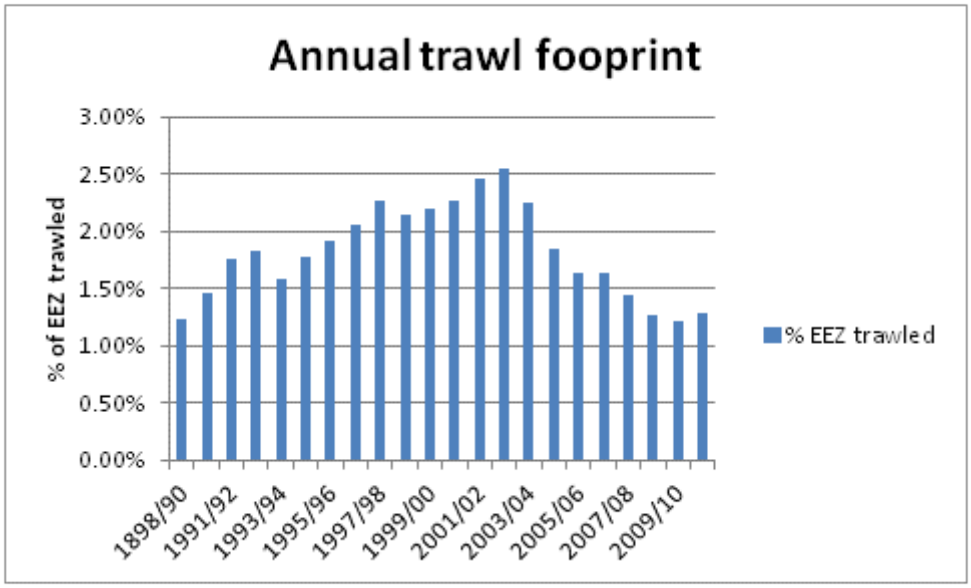


Figure 3: Estimated annual percentage of the EEZ seafloor contacted by trawling each year for 1989/90 to 2010/11.

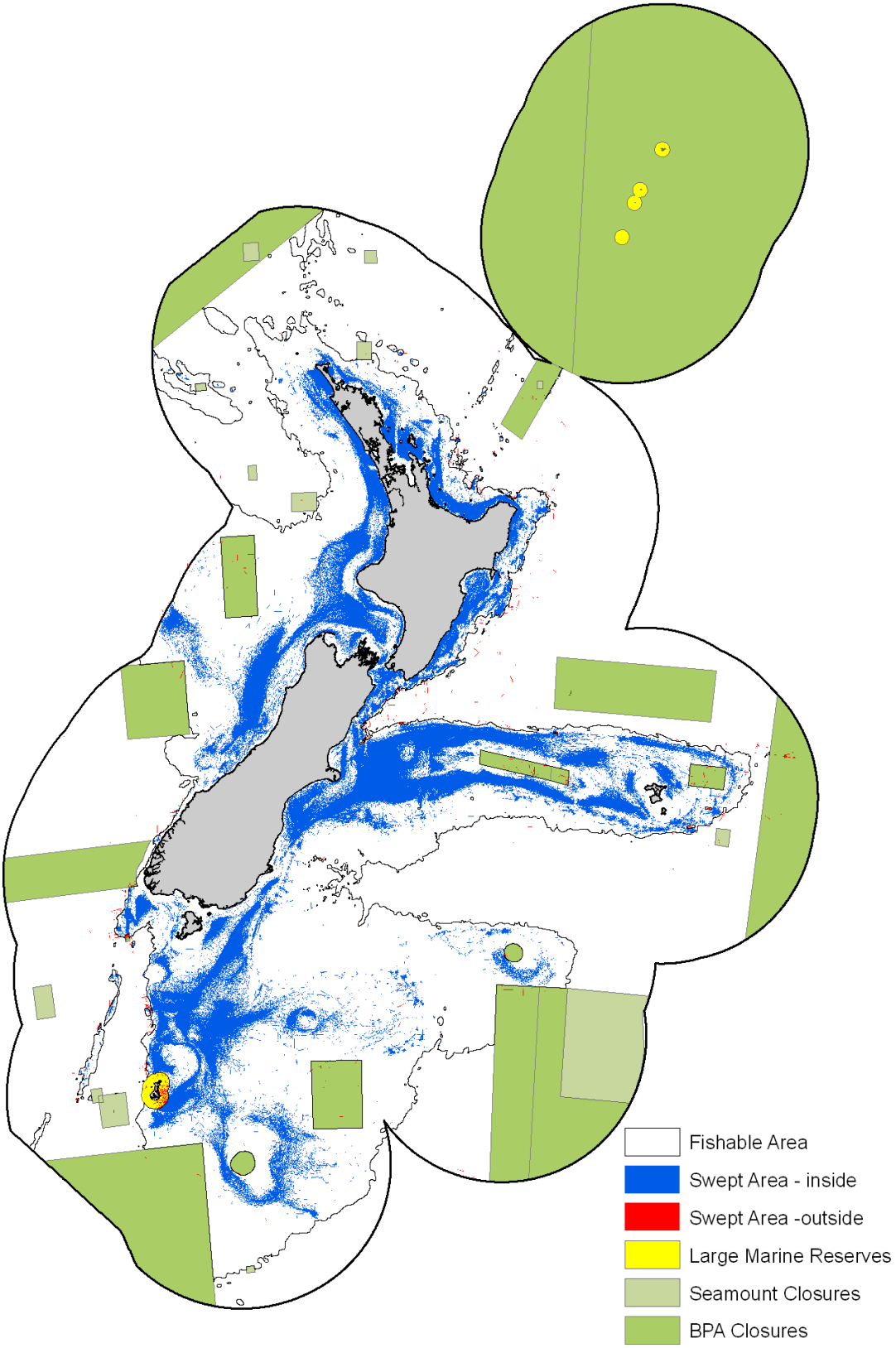


Figure 4: Trawl footprint for all deepwater species in relation to the fishable area for the period 1989/90 to 2009/10.[13]

[13] Effort appearing in closed areas is from the years prior to the closures. E.g. the Auckland Islands Marine Reserve was created in 2003, fishing effort from 1989/90 until then is shown in the figure.

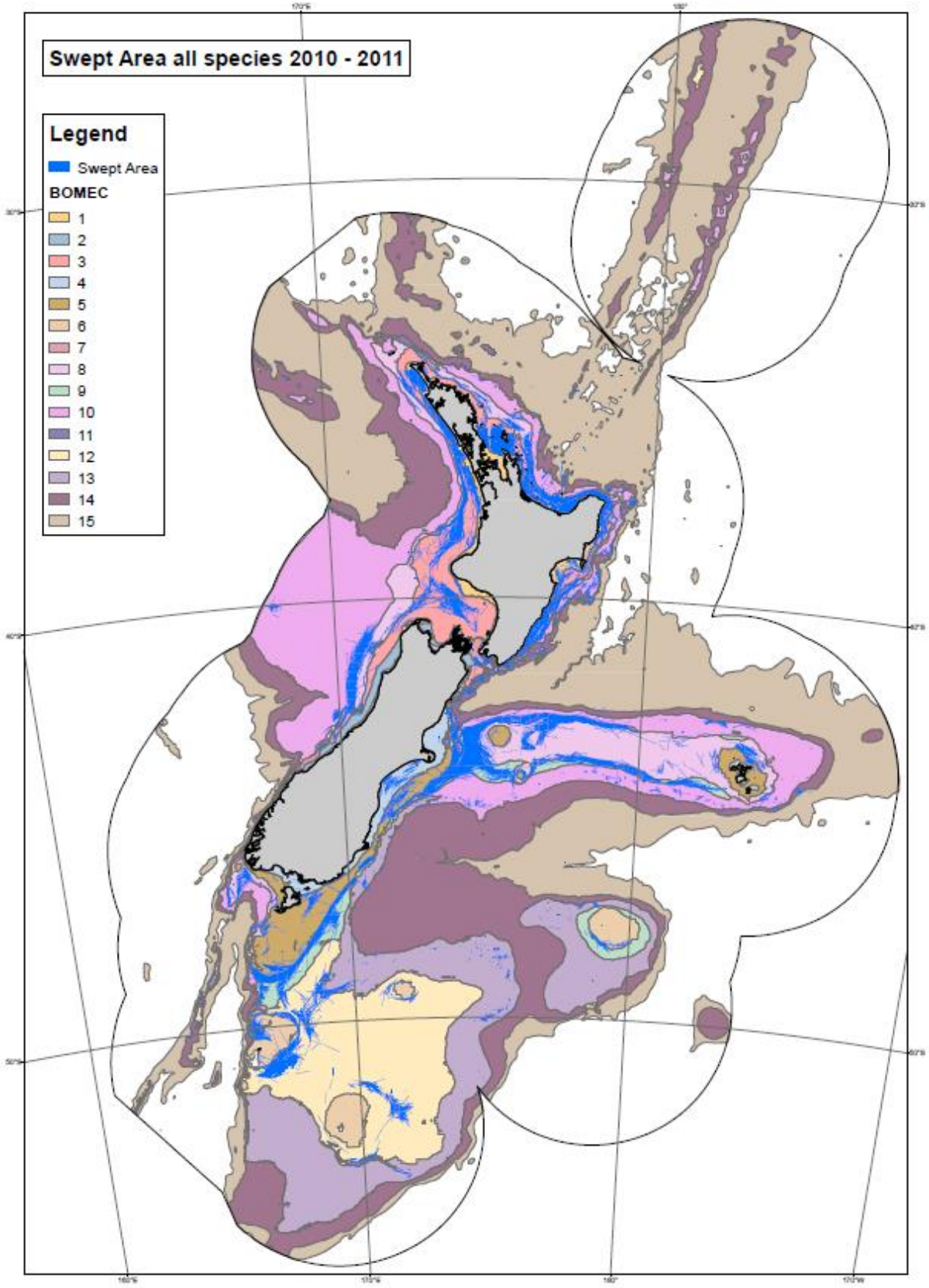


Figure 5: Trawl footprint for all deepwater species in relation to BOMEC areas for the 2010/11 fishing year.

Trawl footprint vs. Benthic Optimised Marine Environmental Classification (BOMEC)[14]

The trawl footprint of deepwater fisheries is also assessed against the 15 BOMEC classes representing proxies for various benthic habitats in the New Zealand EEZ. This analysis allows for the monitoring of interactions with particular BOMEC classes.

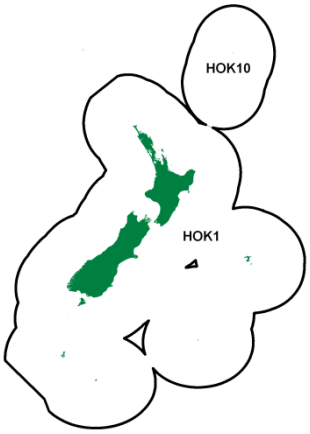
Table 29: The BOMEC classification and swept area for all species, 1989/90 to 2010/11.

BOMEC code	Area (km^2)	Swept Area (km^2)	Swept Area (%)
1	27,557	12,484	45%
2	12,420	3,331	27%
3	89,710	58,234	65%
4	27,268	9,675	35%
5	60,990	26,781	44%
6	38,609	6,787	18%
7	6,342	3,056	48%
8	138,551	68,922	50%
9	52,224	38,300	73%
10	311,361	71,912	23%
11	1,289	14	1%
12	198,577	55,181	28%
13	233,825	18,737	8%
14	493,034	11,453	2%
15	935,315	2,459	0.3%

[14] Details regarding the definition of BOMEC classes can be found in 'Leathwick, J.R.; Rowden, A.; Nodder, S.; Gorman, R.; Bardsley, S.; Pinkerton, M.; Baird, S.J.; Hadfield, M.; Currie, K.; Goh, A. (2012). A Benthic-optimised Marine Environment Classification (BOMEC) for New Zealand waters. New Zealand Aquatic Environment and Biodiversity Report No. 89. 54p.'

Appendix I: Summaries of NZ Deepwater Fisheries 2013/14

HOK: Hoki (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
HOK1	146,333	151,540	150,000	20	20	1,500

Reference points and current status			
Metric			**Status**
Target range		35-50% B_0	
B_{MSY}	*Eastern stock*	24% B_0	B_{2014}: 60 % B_0
	Western stock	25% B_0	B_{2014}: 59 %B_0
Soft limit		20%B_0	Both stocks 'Exceptionally Unlikely' to be below limit
Hard limit		10%B_0	Both stocks 'Exceptionally Unlikely' to be below limit
Exploitation rate (F)		10-25% of target biomass	

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
HOK1	$0.45 per kg	$0.90 per kg	$1.30 @ >102%	$90

Environmental indicators and observer coverage*			
Observer coverage		2012/13: 38.6% of tows observed	2013/14: 29.8% of tows observed
Seabirds		2012/13: 96 observed; 265 estimated	2013/14: 146 observed captures
Marine mammals	NZ fur seal	2012/13: 58 observed; 242 estimated	2013/14: 25 observed captures
	NZ sea lion	2011/12: 1 observed; 1 estimated	2013/14: 0 observed captures
Benthic interactions (fishable area trawled)		2010/11: 24,029 km^2 (1.71%)*	1989/90 to 2010/11: 169,495 km^2 (11.97%)*

Economic indicators (calendar year)	
Quota value 2009	$815m
Export earnings 2013	$187.3m

Eastern and Western catch limit reporting

The hoki fishery is considered to consist of two biological stocks; an eastern stock and western stock. Agreements between the Minister and the fishing industry have seen catch limits apply to each stock since 2001/02. For the 2013/14 fishing year, owners of approximately 87% of the hoki quota had formally entered into the catch limit agreement requested by the Minister. The E:W catch limit regime is administered by FishServe and monitored by DWG.

Table 30 below provides details on the catch limits and catch amounts for the 2013/14 fishing year.

Table 30: Catch limits and actual catch estimates for 2013/14 fishing year (tonnes).

Catch limits	2013/14 Planned	Catch within agreement (from FishServe)	Catch estimates for all fishers	Estimated catch scaled up to total landings
Eastern stock	60,000	52,174	55,462	56,489
Western stock	90,000	73,975	88,212	89,845

Hoki Operational Procedure (HOP)

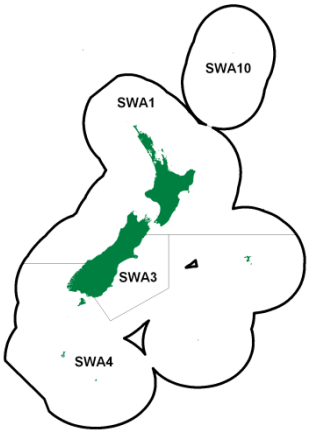
The purpose of the Hoki Operational Procedure (HOP) is to monitor and manage fishing effort within the agreed hoki management areas (HMAs). HMAs are areas where there is information to demonstrate the presence of high abundance of juvenile hoki (for these purposes hoki <55cm in total length) and no target fishing for hoki is allowed.

Table 31: Summary of HMA fishing activity for the 2011/12 – 2013/14 fishing years

HMA	# of vessels that fished in HMA	# of HOK target tows undertaken	# of non-HOK target tows	Fisher Estimated catch of HOK (t)	Estimated catch of all species (t)
Canterbury Banks					
2011/12	24	16	454	494	7,301
2012/13	20	17	471	772	7,849
2013/14	19	41	584	692	8,402
Mernoo Bank					
2011/12	17	14	68	456	1,310
2012/13	14	8	178	322	3,092
2013/14	16	9	231	346	4,102
Puysegur					
2011/12	14	2	98	197	1,167
2012/13	12	2	82	80	781
2013/14	11	0	118	294	1,432
Cook Strait					
2011/12	-	-	-	-	-
2012/13	1	3*	-	1	1
2013/14	-	-	-	-	-

* Tows in the Cook Strait HMA were undertaken as part of a research project to estimate hoki spawning abundance.

SWA: Silver warehou (Tier 2)



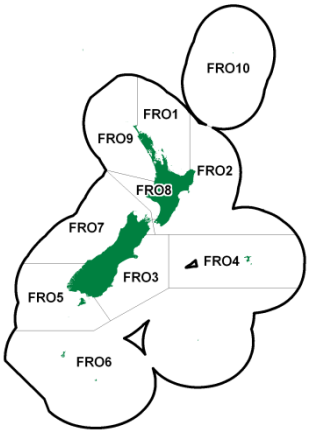
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SWA 1	903	3,003	3,000	2	1	0
SWA 3	3,201	N/A	3,280	N/A	N/A	N/A
SWA 4	3,884	N/A	4,090	N/A	N/A	N/A

Reference points and current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
SWA 1 SWA 3 SWA 4	$0.50 per kg	$1.22 per kg	$1.74 @ 110-130% $3.00 @ >130%	$6 $5,257 $5

Economic indicators (calendar year)	
Quota value 2009	$83m
Export earnings 2013	$20.9m

FRO: Frostfish (Tier 2)



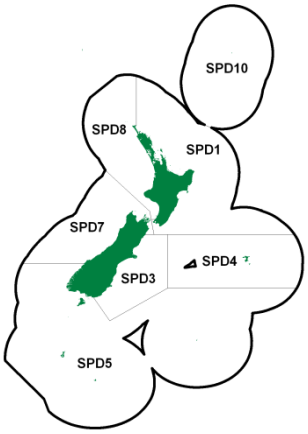
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
FRO 3	63	176	176	0	0	N/A
FRO 4	15	28	28	0	0	N/A
FRO 5	11	135	135	0	0	N/A
FRO 6	<0.1	11	11	0	0	N/A
FRO 7	880	2,625	2,623	1	1	N/A
FRO 8	814	649	649	0	0	N/A
FRO 9	262	140	138	1	1	N/A

Reference points and current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges			
Stock	**Interim**	**Annual**	**2013/14 Actual**
FRO 3	$0.17 per kg	$0.34 per kg	0
FRO 4	$0.12 per kg	$0.24 per kg	0
FRO 5	$0.08 per kg	$0.15 per kg	0
FRO 6			0
FRO 7			0
FRO 8			$22,000
FRO 9			$18,480

Economic indicators (calendar year)	
Quota value 2009	$2.8m
Export earnings 2012	No export information specific to frostfish is currently available

SPD: Spiny dogfish (Tier 2)



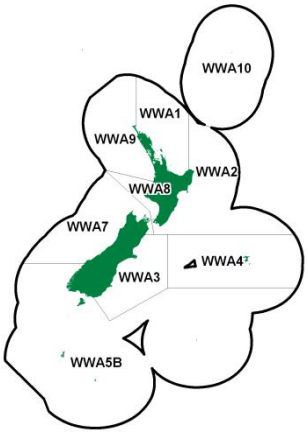
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SPD 4	1,055	1,666	1,626	10	10	20
SPD 5	2,067	3,753	3,700	8	8	37

Reference points and current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
SPD 4 SPD 5	$0.05 per kg	$0.10 per kg	N/a	$600 $44

Economic indicators (calendar year)	
Quota value 2009	$6.1m
Export earnings 2013	$0.7m (includes all SPD stocks)

WWA: White warehou (Tier 2)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	2013/14 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
WWA3	302	585	583	1	1	0
WWA4	110	332	330	1	1	0
WWA5B	1,373	2,621	2,617	2	2	0
WWA7	115	129	127	1	1	0
WWA8	<0.1	1	1	0	0	0
WWA9	0	0	0	0	0	0

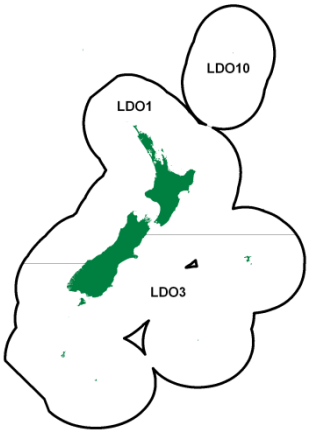
Reference points and current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges				
Stock	Interim	Annual	Differential	2013/14 Actual
WWA3 WWA4 WWA5B WWA7	$0.52 per kg	$1.03 per kg	$2.00 @ >110%	0 0 0 $3,400
WWA8 WWA9	$0.27 per kg	$0.54 per kg	na	0 0

Economic indicators (calendar year)	
Quota value 2009	$16.8m
Export earnings 2013	$5.2m [15]

[15] Information in export statistics for "Warehou, Other" assumed to be white warehou as there are separate entries for silver and blue warehou.

LDO: Lookdown dory (Tier 2)



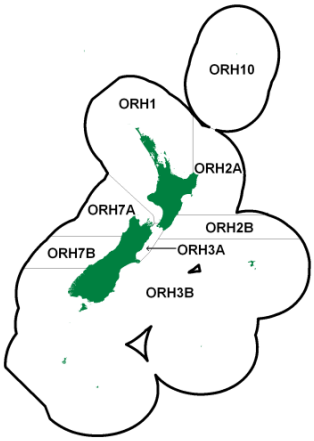
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2012/13 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
LDO1	204	168	168	0	0	0
LDO3	256	614	614	0	0	0

Reference points and current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	LDO1: Unknown
		LDO3: Unlikely to be below the hard limit (<40%)

Deemed value rates and charges			
Stock	**Interim**	**Annual**	**2013/14 Actual**
LDO1	\$0.21 per kg	\$0.42 per kg	\$16,190
LDO3	\$0.21 per kg	\$0.42 per kg	0

Economic indicators (calendar year)	
Quota value 2009	\$0.9m
Export earnings 2012	Primarily sold domestically and does not feature in export statistics

ORH: Orange roughy (Tier 1)



2013/14 Landings, Catch limits, and Allowances (tonnes)						
Stock	2013/14 Catch	TAC	TACC	Recreational	Customary	Other fishing related mortality
ORH 1	1,055	1,470	1,400	0	0	70
ORH 2A	732	919	875	0	0	44
ORH 2B	108	147	140	0	0	7
ORH 3A	331	436	415	0	0	21
ORH 3B	2,515	4,725	4,500	0	0	225
ORH 7A	772[16]	525	500	0	0	25
ORH 7B	0.3	1	1	0	0	0

Reference points and current status			
Target	30-50%B_0	ORH 3B NW Chatham Rise	B_{2014}: 37% B_0
		ORH 3B E & S Chatham Rise	B_{2014}: 30%B_0
		ORH 7A	B_{2014}: 42%B_0
	30-40%B_0	ORH 1	
		ORH 2A North	B_{2003}: 24% B_0
		ORH 2A South, 2B, 3A (MEC)	B_{2014}: 14% B_0
		ORH 3B Puysegur	
		ORH 3B Sub-Antarctic	
		ORH7B	B_{2004}: 17% B_0
Deterministic B_{MSY}		22-25% B_o	
Soft limit	20%B_o	ORH 1	
		ORH 2A North	Unlikely (<40%) below
		ORH 2A, 2B, 3A (MEC)	Likely (>60%) below
		ORH 3B NW Chatham Rise	Very Unlikely (<10%) below
		ORH 3B E & S Chatham Rise	Unlikely (<40%) below
		ORH 3B Puysegur	
		ORH 3B Sub-Antarctic	
		ORH7A	Very Unlikely (<10%) below
		ORH7B	Likely (>60%) below
Hard limit	10%B_o	ORH 1	
		ORH 2A North	Very Unlikely (<10%) below
		ORH 2A, 2B, 3A (MEC)	Unlikely (<40%) below
		ORH 3B NW Chatham Rise	Exceptionally Unlikely (<1%) below
		ORH 3B E & S Chatham Rise	Very Unlikely (<10%) below
		ORH 3B Puysegur	
		ORH 3B Sub-Antarctic	

		ORH7A	Exceptionally Unlikely (<1%) below
		ORH7B	Unlikely (<40%) below

Harvest strategy	
Harvest Control Rule for: ORH 3B – NW Chatham Rise ORH 3B – E&S Chatham Rise ORH 7A	Based on an F_{mid} of 4.5%. This is increased slightly above the midpoint of the target range and decreased slightly below the midpoint. If a stock is below the target range, F is decreased more substantially and the subsequent F is also rescaled to ensure that biomass returns to the target range.
Exploitation rate (F): All other stocks	4.5% of current biomass if in target range. F is reduced if biomass is below the target range

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
ORH 1	$1.70 per kg	$3.40 per kg	$5.00 @ > 110%	0
ORH 2A ORH 2B ORH 3A	$2.50 per kg	$5.00 per kg	$6.00 @ 120-140% $7.00 @ 140-160% $8.00 @ 160-180% $9.00 @ 180-200% $10.00 @ > 200%	0 0 0
ORH 3B	$2.50 per kg	$5.00 per kg	$6.25 @ > 110%	0
ORH 7A	$1.60 per kg	$3.20 per kg	$3.84 @ 120-140% $4.48 @ 140-160% $5.12 @ 160-180% $5.76 @ 180-200% $6.40 @ > 200%	0
ORH 7B	$1.60 per kg	$3.20 per kg	$5.00 @ > 110%	0

Environmental indicators and observer coverage[17]			
Observer coverage*		2012/13: 11.6% tows observed	2013/14: 13.1% tows observed
Seabirds		2012/13: 2 observed; 11 estimated captures	2013/14: 2 observed capture
Marine mammals	NZ fur seal	2012/13: 0 observed; 0 estimated captures	2013/14: 0 observed captures
	NZ sea lion	2011/12: 0 observed; 0 estimated captures	2013/14: 0 observed captures
Benthic impacts (fishable area trawled)		2010/11: 1,031 km^2 (0.04%)*	1989/90 – 2010/11: 38,861 km^2 (2.63%)*

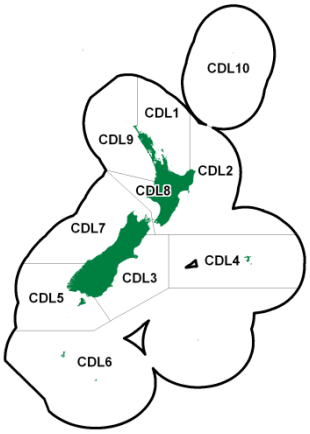
Economic indicators (calendar year)	
Quota value 2009	$282m
Export earnings 2013	$34.2m (may include some catch from outside the EEZ)

Table 33: Sub-area catch limits and actual 2013/14 catch for orange roughy stocks.

Sub-area catch limits (in tonnes)			
Stock	**Sub-area**	**Agreed catch limit**	**2013/14 Catch** [18]
ORH 1[19]	Area A	500 tonnes	393
	Area B	500 tonnes	487
	Area C	500 tonnes	0
	Area D	500 (incl. 30 tonnes bycatch limit in the MC Box)	174
ORH 2A	ORH 2A North	200	192
ORH 2A South, 2B and 3A	MEC	930[20]	979
ORH 3B	NW Chatham Rise	750	801
	E & S Chatham Rise	3,100	3,185
	Puysegur	150	0
	Sub-Antarctic	500	506

[17] Capture information is based on all fishing activity targeting both oreo and orange roughy.
[18] From industry-reported catch records, monitored by MPI.
[19] A 500 tonne catch limit applies to each sub-area despite the overall TACC being 1,400 tonnes. This means the catch limit cannot be reached in each sub-area.
[20] Industry agreed to shelve 300 tonnes of the 1,230 tonnes of MEC ACE during the 2013/14 year.

CDL: Black cardinalfish (Tier 2)



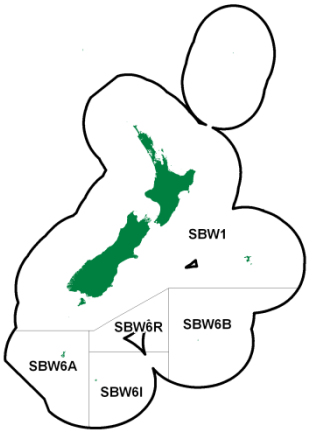
2013/14 Landings, Catch limits, and Allowances (in tonnes)						
Stock	**2013/14 Catch**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
CDL 1	160	1,320	1,200	0	0	120
CDL 2	282	460	440	0	0	20
CDL 3	68	196	196	0	0	N/A
CDL 4	11	66	66	0	0	N/A
CDL 5	19	22	22	0	0	N/A
CDL 6	<0.1	1	1	0	0	N/A
CDL 7	1	39	39	0	0	N/A
CDL 8	0	0	0	0	0	N/A
CDL 9	1	4	4	0	0	N/A

Reference points and Current status (as per Harvest Strategy Standard defaults)			
Target	40% B_0	CDL 2, 3 & 4	2009: Very Unlikely to be at or above target (<10%)
Soft Limit	20% B_0	CDL 2, 3 & 4	2009: Likely to be below the soft limit (>60%)
Hard Limit	10% B_0	CDL 2, 3 & 4	2009: About as Likely as Not to be below the hard limit (40-60%)

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
CDL 1 CDL 6 CDL 7 CDL 8 CDL 9	$0.15 per kg	$0.30 per kg	na	$2 $26 0 0 $1.50
CDL 2	$0.30 per kg	$0.60 per kg	$0.69 @> 120%	0
CDL 5	$0.26 per kg	$0.52 per kg	na	0
CDL 3 CDL 4	$0.26 per kg	$0.52 per kg	$0.60 @ > 120%	0 0

Economic indicators (calendar year)	
Quota value 2009	$4.2m
Export earnings 2013	$0.9m

SBW: Southern blue whiting (Tier 1)



Landings, Catch limits and Allowances as of 1 April 2013 (tonnes)							
Stock	**2013/14 Landings[21]**	**2014/15 Landings***	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SBW 1	21	2	8	8	0	0	N/A
SBW 6A	79	73	1,640	1,640	N/A	N/A	N/A
SBW 6B	4,278	7,054[22]	7,000	6,860	0	0	140
SBW 6I	28,606	24,593	30,000	29,400	0	0	600
SBW 6R	71	17	5,500	5,500	N/A	N/A	N/A

Reference points and Current status (as per Harvest Strategy Standard defaults)			
Target	40% B_0	SBW 1	Unknown
		SBW 6A	Unknown
		SBW 6B	Unknown
		SBW 6I	Unknown
		SBW 6R	
Soft limit	20%B_0	SBW 1	Unknown
		SBW 6A	Unknown
		SBW 6B	Unlikely to be below (<40%)
		SBW 6I	Very Unlikely to be below (<10%)
		SBW 6R	Unknown
Hard limit	10%B_0	SBW 1	Unknown
		SBW 6A	Unknown
		SBW 6B	Very Unlikely to be below (<10%)
		SBW 6I	Very Unlikely to be below (<10%)
		SBW 6R	Unknown

Deemed value rates and charges				
Stock	**Interim**	**Annual**	**Differential**	**2013/14 Actual**
SBW1	$0.45 per kg	$0.90 per kg	$1.30 @ >102%	$11,025
SBW 6A SBW 6B SBW 6I SBW 6R	$0.41 per kg	$0.46 per kg @ 100-102% $0.60 per kg @ 102-150% $0.92 per kg @ 150%+	N/A	0 0 0 0

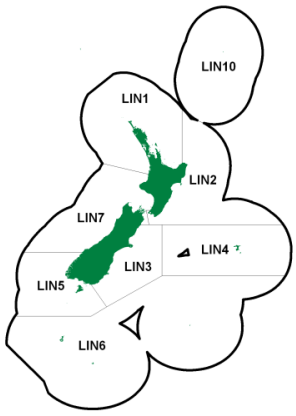
* 2014/15 landings are based on preliminary landings information from the 1 April 2014 – 30 March 2015 fishing year. Note TAC for SBW 6I was increased to 40,000 tonnes for the 1 April 2014 fishing year.

[21] Totals are for the 2013/14 April fishing year (1 April 2013 – 31 March 2014).
[22] A special permit was issued allowing up to 2,000 tonnes in excess of the TACC to be taken during research surveys in the area

Environmental indicators and observer coverage[23]			
Observer coverage		2012/13: 99.9% tows observed	2013/14: 99.5% tows observed
Seabirds		2012/13: 20 observed; 20 estimated captures	2013/14: 16 observed captures
Marine mammals	NZ fur seals	2012/13: 26 observed; 26 estimated captures	2013/14: 44 observed captures
	NZ sea lion	2012/13: 21 observed; 21 estimated captures	2013/14: 2 observed captures
Benthic interactions (fishable area trawled)		2010/11: 1,422 (0.10%)	1989/90 – 2010/11: 19,531 km^2 (1.38%)
Economic indicators (calendar year)			
Quota value 2009		$74.3m	
Export earnings 2013		$29.2m	

[23] Information on environmental actions is provided by October fishing year. 2012-13 covers 1 October 2012 – 30 September 2013. This effectively includes all captures in the 2013-14 April fishing year.

LIN: Ling (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
LIN 2	673	N/A	982	N/A	N/A	N/A
LIN 3	1,442	2,060	2,060	0	0	0
LIN 4	2,372	4,200	4,200	0	0	0
LIN 5	3,934	4,036	3,955	1	1	36
LIN 6	3,219	8,590	8,505	0	0	85
LIN 7	3,200	3,144	3,080	1	1	25

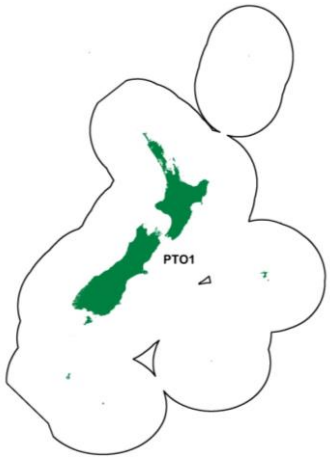
Reference points and Current status				
Target	40% B_0	LIN 2	Unknown	
		LIN 3&4	B_{2011}: 55% B_0	Very Likely (>90%) to be at or above
		LIN 5&6	B_{2011}: 70-101% B_0	Virtually Certain (>99%) to be at or above
		LIN 6B	B_{2006}: 61% B_0	Very Likely (>90%) to be at or above
		LIN7WC	B_{2012}: 71% B_0	Very Likely (>90%) to be at or above
		LIN CS	B_{2010}: 54% B_0	Likely (>60%) to be at or above
Soft limit	20%B_0	LIN 2	Unlikely (<40%) to be below	
		LIN 3&4	Exceptionally Unlikely (<1%) to be below	
		LIN 5&6	Exceptionally Unlikely (<1%) to be below	
		LIN 6B	Very Unlikely (<10%) to be below	
		LIN7WC	Very Unlikely (<10%) to be below	
		LIN CS	Exceptionally Unlikely (<1%) to be below	
Hard limit	10%B_0	LIN 2	Very Unlikely (<10%) to be below	
		LIN 3&4	Exceptionally Unlikely (<1%) to be below	
		LIN 5&6	Exceptionally Unlikely (<1%) to be below	
		LIN 6B	Exceptionally Unlikely (<1%) to be below	
		LIN7WC	Exceptionally Unlikely (<1%) to be below	
		LIN CS	Exceptionally Unlikely (<1%) to be below	

Deemed value rates and charges (per kg)

Stock	Interim	100-102%	102-120%	Annual 120%+	2013/14 Actual
LIN 2	$1.20	$2.38	$3.40	$6.00	0
LIN 3					0
LIN 4					0
LIN 5					$2,880
LIN 6					0
LIN 7					$418,290

Environmental indicators and observer coverage			
Observer coverage		Trawl - 2012/13: 23.4% tows observed	Trawl – 2013/14: 22.7% tows observed
		Longline - 2012/13: 1.7% hooks observed	Longline – 2013/14: 8.3% hooks observed
Seabirds	Trawl	2012/13: 4 observed; 21 estimated captures	2013/14: 6 observed captures
	Longline	2012/13: 0 observed; 361 estimated captures	2013/14: 33 observed captures
Marine mammals	NZ fur seal	2012/13: 4 observed; 15 estimated captures	2013/14: 0 observed captures
	NZ sea lion	2012/13: 0 observed; 0 estimated captures	2013/14: 0 observed captures
Benthic interactions (fishable area trawled)		2010/11: 492 km^2 (0.02%)	1989/90 – 2010/11: 13,978 km^2 (0.53%)
Economic indicators (calendar year)			
Quota value 2009		$246.2m	
Export earnings 2013		$52.6m	

PTO: Patagonian toothfish (Tier 2)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
PTO 1	<0.1	50	49.5	0	0	0.5

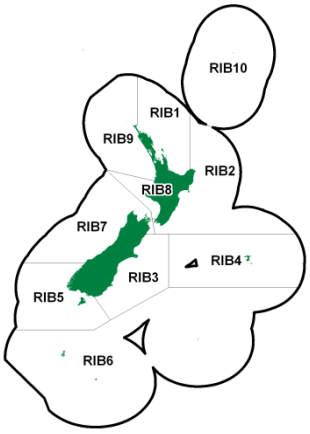
Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges				
Stock	**Interim**	**Annual 100-110%**	**Annual 110% +**	**2013/14 Actual**
PTO 1	$13.50 per kg	$15.00 per kg	$25.00 per kg	0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$6.8m[24]

[24] The majority of revenue was generated by Patagonian toothfish taken in other jurisdictions but landed in New Zealand.

RIB: Ribaldo (Tier 2)



2013/14 Landings, Catch limits and Allowances (tonnes)

Stock	2013/14 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
RIB 3	104	394	394	0	0	0
RIB 4	492	357	357	0	0	0
RIB 5	41	52	52	0	0	0
RIB 6	133	231	231	0	0	0
RIB 7	291	330	330	0	0	0
RIB 8	2	1	1	0	0	0

Reference points and Current status (as per Harvest Strategy Standard defaults)

Target	40% B_0	RIB 7 & 8	Unknown
		RIB 3 & 4	Unknown
		RIB 5 & 6	Unknown
Soft Limit	20% B_0	RIB1, 2, 7, 8, 9	Unknown
		RIB 3 & 4	Unlikely to be below soft limit (<40%)
		RIB 5 & 6	Unlikely to be below soft limit (<40%)
Hard Limit	10% B_0	RIB1, 2, 7, 8, 9	Unknown
		RIB 3 & 4	Unlikely to be below hard limit (<40%)
		RIB 5 & 6	Unlikely to be below hard limit (<40%)

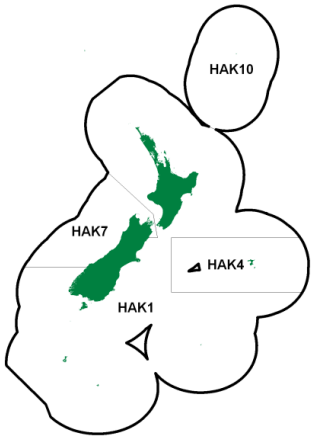
Deemed value rates and charges

Stock	Interim	100-120%		120-140%	140-160%	160-180%	180-200%	200%+	2013/14 Actual
RIB 3 RIB 4 RIB 5 RIB 8	$0.15	$0.30		$0.36	$0.42	$0.48	$0.54	$0.60	0 $39,480 0 $305
RIB 6	$0.40	$0.80		$0.96	$1.12	$1.28	$1.44	$1.60	0
RIB 7	$0.40	**100-110%** $0.80	**110-120%** $1.20	$2.00					0

Economic indicators (calendar year)

Quota value 2009	$2.7m
Export earnings 2013	No export information specific to ribaldo is currently available

HAK: Hake (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
HAK 1	1,883	N/A	3,701	N/A	N/A	N/A
HAK 4	168	1,818	1,800	0	0	18
HAK 7	3,641	7,777	7,700	0	0	77

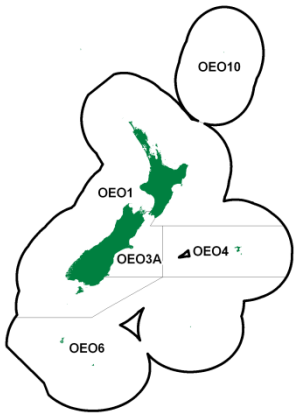
Reference points and Current status (as per Harvest Strategy Standard defaults)				
Target	40% B_0	HAK 1	B_{2011}: 50%B_0	Very Likely (>90%) to be at or above
		HAK 4	B_{2009}: 47%B_0	Likely (>60%) to be at or above
		HAK 7		Unknown
Soft limit	20% B_0	HAK 1		Exceptionally Unlikely (<1%) to be below
		HAK 4		Very Unlikely (<10%) to be below
		HAK 7		Unknown
Hard limit	10% B_0	HAK 1		Exceptionally Unlikely (<1%) to be below
		HAK 4		Exceptionally Unlikely (<1%) to be below
		HAK 7		Unknown

Deemed value rates and charges								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
HAK 1 HAK 4 HAK 7	$0.80	$1.60	$1.92	$2.24	2.56	2.88	3.20	$9 0 $52

Environmental indicators and observer coverage			
Observer coverage		2012/13: 74.4% tows observed	2013/14: 70.3% tows observed
Seabirds		2012/13: 5 observed; 7 estimated captures	2013/14: 6 observed captures
Marine mammals	NZ fur seal	2012/13: 8 observed; 11 estimated captures	2013/14: 5 observed capture
	NZ sea lion	2012/13: 0 observed; 0 estimated captures	2013/14: 0 observed captures
Benthic interactions (fishable area trawled)		2010/11: 1,223 km^2 (0.09%)	1989/90 – 2010/11: 17,976 km^2 (1.27%)

Economic indicators (calendar year)	
Quota value 2009	$135.5m
Export earnings 2013	$16.6m

OEO: Oreos (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
OEO 1	386	2,500	2,500	0	0	0
OEO 3A	3,473	3,518	3,350	0	0	168
OEO 4	7,024	7,000	7,000	0	0	0
OEO 6	367	N/A	6,000	N/A	N/A	N/A

Reference points and Current status (as per Harvest Strategy Standard defaults)				
Target	40% B_0	OEO 1		
		OEO 3A	B_{2008}: 27% B_0	Black oreo: Unlikely (<40%) to be at or above
			B_{2009}: 36% B_0	Smooth oreo: About As Likely As Not (40-60%)to be at or above
		OEO 4		Black oreo: Unknown
			B_{2010}: 33 or 41% B_0	Smooth oreo: About As Likely As Not (40-60%) to be at or above
		OEO 6		
Soft Limit	20% B_0	OEO 1		
		OEO 3A	Black oreo: Unlikely (<40%) to be below	
			Smooth oreo: Unlikely (<40%) to be below	
		OEO 4	Black oreo: Unknown	
			Smooth oreo: Unlikely (<40%) to be below	
		OEO 6		
Hard Limit	10% B_0	OEO 1		
		OEO 3A	Black oreo: Unlikely (<40%) to be below	
			Smooth oreo: Very Unlikely (<10%) to be below	
		OEO 4	Black oreo: Unknown	
			Smooth oreo: Very Unlikely (<105) to be below	
		OEO 6		

Deemed value rates and charges								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
OEO 1 OEO 4 OEO 6	$0.39	$0.78	$0.936	$1.092	$1.248	$1.404	$1.56	0 0 0
OEO 3A	$0.38	$0.76	$0.912	$1.064	$1.216	$1.368	$1.52	0

Environmental indicators and observer coverage		
Observer coverage	2012/13: 12.3% tows observed	2013/14: 20.3% tows observed
Seabirds	2012/13: 0 observed; 13 estimated captures	2013/14: 2 observed captures

Marine mammals	NZ fur seal	2012/13: 0 observed; 0 estimated captures	2013/14: 0 observed captures
	NZ sea lion	2012/13: 0 observed; 0 estimated captures	2013/14: 0 observed captures
Benthic interactions (fishable area trawled)		2010/11: 801 km^2 (0.06%)	1989/90 – 2010/11: 16,328 km^2 (1.13%)
Economic indicators (calendar year)			
Quota value 2009	$74.4m		
Export earnings 2013	$12m		

Catch split

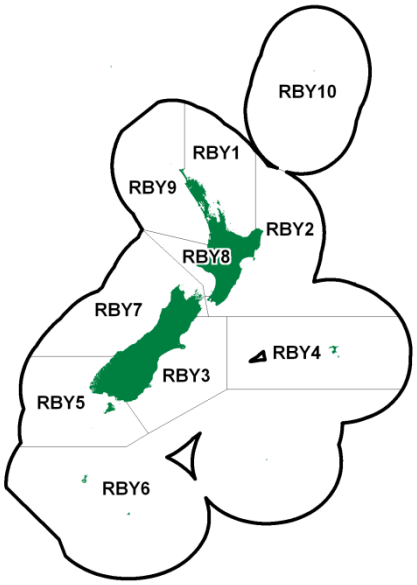
OEO 1

Area	Catch limit for 2013/14 (t)	Sum of catch reported to DWG or on TCEPRs/MHRs (t)
Southland (*smooth oreo only*)	400	95 (DWG)
Southland (*black oreo only*)	N/A	79 (DWG)
OEO1 excluding Southland (*all species*)	N/A	196 (TCEPR)
OEO1 (*all species*)	2,500	386 (MHR)

OEO3A

Species	Catch limit (t)	Sum of catch reported on CLRs (t)
Black oreo	1,700	1,770
Smooth oreo	1,650	1,696
Totals	*3,350*	*3,496*

RBY: Rubyfish (Tier 2)



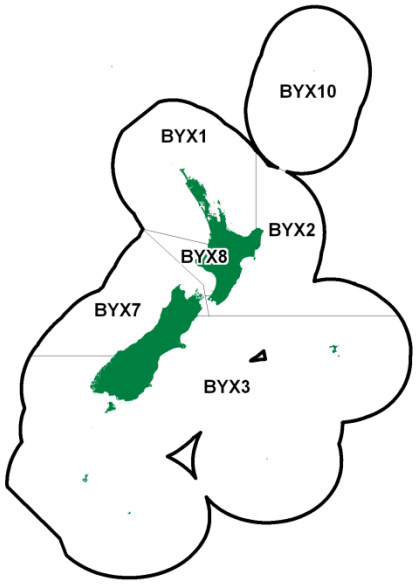
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
RBY 1	223	318	300	1	2	15
RBY 2	349	435	433	1	1	0
RBY 3	0.2	3	3	0	0	0
RBY 4	15	19	18	0	0	1
RBY 5	<0.1	0	0	0	0	0
RBY 6	0	0	0	0	0	-
RBY 7	48	33	33	0	0	-
RBY 8	<0.1	6	6	0	0	0
RBY 9	0.2	19	19	0	0	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
RBY 1								0
RBY 2								$1
RBY 3								0
RBY 4								$1
RBY 5	$0.13	$0.26	$0.312	$0.364	$0.416	$0.468	$0.52	$18
RBY 6								0
RBY 7								$7,971
RBY 8								0
RBY 9								0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	Rubyfish does not feature in export statistics

BYX: Alfonsino (Tier 2)



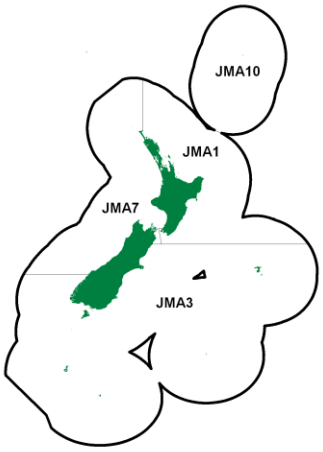
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
BYX 1	29	304	300	2	2	31.3
BYX 2	1,551	-	1,575	-	-	-
BYX 3	1,013	-	1,010	-	-	-
BYX 7	58	-	81	-	-	-
BYX 8	0.1	-	20	-	-	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
BYX 1	$1.44	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40	$62
BYX 3	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40	0
BYX 7								$3
BYX 8								0
Stock	**Interim**	**100-110%**	**110-130%**	**130-150%**	**150-170%**	**170-190%**	**190%+**	**2013/14 Actual**
BYX 2	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40	$1,476

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$13.1m

JMA: Jack Mackerel (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	
JMA 3	4,693	NA	18,000	NA	NA	
JMA 7	35,175	NA	32,537	NA	NA	

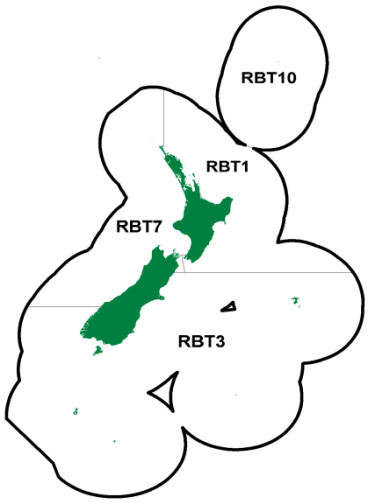
Reference points and Current status (as per Harvest Strategy Standard defaults)			
Target	40% B_0	JMA 3	Unknown
		JMA 7	Unknown
Soft Limit	20% B_0	JMA 3	Unknown
		JMA 7	Unknown
Hard Limit	10% B_0	JMA 3	Unknown
		JMA 7	Unknown

Deemed value rates and charges								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
JMA 3	$0.08	$0.09	$0.108	$0.126	$0.144	$0.162	$0.18	0
JMA 7	$0.08	$0.15	$0.18	$0.21	$0.24	$0.27	$0.30	$50

Environmental indicators and observer coverage			
Observer coverage		2012/13: 87.6% tows observed	2013/14: 88.6% tows observed
Seabirds		2012/13: 34 observed; 34 estimated captures	2013/14: 11 observed captures
Marine mammals	NZ fur seal	2012/13: 3 observed; 4 estimated captures	2013/14: 8 observed captures
	Common dolphin	2012/13: 15 observed; 15 estimated captures	2013/14: 30 observed captures
Benthic interactions (fishable area trawled)		2010/11: 3,700 km^2 (0.14%)	1989/90 – 2010/11: 42,678 km^2 (3.03%)

Economic indicators (calendar year)	
Quota value 2009	$53.6m (for all stocks)
Export earnings 2013	$ 57.5m (for all stocks)

RBT: Redbait (Tier 2)



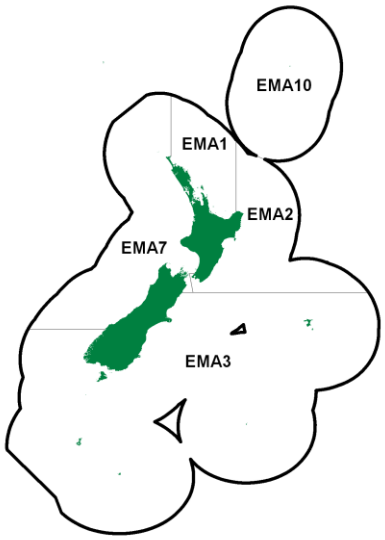
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
RBT 1	4	20	19	0	0	1
RBT 3	2,774	2,305	2,190	0	0	115
RBT 7	78	2,991	2,841	0	0	150

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
RBT 1 RBT 3 RBT 7	$0.25	$0.50	$0.60	$0.70	$0.80	$0.90	$1.00	$14 $183,439 $2

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	Redbait does not feature in export statistics

EMA: English mackerel (Tier 2)



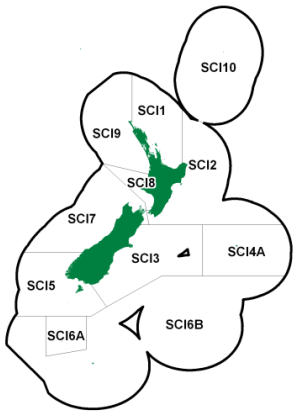
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
EMA 3	29	392	390	1	1	0
EMA 7	1,200	3,352	3,350	1	1	0

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
EMA 3 EMA 7	$0.13	$0.26	$0.312	$0.364	$0.416	$0.468	$0.52	$3 0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$10.7m (includes all stocks)

SCI: Scampi (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)

Stock	2013/14 Landings	TAC	TACC	Recreational	Customary	Other Mortality
SCI 1	107	126	120	0	0	6
SCI 2	125	105	100	0	0	5
SCI 3	319	357	340	0	0	17
SCI 4A	107	126	120	0	0	6
SCI 6A	107	321	306	0	0	15
SCI 7	4	79	75	0	0	4

Reference Points and Current status (as per Harvest Strategy Standard defaults)

Metric			Status
Target	40% B_0	SCI 1	B_{2011}: Likely (> 60%) to be at or above
		SCI 2	B_{2012}: Very likely (> 90%) to be at or above
		SCI 3 & 6A	Unknown
Soft Limit	20% B_0	SCI 1	Very Unlikely (<10%) to be below
		SCI 2	
Hard Limit	10% B_0	SCI 1 SCI 2	Very Unlikely (< 10%) to be below

Deemed value rates and charges

Stock	Interim	100-120%	120-140%	140-160%	160-180%	180-200%	200%+	2013/14 Actual
SCI 1	$25.65	$51.30	$61.56	$71.82	$82.08	$92.34	$102.60	0
SCI 2								$2,670
SCI 3								0
SCI 4A								0
SCI 6A								0
SCI 7								0

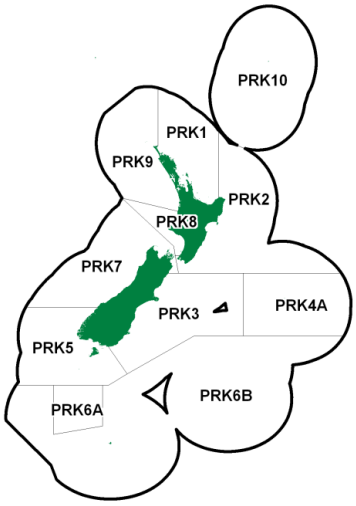
Environmental indicators and observer coverage

Observer coverage		2012/13: 5.9% tows observed	2013/14: 5.7% tows observed
Seabirds		2012/13: 5 observed; 221 estimated captures	2013/14: 10 observed captures
Marine mammals	NZ fur seal	2012/13: 0 observed; 4 estimated captures	2013/14: 2 observed capture
	NZ sea lion	2012/13: 0 observed; 6 estimated captures	2013/14: 0 observed captures
Benthic interactions (fishable area trawled)		2010/11: 5,029 km^2 (0.36%)	1989/90 – 2010/11: 19,285 km^2 (1.34%)

Economic Indicators (calendar year)

Quota value 2009	$132.3m
Export earnings 2013	$12.3m

PRK: Prawn killer (Tier 2)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
PRK 1	0.1	25.7	24.5	0	0	1.2
PRK 2	<0.1	3.7	3.5	0	0	0.2
PRK 3	0	1	1	0	0	0
PRK 4A	0	1	1	0	0	0
PRK 5	0	1	1	0	0	0
PRK 6A	0	1	1	0	0	0
PRK 6B	0	1	1	0	0	0
PRK 7	0.6	1	1	0	0	0
PRK 8	<0.1	1	1	0	0	0
PRK 9	0.1	1	1	0	0	0

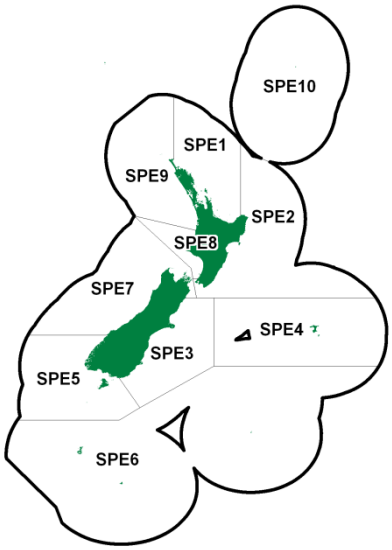
Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)

Stock	Interim	100%+	2013/14 Actual
PRK 1	$0.10	$0.20	0
PRK 2			0
PRK 3			0
PRK 4A			0
PRK 5			0
PRK 6A			0
PRK 6B			0
PRK 7			$14
PRK 8			0
PRK 9			0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	Prawn killer does not feature in export statistics

SPE: Sea perch (Tier 2)



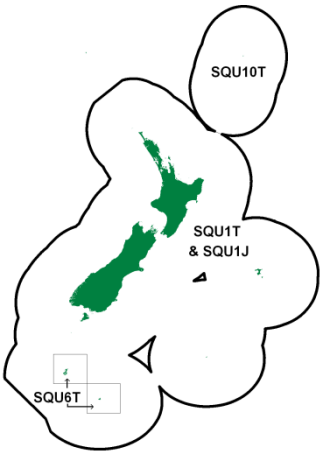
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SPE 3	500	1,022	1,000	11	11	-
SPE 4	329	956	910	0	0	46
SPE 5	19	38	36	1	1	-
SPE 6	3	9	9	0	0	-
SPE 7	100	98	82	8	8	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
SPE 3 SPE 7	$0.50	$0.55	$0.66	$0.77	$0.88	$0.99	$1.10	$3 $11,202
SPE 4 SPE 5 SPE 6	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80	$1 $16 0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$1.5m (includes all stocks)

SQU: Squid (Tier 1)



2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SQU 1J	167	N/A	50,212	N/A	N/A	N/A
SQU 1T	7,483	44,741	44,741	0	0	0
SQU 6T	7,403	N/A	32,369	N/A	N/A	N/A

Reference points and Current status

Arrow squid live for one year, spawn once then die. There is currently no method to estimate biomass of arrow squid.

Deemed value rates (per kg) and charges

Stock	Interim	100-120%	120-140%	140-160%	160-180%	180-200%	200%+	2013/14 Actual
SQU 1J	$0.44	$0.88	$1.056	$1.232	$1.408	$1.584	$1.76	0
SQU 1T								$215
SQU 6T								0

Environmental indicators and observer coverage

Observer coverage		2012/13: 85.9% tows observed	2013/14: 85.5% tows observed
Seabirds		2012/13: 450 observed; 505 estimated captures	2013/14: 198 observed captures
Marine mammals	NZ fur seals	2012/13: 6 observed; 8 estimated captures	2013/14: 10 observed captures
	NZ sea lion	2012/13: 3 observed; 4 estimated captures	2013/14: 2 observed captures
Benthic interactions (fishable area trawled)		2010/11: 5,244 km^2 (0.37%)	1989/90 – 2010/11: 37,827 km^2 (2.65%)

Economic indicators (calendar years)

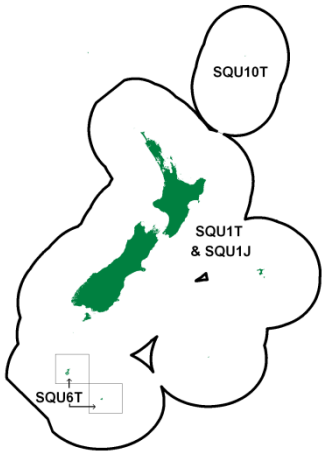
Quota value 2009	$116.5m
Export earnings 2013	$63.3m

Southern squid trawl fishery (SQU6T) Operational Plan

FRML	Completed tows from weekly reports*	Tows reported on TCEPR	% of tows observed	Observed sea lion captures	Estimated captures	% of FRML reached
68	739	737	82%	2	8	12%

*Updated to reflect error in previously reported effort. This resulted in 22 fewer tows in the weekly reports.

BAR: Barracouta (Tier 2)



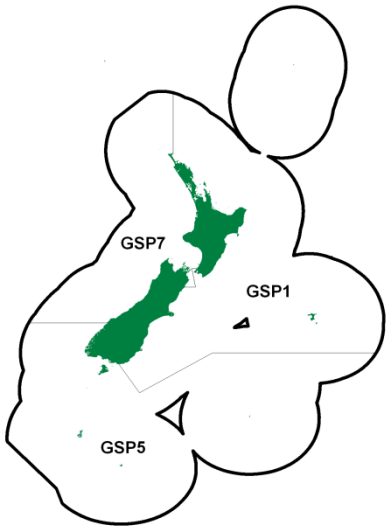
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
BAR 4	1,478	N/A	3,019	N/A	N/A	N/A
BAR 5	6,882	7,475	7,470	3	2	0
BAR 7	6,634	N/A	11,173	N/A	N/A	N/A

Reference points and Current status (as per Harvest Strategy Standard defaults)			
Target	40% B_0	BAR 4	Unknown
		BAR 5	Unknown
		BAR 7	Unknown
Soft Limit	20% B_0	BAR 4	Unknown
		BAR 5	Unknown
		BAR 7	Unknown
Hard Limit	10% B_0	BAR 4	Unknown
		BAR 5	Unknown
		BAR 7	Unknown

2013/14 Deemed value rates (per kg) and charges								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
BAR 7	$0.12	$0.24	$0.288	$0.336	$0.384	$0.432	$0.48	$9
Stock	**Interim**	**100-110%**		**110-120%**		**120%+**		**2013/14 Actual**
BAR 4 BAR 5	$0.12	$0.25		0.50		1.00		0 0

Economic indicators (calendar years)	
Quota value 2009	$116.5m
Export earnings 2013	$24.4m

GSP: Pale ghost shark (Tier 2)



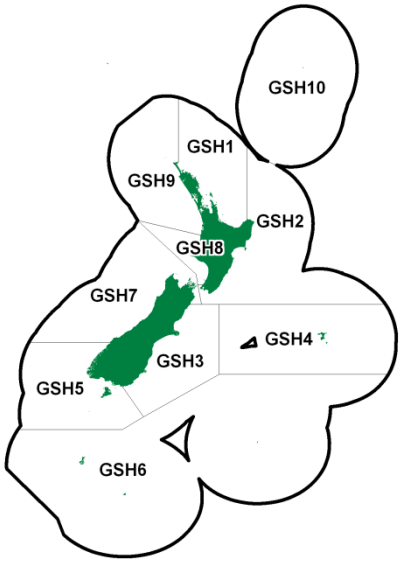
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
GSP 1	408	1,208	1,150	0	0	58
GSP 5	286	477	454	0	0	23
GSP 7	33	176	176	0	0	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
GSP 1 GSP 5	$0.08	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	0 0
GSP 7	$0.17	$0.34	$0.34	$0.34	$0.34	$0.34	$0.34	0

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$2m (includes both pale and dark ghost shark)

GSH: Dark ghost shark (Tier 2)



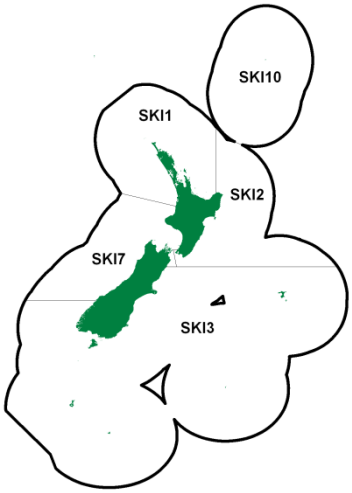
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
GSH 4	200	370	370	0	0	-
GSH 5	53	109	109	0	0	-
GSH 6	72	95	95	0	0	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
GSH 4 GSH 5 GSH 6	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80	$1,396 $181 $3

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$2m (includes both pale and dark ghost shark)

SKI: Gemfish (Tier 2)



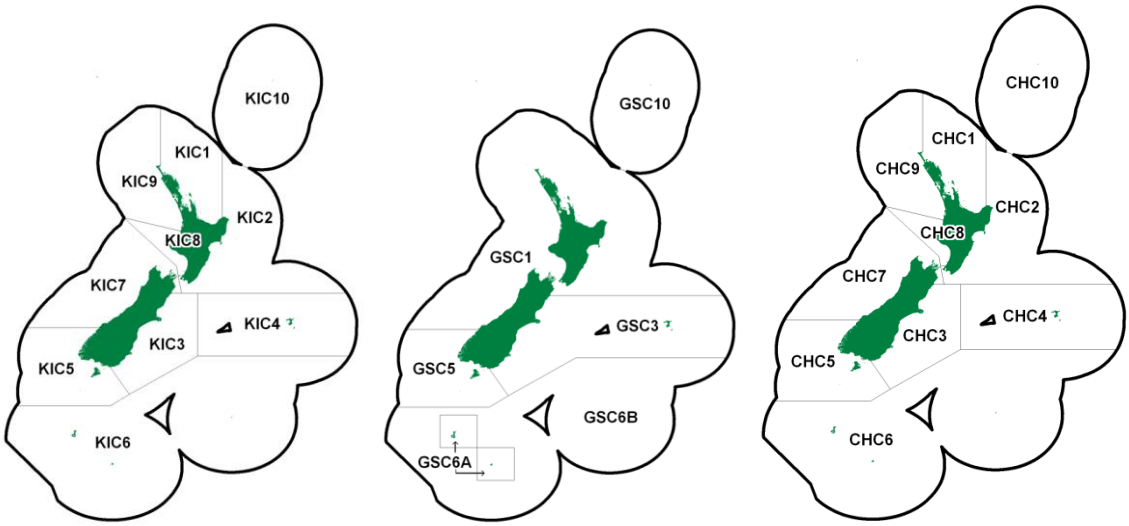
2013/14 Landings, Catch limits and Allowances (tonnes)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
SKI 3	29	300	300.4	-	-	-
SKI 7	268	300	300	-	-	-

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg)								
Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
SKI 3 SKI 7	$0.65	$1.29	$1.548	$1.806	$2.064	$2.322	$2.58	0 $95

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$0.9m (includes all stocks)

KIC/GSC/CHC: Deepwater crab species (Tier 2)



2013/14 Landings, Catch limits and Allowances* (tonnes) (only shown where catches > 0.1 t were taken)						
Stock	**2013/14 Landings**	**TAC**	**TACC**	**Recreational**	**Customary**	**Other fishing related mortality**
KIC 2 (incl 2E)	12.1	10	10	0	0	0
KIC 3	0.1	10	10	0	0	0
KIC 4	0.1	10	10	0	0	0
KIC 5	0.3	10	10	0	0	0
KIC 6	0.7	10	10	0	0	0
GSC 3	1.9	15	14	0	0	1
GSC 5	72	20	19	0	0	1
GSC 6A	58	165	148	0	0	17
GSC 6B	0.5	250	237	0	0	13
CHC 1	0.8	10	10	0	0	0
CHC 2	0.1	10	10	0	0	0

Reference points and Current status (as per Harvest Strategy Standard defaults)		
Target	40% B_0	Unknown
Soft Limit	20% B_0	Unknown
Hard Limit	10% B_0	Unknown

Deemed value rates and charges (per kg) (only shown where deemed values were accrued)

Stock	**Interim**	**100-120%**	**120-140%**	**140-160%**	**160-180%**	**180-200%**	**200%+**	**2013/14 Actual**
GSC 5 GSC 6A	$1.62	$1.80	$2.16	$2.52	$2.88	$3.24	$3.60	$171,533 $218

Economic indicators (calendar year)	
Quota value 2009	$N/A
Export earnings 2013	$0.5m (reported as 'crabs')

*All catch information is based on the April fishing year (1 April 2013 – 31 March 2014)

Appendix II: Results of 2013/14 Sustainability rounds

TAC reviews

Species	Stock	Pre-1 Oct 2013 TAC	Pre-1 Oct 2013 TACC	1 Oct 2013 TAC	1 Oct 2013 TACC
Hoki	HOK1	131,340	130,000	151,540	150,000
	LIN 5	3,633	3,595	4,036	3,955
Ling	LIN 6	8,590	8,505	No change	No change
	LIN7	2,501	2,474	3,144	3,080
Orange roughy	ORH 3B	3,780	3,600	4,725	4,500
Scampi	SCI 2	105	100	140	133
		Pre-1 April 2014 TAC	**Pre-1 April 2014 TACC**	**1 April 2014 TAC**	**1 April 2014 TACC**
Southern blue whiting	SBW 6I	30,000	29,400	40,000	39,200

Deemed value rate changes

No deemed value rates were amended for deepwater fish stocks for 1 October 2013 or 1 April 2014.

Appendix III: Landings of Tier 3 species in deepwater fisheries

Landings of all Tier 3 species from core deepwater fleet 2008/09 to 2013/14 (in kgs)

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
JAV	Javelinfish	*Lepidorhynchus denticulatus*	4981178	3999681	3297768	4070825	3922453
RAT	Rattails	*Macrouridae* spp.	3685041	3192849	3243432	4046886	3378020
STU	Slender tuna	*Allothunnus fallai*	52554	108476	74076	262048	582089
ETB	Baxter's lantern dogfish	*Etmopterus baxteri*	43909	47157	30218	40531	299975
SND	Shovelnose dogfish	*Deania calcea*	149001	126803	97137	134641	283168
OSD	Other sharks and dogfish	Order Selachii	582778	580440	656006	545641	225817
SDO	Silver dory	*Cyttus novaezealandiae*	416054	194102	189183	127275	224542
NCB	Smooth red swimming crab	*Nectocarcinus bennetti*	564711	586358	203438	717355	168810
BSH	Seal shark	*Dalatias licha*	242712	142558	145298	197890	128003
LCH	Long-nosed chimaera	*Harriotta raleighana*	130480	95437	99080	113008	123384
SSI	Silverside	*Argentina elongate*	195743	144449	164095	104586	97536
CSQ	Leafscale gulper shark	*Centrophorus squamosus*	19780	13756	8968	29928	95793
WSQ	Warty squid	*Onykia* spp.	105452	78926	81447	95682	93082
CON	Conger eel	Family Congridae	53773	62687	37301	66009	91297
FHD	Deepsea flathead	*Hoplichthys haswelli*	96217	92243	84391	101772	77543
SLK	Slickhead	*Alepocephalidae* spp.	126536	39159	57635	43717	65231
CDO	Capro dory	*Capromimus abbreviatus*	52053	53762	45930	35445	60965
DWD	Deepwater dogfish	N/A	233628	97601	78218	34666	59177
RUD	Rudderfish	*Centrolophus niger*	54541	35536	32094	53448	54624
SUN	Sunfish	*Mola mola*	8072	15147	15431	12913	51112
BEN	Scabbardfish	*Benthodesmus* spp.	34129	23328	13773	18,316	49013
SRH	Silver roughy	*Hoplostethus mediterraneus*	63605	31531	23734	22203	48077
BEL	Bellowsfish	*Centriscops* spp.	102495	161999	80812	51324	45255
HCO	Hairy conger	*Bassanago hirsutus*	72009	70532	13815	47739	44559
SFI	Starfish	N/A	64000	60344	72810	46988	44432
RHY	Common roughy	*Paratrachichthys trailli*	145921	91762	153240	118775	41449
CAR	Carpet shark	*Cephaloscyllium isabellum*	27094	68184	42999	31879	40396
HAG	Hagfish	*Eptatretus cirrhatus*	14014	13513	2469	5154	39932
CBE	Crested bellowsfish	*Notopogon lilliei*	4768	2865	11290	16424	39301
CYP	Longnose velvet dogfish	*Centroscymnus crepidater*	2219	531	210	8198	37728
MOD	Morids	*Moridae* spp.	139775	19442	27109	27868	37066

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
CRB	Crab (unspecified)	N/A	167195	81479	103281	72392	35050
ALB	Albacore tuna	*Thunnus alalunga*	251	2238	2451	10922	34611
POP	Porcupine fish	*Tragulichthys jaculiferus*	42371	26232	40368	33259	32241
THR	Thresher shark	*Alopias vulpinus*	9017	15166	13593	16937	25080
NSD	Northern spiny dogfish	*Squalus griffin*	16796	21962	9755	19759	24561
TOA	Toadfish	*Neophrynichthys* spp.	33795	29866	23000	27894	24045
ETL	Lucifer dogfish	*Etmopterus lucifer*	25718	17393	24735	32202	20535
JFI	Jellyfish (unspecified)	N/A	5742	29594	16390	25113	19373
UNI	Unidentified fish	N/A	801	2590	1669	6841	18982
OPE	Orange perch	*Lepidoperca aurantia*	19161	39133	66665	39072	18273
BBE	Banded bellowsfish	*Centriscops humerosus*	36822	63224	19663	31890	17157
BCD	Black cod	*Paranotothenia magellanica*	9069	22795	10858	1781	16966
HJO	Johnson's cod	*Halargyreus johnsonii*	13997	14825	9168	21014	16637
PAH	Opah	*Lampris immaculatus*	3257	3390	6878	19262	16509
SCO	Swollenhead conger	*Bassanago bulbiceps*	14	1	178	15607	16043
WIT	Witch	*Arnoglossus scapha*	15303	26942	16394	16,618	14962
DWE	Deepwater eel (unspecified)	N/A	9177	11281	14119	9926	14778
BEE	Basketwork eel	*Diastobranchus capensis*	36027	18231	11808	13939	14341
SAL	Salps	N/A	74	12	314	16337	12820
OCT	Octopus	*Pinnoctopus cordiformis*	3786	12480	14726	7747	12272
ERA	Electric ray	*Torpedo fairchildi*	10127	12225	12360	13935	11988
GON	Sandfish	*Gonorynchus* spp.	23401	17213	13739	17,853	9945
SBK	Spineback	*Notacanthus sexpinis*	6479	7592	3679	6491	8176
SSH	Slender smooth-hound	*Gollum attenuates*	5018	8792	6992	27499	8036
SCG	Scaly gurnard	*Lepidotrigla brachyoptera*	13772	13297	19752	14060	7805
PIG	Pigfish	*Congiopodus leucopaecilus*	8646	46389	13269	23132	7453
PLS	Plunket's shark	*Centroscymnus plunketi*	1323	5071	169	3199	7075
MDO	Mirror dory	*Zenopsis nebulosa*	12658	9090	20207	47178	6799
OSK	Skate, other	Family Rajidae	1607	929	605	10337	6497
YBO	Yellow boarfish	*Pentaceros decacanthus*	1249	3077	1570	3631	6307
ANT	Anemones	N/A	7959	11669	10590	11300	5268
OPI	Umbrella octopus	*Opisthoteuthis* spp.	1091	2579	3176	4370	5030
EPL	Cardinal fish, bigeye	*Epigonus lenimen*	1538	4413	2114	6795	4784
WHX	Unicorn rattail	*Trachyrincus* sp.	772	2754	3395	3905	4356

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
DWO	Deepwater octopus	*Graneledone* spp.	3823	13513	6200	5271	4283
URO	Sea urchin other (except SUR-Kina)	N/A	2022	5568	4784	3570	4104
VSQ	Violet squid	*Histioteuthis* spp.	3870	3351	1531	2403	3943
PDG	Prickly dogfish	*Oxynotus bruniensis*	5612	7249	4030	4196	3725
CHG	Purple chimaera	*Chimaera lignaria*	1218	6356	688	13289	3246
BSL	Black slickhead	*Xenodermichthys* spp.	6112	2	376	649	3201
SQX	Squid (unspecified)	N/A	2530	2156	2054	4132	3137
DEA	Dealfish	*Trachipterus trachypterus*	7524	2473	5110	5163	2997
HEX	Sixgill shark	*Hexanchus griseus*	1423	2158	1916	4043	2525
SBO	Southern boarfish	*Pseudopentaceros richardsoni*	32762	21643	109319	897	2300
LAN	Lanternfish	*Myctophidae* spp.	11026	8491	2730	1322	2239
MAN	Finless flounder	*Neoachiropsetta milfordi*	644	484	454	2515	2184
SEV	Broadnose sevengill shark	*Notorynchus cepedianus*	473	487	656	1749	2044
YCO	Yellow cod	*Parapercis gilliesi*	2298	3070	2588	2541	2032
JGU	Japanese gurnard	*Pterygotrigla picta*	551	5226	3901	4130	2022
TAM	Tam O'Shanter urchins	N/A	514	369	971	2174	1985
EEL	Eels, Marine (unspecified)	N/A	126	803	615	574	1922
TSQ	Todarodes filippovae	*Todarodes filippovae*	4377	2390	1978	1329	1866
CHI	Chimaera spp.	*Chimaeras pp.*	2033	10616	599	2171	1856
TOP	Pale toadfish	*Neophrynichthys angustus*	93		2	400	1825
SKJ	Skipjack tuna	*Katsuwonus pelamis*	388	8	3	165	1798
SBR	Southern bastard cod	*Pseudophycis barbata*	1135	896	642	1042	1657
GSQ	Giant squid	*Architeuthis* sp.	990	2233	3184	1566	1652
SNI	Snipefish	*Macroramphosus scolopax*	1543	266	431	151	1558
HSI	Jack-knife prawn	*Haliporoides sibogae*	19267	12761	8888	1968	1540
WRA	Whiptail ray	*Dasyatis thetidis*	449	455	1114	1423	1274
EGR	Eagle ray	*Myliobatis tenuicaudatus*	1352	967	1629	1080	1087
OPA	Opalfish	*Hemerocoetes* spp.	7783	5494	3638	4819	1084
SCD	Smallscaled cod	*Paranotothenia microlepidota*	435	139	789	1756	1021
CYO	Smooth skin dogfish	*Centroscymnus owstoni*	210	1415	654	1475	1016
CYL	Portuguese dogfish	*Centroscymnus coelolepis*		555		59	1010
RDO	Rosy dory	*Cyttopsis rosea*	2944	2267	1033	4526	964

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
BSP	Big-scale pomfret	*Taractichthys longipinnis*	88	258	555	1551	960
DSK	Deepwater spiny skate	*Amblyraja hyperborean*	10811	12685	7637	8047	933
BER	Electric ray	*Typhlonarke* spp.	1351	2757	1776	13935	906
PSK	Longnosed deepsea skate	*Bathyraja shuntovi*	4795	360	575	762	768
OFH	Oilfish	*Ruvettus pretiosus*	698	442	534	907	699
LSK	Long-tailed skate	*Arhynchobatis asperrimus*	1598	973	588	654	650
BRZ	Brown stargazer	*Xenocephalus armatus*	1424	1003	1797	1464	634
CUC	Cucumber fish	*Chlorophthalmus nigripinnis*	9	20	218	65	561
HEP	Sharpnose sevengill shark	*Heptranchias perlo*	325	476	1762	966	501
RSQ	Ommastrephes bartrami	*Ommastrephes bartrami*	2004	4317	755	120	500
VCO	Violet cod	*Antimora rostrata*	4300	3268	13475	4240	497
BCA	Barracudina	*Magnisudis prionosa*	35	11	17	55	458
LEG	Giant lepidion	*Lepidion schmidti, L. inosimae*	203	46	1184	20	455
RAY	Rays	N/A	4122	725	3302	12095	410
PHO	Lighthouse fish	*Photichthys argenteus*	991	621	979	926	408
SMC	Small-headed cod	*Lepidion microcephalus*	142	472	405	376	367
UNX	All and any unidentified species	N/A	423	2295	1766	1524	362
EUC	Eucla cod	*Euclicthys polynemus*	27	157	400	639	344
GRC	Grenadier cod	*Tripterophycis gilchristi*		3	87	31	339
FMA	Fusitriton magellanicus	*Fusitriton magellanicus*	153	270	70	247	308
HTH	Sea cucumber (other than Stichopus mollis)	Holothuroidea (Class)	289	285	532	117	273
APR	Cat shark	*Apristurus* spp.	1449	241	570	1165	257
EPR	Cardinal fish, robust	*Epigonus robustus*	3869	5253	2356	1356	255
WHR	White rattail	*Trachyrincus longirostris*	50	80		16	250
WHE	Whelks	N/A	177	388	259	302	247
SSM	Smallscaled brown slickhead	*Alepocephalus antipodianus*	158		63	252	240
PRA	Prawn (unspecified)	N/A	2741	3412	1885	132	203
CHP	Chimaera, purple	*Chimaera* sp.	97	374	95	627	175
DCS	Dawson's cat shark	*Halaelurus dawsoni*	61			161	168
BRA	Short-tailed black ray	*Dasyatis brevicaudata*				201	168
COD	Cod (unspecified)	N/A	3349	1481	207	55	167

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
BWH	Bronze whaler shark	*Carcharhinus brachyurus*	247	660	425	76	142
SYN	Cutthroat eels (except Basketwork eels)	N/A	87				142
SPZ	Spotted stargazer	*Genyagnus monopterygius*	896	1612	1512	20	137
SPI	Spider crabs (unspecified)	N/A	308	1034	416	58	133
BPE	Butterfly perch	*Caesioperca Lepidoptera*	142	183	150	35	131
CHA	Viper fish	*Chauliodus sloani*					129
OAR	Oarfish	*Regalecus glesne*	88	118	67	46	126
CUB	Cubeheads	*Cubiceps* spp.	1		146	97	124
GPF	Girdled wrasse	*Notolabrus cinctus*	18	224		153	124
LFB	Long-finned boarfish	*Zanclistius elevatus*	382	3	3	5	118
BOT	Lefteye flounders	*Bothidae* spp.		407	200	16	116
SPF	Scarlet wrasse	*Pseudolabrus miles*		40	2	31	116
RCH	Widenosed chimaera	*Rhinochimaera pacifica*		17		17	107
AGR	Ribbonfish	*Agrostichthys parkeri*	98	131	112	242	101
CSH	Cat shark	Other than *Apristurus* spp.	616	449	174	290	99
RAG	Ragfish	*Icichthys australis*	339	11	12	16	97
VOL	Volute	Family Volutidae	125	587	1830	635	81
API	Alert pigfish	*Alertichthys blacki*	99	155	108	185	67
SDF	Spotted flounder	*Azygopus pinnifasciatus*		270	212	192	65
STR	Stingray (unspecified)	N/A	227	1010	778	227	65
NTU	Northern bluefin tuna	*Thunnus thynnus*				150	49
PLZ	Scaly stargazer	*Pleuroscopus pseudodorsalis*	517	540	560	28	46
CHX	Pink frogmouth	*Chaunax pictus*	365	15	36	62	34
PAG	Pagurid	N/A	1	153	6	45	34
PMA	Pink maomao	*Caprodon longimanus*			12		27
BSQ	Broad squid	*Sepioteuthis australis*	16	71	16	1	26
BOA	Sowfish	*Paristiopterus labiosus*	16540	7597	68	41	23
DSP	Deepsea pigfish	*Congiopodus coriaceus*		42	2	55	18
TOD	Dark toadfish	*Neophrynichthys latus*	6		50	5	15
GVO	Golden volute	*Provocator mirabilis*	6	2		2	14
BCR	Blue cusk eel	*Brotulotaenia crassa*	1				13
DIS	Discfish	*Diretmus argenteus*	1	10	11	4	10
PSP	Scissortail	*Psenes pellucidus*	135		113	148	10
SFN	Spinyfin	*Diretmichthys parini*	3		14	4	8
SPT	Purple-heart urchin	*Spatangus multispinus*	7		17		8
WLP	Wavy line perch	*Lepidoperca tasmanica*			150	150	8

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
MIQ	Warty squid	*Onykia ingens*	7142	4694	2810	95682	7
TRS	Cape scorpionfish	*Trachyscorpia capensis*	27	97	93	45	6
RRC	Red scorpion fish	*Scorpaena cardinalis, S. papillosus*	22		3		6
HYD	Hydrolagus spp.	*Hydrolagus* spp.	14		11		5
SDE	Seadevil	*Cryptopsaras couesi*	398			2	4
SPP	Splendid perch	*Callanthias allporti*			103		4
LHO	Omega prawn	*Lipkius holthuisi*	128	42	10	127	2
PAL	Barracudinas	N/A	83	32	3	19	2
WSE	Wrasses	N/A	71	78	64	47	2
MOB	Blunthead lightfish	*Margrethia obtusirostra*	82	60	546	645	2
AER	Aeneator recens	*Aeneator recens*			5		1
NCA	Hairy red swimming crab	*Netocarcinus antarcticus*	476	163	11	1	1
NOT	Antarctic rock cods	*Paranotothenia* spp.			186	6	1
SLL	Slipper lobsters	*Scyllaridae* spp.	4	99	112	59	1
ABR	Shortsnouted lancetfish	*Alepisaurus brevirostris*			1		
AME	Sculpin	*Antipodocottus megalops*			17		
ART	Brine shrimp	*Artemia salina*		6			
ASR	Sea stars	N/A					
BAC	Codheaded rattail	*Bathygadus cottoides*	1	319	207		
BAF	Black anglerfish	N/A			1		
BAN	Borostomias antarcticus	*Borostomias antarcticus*			17		
BAT	Slickheads	*Rouleina* spp.	2295	3560	21		
BBR	Bronze bream	*Xenobrama microlepis*			110		
BEA	Eaton's skate	*Bathyraja eatoni*			129		
BPF	Banded wrasse	*Notolabrus fucicola*	1	124	14		
BRC	Northern bastard cod	*Pseudophycis breviuscula*			118		
BRE	Codlet	*Bregmaceros macclellandi*			4		
BSK	Basking shark	*Cetorhinus maximus*	19200	7000			
BTU	Butterfly tuna	*Gasterochisma melampus*					
CAM	Sabre prawn	*Campylonotus rathbunae*					
CAX	White brotula	*Cataetyx* sp.	55				
CEN	Deepsea sharks	*Centroscymnus* spp.					
CFA	Banded rattail	*Coelorinchus rasciatus*			44	8	
COL	Olivers rattail	*Coelorinchus oliverianus*		20			

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
CTU	Cook's turban shell	*Cookia sulcata*			27		
DHO	Deepsea urchin	*Dermechinus horridus*		12			
EBI	Pygmy shark	*Euprotomicrus bispinatus*			161		
ECO	Prickly shark	*Echinorhinus cookie*	20	17			
EPD	Cardinal fish, white	*Epigonus denticulatus*	156			6	
EPO	Limp eelpout	*Melanostigma gelatinosum*					
EPT	Deepsea cardinalfish	*Epigonus telescopes*			12		
ETM	Etmopterus spp.	*Etmopterus* spp.		15			
FLO	Flounder (unspecified)	N/A		37			
FRS	Frill shark	*Chlamydoselachus anguineus*	24		2		
FTU	Frigate tuna	*Auxis thazard*		49	161	2	
GAS	Gastropods	N/A			22		
GPA	Parasol urchin	*Goniocidaris parasol*	27				
GRV	Macrourus spp.	*Macrourus* spp.			6516		
GSA	Giant sawbelly	*Hoplostethus gigas*		4	20		
GSE	Snake mackerel	*Gempylus serpens*	16			138	
GUL	Gulper eel	*Eurypharynx pelecanoides*	120	365	62	16	
HAT	Hatchetfish	*Sternoptychidae* sp.			524		
HYP	Pointynose blue ghost shark	*Hydrolagus trolli*	149	231	6351	74	
ICX	Icefishes	Family Channichthyidae			3636		
INV	Invertebrate (unknown)	N/A			15		
KAN	Krefftichthys anderssoni	*Krefftichthys anderssoni*			45		
LEP	Escolar	*Lepidocybium flavobrunneum*			12	5	
LLC	Long-legged masking crab	*Leptomithrax longipes*	2				
MCA	Ridge scaled rattail	*Macrourus carinatus*	38503	26273			
MNI	Krill, squat lobsters	*Munida* spp.	3	265		17	
MOR	Moray eel	*Muraenidae* spp.	63	382	63	18	
MRL	Moray cods	*Muraenolepididae* sp.			512		
MST	Scaleless black dragonfishes	N/A	1				
MUR	Moray cod	*Muraenolepis marmoratus*	11				
NOC	Notocanthus chemnitzi	*Notocanthus chemnitzi*					
ONG	Sponges	Porifera			6		

Species code	Common name	Scientific name	2009/10	2010/11	2011/12	2012/13	2013/14
PGR	Plunderfish	*Pogonophryne permitini*			23		
RMU	Red mullet	*Upeneichthys lineatus*	16	212	52		
ROC	Rock cod	*Lotella rhacina*			485		
RPE	Red perch	Unspecified			3	62	
SAM	Quinnat salmon	*Omcorhynchus tshawytscha*	10			4	
SCM	Roughskin dogfish	*Scymnodon macracanthus*	1810	1635	146	31	
SEE	Silver conger	*Gnathophis habenatus*	2	97	72	5	
SHR	Sea hare	N/A	4	6			
SLS	Slender sole	*Peltorhamphus tenuis*	65				
SNE	Snubnosed eel	*Simenchelys parasitica*		20		2	
SOL	Sole (unspecified)	N/A			6		
SOP	Pacific sleeper shark	*Somniosus pacificus*					
SPK	Spikefish	*Macrorhamphosodes uradoi*		88			
SRR	Amblyraja Georgiana	*Amblyraja georgiana*			57		
SSC	Giant masking crab	*Leptomithrax australis*		245			
STG	Stargazer (unspecified)	N/A	8		1	27	
TAS	Rough pomfret	*Taractes asper*		10	5		
TIN	Tinselfish	*Xenolepidichthys dalgleishi*	5	45	6		
TRA	Roughies	Family Trachichthyidae		1697		18	
WGR	Macrourus whitsoni	*Macrourus whitsoni*			4121		
WPS	White pointer shark	*Carcharodon carcharias*					

Appendix IV: Cost recovery levies analysis

Table 30: Cost recovery levies ($) for deepwater stocks 2013/14

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
BAR10	39	19			2	0	6	0	66
BAR4	10,538	5,201	21,644	4,328	563	914	1,736	0	44,923
BAR5	34,268	16,911	63,176	12,627	1,831	3,436	3,589	-2,689	133,150
BAR7	33,427	16,496	129,297	25,254	1,786	4,067	7,078	-4,392	213,014
BYX1	5,834	2,879			11,315	159	899	0	21,086
BYX10	194	96			1	0	30	0	321
BYX2	30,782	15,191	44,325	5,408	11,781	840	-37,866	-4,873	65,586
BYX3	20,253	9,995	11,880	1,480	11,543	552	1,705	-265	57,143
BYX7	1,453	717			8	40	193	0	2,410
BYX8	399	197			2	11	60	0	669
CDL1	11,967	5,906			65	326	1,622	0	19,886
CDL10	0	0			0	0	0	0	0
CDL2	4,563	2,252	6,300	765	16,489	124	-29,605	-890	0
CDL3	2,033	1,003			11	55	275	0	3,377
CDL4	685	338			4	19	91	0	1,136
CDL5	219	108			1	6	32	0	367
CDL6	10	5			0	0	1	0	17
CDL7	404	200			2	11	56	0	673
CDL8	0	0			0	0	0	0	0
CDL9	40	20			0	1	6	0	67
CHC1	359	177			0	0	55	0	591
CHC10	0	0			0	0	0	0	0

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
CHC2	359	177			0	0	55	0	591
CHC3	144	71			0	0	22	0	237
CHC4	144	71			0	0	22	0	237
CHC5	144	71			0	0	22	0	237
CHC6	144	71			0	0	22	0	237
CHC7	144	71			0	0	22	0	237
CHC8	144	71			0	0	22	0	237
CHC9	144	71			0	0	22	0	237
EMA3	1,634	806			9	102	-918	-26	1,606
EMA7	37,083	18,300	675	153	36,767	2,308	-6,960	-187	88,138
FRO10	0	0			0	0	0	0	0
FRO3	1,843	909			10	50	312	0	3,124
FRO4	109	54			1	3	15	0	181
FRO5	1,777	877			10	48	239	0	2,951
FRO6	54	27			0	1	20	0	102
FRO7	23,542	11,618			11,552	642	3,907	0	51,261
FRO8	6,796	3,354			11,470	185	1,149	0	22,954
FRO9	1,445	713			11,278	39	251	0	13,726
GSC1	36	18			0	0	7	0	60
GSC10	0	0			0	0	0	0	0
GSC3	503	248			0	0	94	0	845
GSC5	682	337			0	0	128	0	1,147
GSC6A	5,313	2,622			0	0	999	0	8,934
GSC6B	8,509	4,199			0	0	1,599	0	14,306
GSH4	922	455			0	57	117	3	1,555
GSH5	500	247			0	14	42	-14	789
GSH6	445	220			0	12	79	0	756

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
GSP1	5,390	2,660			17,445	335	821	18	26,669
GSP5	2,128	1,050			17,423	58	342	0	21,002
GSP7	702	346			4	44	128	3	1,227
HAK1	45,769	22,587	12,554	2,495	17,726	3,092	-12,428	-1,583	90,211
HAK10	118	58			7	0	16	0	199
HAK4	24,413	12,048	6,660	1,324	16,310	1,649	224	-290	62,338
HAK7	86,004	42,443	24,929	4,990	19,963	5,811	9,978	-2,616	191,501
HOK1	1,037,154	511,833	976,224	195,091	1,739,335	146,753	-82,086	-34,249	4,490,055
HOK10	80	39			5	0	12	0	136
JMA10	44	22			3	0	6	0	74
JMA3	78,983	38,978	98,634	19,705	19,695	4,915	-2,868	-1,035	257,008
JMA7	142,770	70,457	180,890	36,100	55,193	9,646	22,992	-1,652	516,395
KIC1	359	177			0	0	54	0	591
KIC10	0	0			0	0	0	0	0
KIC2	359	177			0	0	54	0	591
KIC3	359	177			0	0	54	0	591
KIC4	359	177			0	0	54	0	591
KIC5	359	177			0	0	54	0	591
KIC6	359	177			0	0	54	0	591
KIC7	359	177			0	0	54	0	591
KIC8	359	177			0	0	54	0	591
KIC9	359	177			0	0	54	0	591
LDO1	3,435	1,695			19	94	-5,148	-94	0
LDO10	15	7			0	0	-22	0	0
LDO3	9,307	4,593			50	254	-13,951	-254	0
LIN10	253	125			15	0	36	0	429
LIN3	53,003	26,157	20,070	4,074	15,152	18,731	-174	-12,471	124,541

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
LIN4	108,482	53,536	41,219	8,351	18,443	43,067	-322	-40,798	231,977
LIN5	92,497	45,647	13,679	2,750	67,764	11,747	-26,177	-14,496	193,410
LIN6	230,703	113,851	34,108	6,823	75,996	29,298	7,034	-3,338	494,476
LIN7	48,851	24,108	16,882	11,280	20,716	5,943	6,346	-6,647	127,478
OEO1	22,189	10,950	5,310	663	1,316	1,381	-39,765	-2,044	0
OEO10	89	44			5	0	13	0	151
OEO3A	29,733	14,673	17,460	2,194	1,763	3,147	2,760	-249	71,482
OEO4	62,130	30,661	36,495	4,592	821,619	6,575	6,983	-521	968,533
OEO6	53,254	26,281	12,690	1,582	3,158	3,598	-8,043	-1,721	90,798
ORH1	34,625	17,087	22,500	2,551	2,054	2,339	-76,266	-4,890	0
ORH10	247	122			15	0	36	0	420
ORH2A	14,223	7,019	20,475	2,500	242,396	961	-284,114	-3,461	0
ORH2B	3,463	1,709			56,320	234	-44,324	12	17,413
ORH3A	9,271	4,575			135,040	577	-95,363	34	54,133
ORH3B	60,315	29,765	49,815	6,275	1,717,232	6,705	-174,786	-6,338	1,688,982
ORH7A	9,624	4,749	8,100	1,020	625,949	262	3,002	1,350	654,057
ORH7B	25	12			1	1	-38	-1	0
PRK1	836	412			5	23	148	0	1,423
PRK10	0	0			0	0	0	0	0
PRK2	119	59			1	3	21	0	203
PRK3	34	17			0	1	6	0	59
PRK4A	34	17			0	1	6	0	59
PRK5	34	17			0	1	6	0	59
PRK6A	34	17			0	1	6	0	59
PRK6B	34	17			0	1	6	0	59
PRK7	34	17			0	1	6	0	59
PRK8	67	33			0	2	6	0	109

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
PRK9	34	17			0	1	6	0	59
PTO1	4,936	2,436			0	0	258	0	7,630
RBT1	74	36			0	2	11	0	124
RBT10	0	0			0	0	0	0	0
RBT3	8,518	4,203			46	232	1,322	0	14,321
RBT7	11,050	5,453			60	301	1,714	0	18,578
RBY1	5,984	2,953			32	163	-8,969	-163	0
RBY10	0	0			0	0	0	0	0
RBY2	4,923	2,429			27	134	-7,379	-134	0
RBY3	34	17			0	1	-51	-1	0
RBY4	205	101			1	6	-307	-6	0
RBY5	0	0			0	0	0	0	0
RBY6	0	0			0	0	0	0	0
RBY7	82	41			0	2	-123	-2	0
RBY8	68	34			0	2	-102	-2	0
RBY9	146	72			1	4	-219	-4	0
RIB10	0	0			0	0	0	0	0
RIB3	3,851	1,900			158	105	-5,909	-105	0
RIB4	2,243	1,107			92	61	-3,442	-61	0
RIB5	327	161			13	9	-501	-9	0
RIB6	1,037	512			43	28	-1,591	-28	0
RIB7	3,390	1,673			139	92	-5,202	-92	0
RIB8	7	4			0	0	-11	0	0
SBW1	45	22			3	1	6	0	76
SBW6A	6,869	3,390	7,290	1,477	390	727	743	-41	20,844
SBW6B	38,311	18,906	40,723	8,147	96,904	2,384	-88,721	85	116,739
SBW6I	184,713	91,156	196,323	39,206	2,161,924	11,494	14,843	-1,023	2,698,636

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
SBW6R	30,716	15,158	32,623	6,517	16,754	1,911	-90,135	-211	13,333
SCI1	14,361	7,087	5,850	1,678	178,158	894	-4,112	-2,572	201,343
SCI10	0	0			0	0	0	0	0
SCI2	11,967	5,906	4,275	1,221	129,626	745	-20,361	-1,965	131,413
SCI3	40,688	20,080	15,345	4,323	143,825	2,884	-137,777	-7,207	82,160
SCI4A	14,361	7,087	5,445	1,526	4,224	1,520	-4,036	-2,637	27,489
SCI5	5,517	2,723	1,800	509	1,623	150	-1,519	-659	10,143
SCI6A	36,620	18,072	13,860	3,916	1,255,899	25,603	-4,288	-6,759	1,342,923
SCI6B	6,896	3,403	2,250	661	2,028	466	-1,662	-1,043	12,999
SCI7	10,344	5,105	3,375	966	3,042	282	-2,835	-1,248	19,031
SCI8	690	340	225	51	203	19	-203	-70	1,255
SCI9	4,827	2,382	1,575	458	1,420	132	-1,316	-589	8,889
SKI10	162	80			1	0	28	0	270
SKI3	3,954	1,951			21	246	580	14	6,767
SKI7	4,966	2,451			27	309	467	12	8,232
SPD10	0	0			0	0	0	0	0
SPD4	4,216	2,081			23	513	460	13	7,305
SPD5	6,273	3,096			2,285	797	-10,301	-797	1,352
SPE10	0	0			0	0	0	0	0
SPE3	6,482	3,199			54,458	789	60	-789	64,199
SPE4	5,354	2,642			21,796	651	741	19	31,205
SPE5	154	76			56	13	19	0	319
SPE6	58	29			0	2	6	0	95
SPE7	621	307			226	76	87	2	1,319
SQU10T	114	56			5	0	17	0	192
SQU1J	570,852	281,714			26,799	0	82,936	0	962,300
SQU1T	584,502	288,450	169,955	33,962	34,666	57,220	73,909	-11,846	1,230,819

	Compliance	Registry	Observers		Research		Under/Over Recovery		2013/14
Fishstock	MPI	MPI	MPI	DOC	MPI	DOC	MPI	DOC	Total
SQU6T	368,001	181,608	107,004	21,385	21,826	257,292	53,655	-21,655	989,117
SWA1	30,815	15,207	13,274	2,648	1,647	1,918	3,837	-68	69,278
SWA10	83	41			4	0	11	0	139
SWA3	20,936	10,332	38,923	7,739	1,119	1,415	-2,356	-9,154	68,955
SWA4	29,775	14,694	12,284	2,444	1,591	2,416	858	-590	63,472
WWA1	56	28			3	2	7	0	95
WWA10	0	0			0	0	0	0	0
WWA2	1,099	542	405	102	59	68	125	3	2,404
WWA3	8,547	4,218	3,285	662	14,130	532	1,449	-62	32,760
WWA4	4,969	2,452	1,890	356	13,903	309	677	16	24,573
WWA5B	39,409	19,448	15,074	3,004	15,806	2,663	4,470	91	99,964
WWA7	1,520	750	585	102	81	95	220	6	3,359
WWA8	15	7			1	0	2	0	25
WWA9	0	0			0	0	0	0	0
Grand Total	4,670,538	2,304,899	2,569,627	507,433	10,041,810	698,953	-1,013,096	-221,997	19,558,167

Table 31: Levies by stock as a percent of landed value

	Total levies 2013/14 ($)	2013/14 Landings (tonnes)	2013/14 Port price ($/kg)	2013/14 Landed value ($)	Levies as % landed value (13/14)
BAR10	66	0	0.39	0	-
BAR4	44,923	1478	0.39	576,385	7.8%
BAR5	133,150	6882	0.46	3,165,908	4.2%
BAR7	213,014	6631	0.30	1,989,445	10.7%
BYX1	21,086	29	1.95	56,835	37.1%
BYX10	321	0	1.95	0	-
BYX2	65,586	1551	1.96	3,039,617	2.2%
BYX3	57,143	930	2.01	1,868,749	3.1%
BYX7	2,410	58	1.81	104,993	2.3%
BYX8	669	0	2.00	194	344.8%
CDL1	19,886	160	1.00	159,574	12.5%
CDL10	0	0	1.00	0	-
CDL2	0	282	1.00	282,280	0.0%
CDL3	3,377	68	1.00	67,802	5.0%
CDL4	1,136	11	1.00	11,209	10.1%
CDL5	367	19	1.00	18,716	2.0%
CDL6	17	0	1.00	452	3.8%
CDL7	673	1	1.00	1,294	52.0%
CDL8	0	0	1.00	0	-
CDL9	67	1	1.00	546	12.2%
CHC1	591	1	3.60	1,984	29.8%
CHC10	0	0	3.60	0	-
CHC2	591	0	3.60	115	512.9%
CHC3	237	0	3.60	0	-
CHC4	237	0	3.60	0	-
CHC5	237	0	3.60	0	-
CHC6	237	0	3.60	0	-
CHC7	237	0	3.60	0	-
CHC8	237	0	3.60	0	-
CHC9	237	0	3.60	0	-
EMA3	1,606	29	0.42	12,096	13.3%
EMA7	88,138	1200	1.11	1,331,532	6.6%
FRO10	0	0	1.05	0	-
FRO3	3,124	63	1.64	104,024	3.0%
FRO4	181	15	2.27	33,848	0.5%
FRO5	2,951	11	1.32	14,144	20.9%
FRO6	102	0	0.49	24	431.8%
FRO7	51,261	880	0.90	792,117	6.5%
FRO8	22,954	814	1.05	855,126	2.7%
FRO9	13,726	262	1.05	275,033	5.0%
GSC1	60	0	3.60	0	-
GSC10	0	0	3.60	0	-
GSC3	845	2	3.60	6,332	13.3%
GSC5	1,147	58	3.60	207,623	0.6%
GSC6A	8,934	12	3.60	42,617	21.0%
GSC6B	14,306	0	3.60	1,249	1145.2%
GSH4	1,555	200	0.25	49,992	3.1%
GSH5	789	53	0.46	24,547	3.2%
GSH6	756	72	0.47	33,648	2.2%
GSP1	26,669	408	0.47	191,707	13.9%
GSP5	21,002	286	0.47	134,256	15.6%
GSP7	1,227	33	0.40	13,044	9.4%
HAK1	90,211	1883	1.24	2,334,978	3.9%
HAK10	199	0	1.18	0	-
HAK4	62,338	168	1.36	228,186	27.3%
HAK7	191,501	3641	1.12	4,065,300	4.7%
HOK1	4,490,055	146333	0.80	117,388,404	3.8%

	Total levies 2013/14 ($)	2013/14 Landings (tonnes)	2013/14 Port price ($/kg)	2013/14 Landed value ($)	Levies as % landed value (13/14)
HOK10	136	0	0.80	0	-
JMA10	74	0	0.44	0	-
JMA3	257,008	4693	0.44	2,064,763	12.4%
JMA7	516,395	35175	0.44	15,476,927	3.3%
KIC1	591	0	3.60	0	-
KIC10	0	0	3.60	0	-
KIC2	591	1	3.60	3,920	15.1%
KIC3	591	0	3.60	140	420.7%
KIC4	591	0	3.60	400	147.8%
KIC5	591	0	3.60	133	443.4%
KIC6	591	0	3.60	1,393	42.4%
KIC7	591	0	3.60	0	-
KIC8	591	0	3.60	0	-
KIC9	591	0	3.60	90	656.3%
LDO1	0	204	2.05	419,123	0.0%
LDO10	0	0	1.50	0	-
LDO3	0	256	1.52	388,690	0.0%
LIN10	429	0	2.54	0	-
LIN3	124,541	1442	2.58	3,715,169	3.4%
LIN4	231,977	2372	2.59	6,146,826	3.8%
LIN5	193,410	3934	2.58	10,158,527	1.9%
LIN6	494,476	3219	2.72	8,748,064	5.7%
LIN7	127,478	3200	1.98	6,320,587	2.0%
OEO1	0	386	0.89	343,211	0.0%
OEO10	151	0	0.89	0	-
OEO3A	71,482	3473	0.89	3,091,170	2.3%
OEO4	968,533	7024	0.89	6,251,804	15.5%
OEO6	90,798	367	0.89	326,935	27.8%
ORH1	0	1055	2.48	2,615,438	0.0%
ORH10	420	0	2.48	0	-
ORH2A	0	732	1.63	1,192,867	0.0%
ORH2B	17,413	108	2.48	267,944	6.5%
ORH3A	54,133	331	2.24	741,682	7.3%
ORH3B	1,688,982	4492	1.68	7,546,177	22.4%
ORH7A	654,057	497	1.93	959,831	68.1%
ORH7B	0	1	2.48	1,530	0.0%
PRK1	1,423	0	3.42	335	424.5%
PRK10	0	0	3.42	0	-
PRK2	203	0	3.42	123	165.1%
PRK3	59	0	3.42	0	-
PRK4A	59	0	3.42	0	-
PRK5	59	0	3.42	3	1710.9%
PRK6A	59	0	3.42	0	-
PRK6B	59	0	3.42	0	-
PRK7	59	1	3.42	2,240	2.6%
PRK8	109	0	3.42	24	453.6%
PRK9	59	0	3.42	496	11.8%
PTO1	7,630	0	10.00	90	8478.2%
RBT1	124	4	0.39	1,495	8.3%
RBT10	0	0	0.39	0	-
RBT3	14,321	2774	0.39	1,081,962	1.3%
RBT7	18,578	78	0.39	30,429	61.1%
RBY1	0	223	2.00	446,378	0.0%
RBY10	0	0	1.14	0	-
RBY2	0	349	1.14	397,463	0.0%
RBY3	0	0	1.14	249	0.0%
RBY4	0	15	1.14	16,601	0.0%
RBY5	0	0	1.14	101	0.0%

	Total levies 2013/14 ($)	2013/14 Landings (tonnes)	2013/14 Port price ($/kg)	2013/14 Landed value ($)	Levies as % landed value (13/14)
RBY6	0	0	1.54	0	-
RBY7	0	48	0.25	12,024	0.0%
RBY8	0	0	1.14	23	0.0%
RBY9	0	0	0.77	166	0.0%
RIB10	0	0	0.77	0	-
RIB3	0	104	0.98	101,505	0.0%
RIB4	0	492	0.63	310,082	0.0%
RIB5	0	41	0.63	26,124	0.0%
RIB6	0	133	0.45	59,892	0.0%
RIB7	0	291	1.03	299,357	0.0%
RIB8	0	2	0.75	1,474	0.0%
SBW1	76	21	0.56	11,760	0.6%
SBW6A	20,844	79	0.42	33,180	62.8%
SBW6B	116,739	4278	0.56	2,395,680	4.9%
SBW6I	2,698,636	28606	0.63	18,021,780	15.0%
SBW6R	13,333	71	0.56	39,760	33.5%
SCI1	201,343	107	14.97	1,595,218	12.6%
SCI10	0	0	13.83	0	-
SCI2	131,413	125	13.02	1,632,916	8.0%
SCI3	82,160	319	13.79	4,399,534	1.9%
SCI4A	27,489	107	13.83	1,477,611	1.9%
SCI5	10,143	0	13.83	346	2933.8%
SCI6A	1,342,923	107	13.86	1,482,881	90.6%
SCI6B	12,999	0	13.83	111	11749.2%
SCI7	19,031	4	13.83	49,041	38.8%
SCI8	1,255	0	13.83	0	-
SCI9	8,889	0	13.83	28	32134.9%
SKI10	270	0	1.62	0	-
SKI3	6,767	29	1.32	38,731	17.5%
SKI7	8,232	268	1.66	444,573	1.9%
SPD10	0	0	0.32	0	-
SPD4	7,305	1056	0.26	274,483	2.7%
SPD5	1,352	2067	0.17	351,449	0.4%
SPE10	0	0	0.65	0	-
SPE3	64,199	500	0.65	324,768	19.8%
SPE4	31,205	329	0.59	194,375	16.1%
SPE5	319	19	0.43	8,210	3.9%
SPE6	95	3	0.65	1,710	5.6%
SPE7	1,319	100	0.76	75,863	1.7%
SQU10T	192	0	1.14	0	-
SQU1J	962,300	167	1.14	190,374	505.5%
SQU1T	1,230,819	7483	1.31	9,802,759	12.6%
SQU6T	989,117	7403	1.14	8,439,411	11.7%
SWA1	69,278	903	1.03	929,718	7.5%
SWA10	139	0	0.83	0	-
SWA3	68,955	3201	0.64	2,048,431	3.4%
SWA4	63,472	3884	0.73	2,835,330	2.2%
WWA1	95	0	1.41	96	99.5%
WWA10	0	0	1.51	0	-
WWA2	2,404	8	1.51	12,143	19.8%
WWA3	32,760	302	1.47	444,188	7.4%
WWA4	24,573	110	1.51	166,183	14.8%
WWA5B	99,964	1373	1.51	2,072,629	4.8%
WWA7	3,359	115	1.20	137,854	2.4%
WWA8	25	0	1.51	26	99.2%
WWA9	0	0	1.50	2	0.0%

Interim Observer Trip Report

Trip Number:	**Vessel Name:**
Call Sign:	**Observer:**
Trip Start Date:	**Trip End Date:**

Q	Criteria	Rating
1	QMS species are discarded only after correct estimation and authorisation	
2	QMS species identified accurately	
3	Vessel has a valid system for determining, recording and retaining block weight test information	
4	Vessel has a valid system in place to quantify all sources of whole and processed fish to meal; including applying conversion factor to processed fish	
5	Fish is cut in accordance with the Conversion Factors Notice	
6	Non-fish by-catch recorded and reported accurately	
7	Offal management was adequate (if VMP onboard, meets specifications)	
8	Appropriate bird mitigation devices were deployed and in working condition for duration of trip	
9	The factory was clean and hygienic	
10	Observer Standard met (e.g. living conditions, water etc, were adequate)	
11	Vessel was using/applying glaze during trip	Y / N
12	If conversion factor (CF) tested insert species, state, and average CF over page	
13	If any maritime or safety issues were identified insert comment over page	
14	If any labour or employment issues were brought to your attention by any crew insert comment over page	
15	Comment on any issues raised with Captain or Factory Manager during trip and the outcome (include names of people spoken too)	

Criteria Rating:	**A**	**B**	**C**	**N/A**
	Clearly acceptable.	Generally acceptable but minor departures from best practice identified.	Not Deemed Acceptable: this criterion is not met and requires addressing	Not applicable

Should you not receive a copy of the full observer report, or have any questions, please contact the Observer Programme via the following email address: observers@mpi.govt.nz

Signed: **Date:**

Manager Observer Services

Question Number	Comment

12	Conversion Factors		
SPECIES	STATE	# of TESTS	AVERAGE CF
SPECIES	STATE	# of TESTS	AVERAGE CF
SPECIES	STATE	# of TESTS	AVERAGE CF