



Annual Review Report for Deepwater Fisheries for 2011/12

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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

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Introduction

Overview of fisheries plans

New Zealand's Deepwater and Middle-depth fisheries (deepwater fisheries) are those 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). Fisheries in this area include five of New Zealand's ten largest export earning fisheries, which together accounted for over \$410 million in export earnings in 2011.

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). This arrangement allows for Management Objectives to be achieved by drawing on the combined knowledge, experience, capabilities and perspectives of both MPI and DWG.

Within the portfolio of deepwater fisheries, fishstocks have been ranked into three tiers according to their commercial importance (see Table 1). Tier 1 fisheries are high volume and/or high value fisheries and are traditionally targeted. They 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. Tier 3 species are those caught as bycatch that are not managed through the quota management system (QMS).

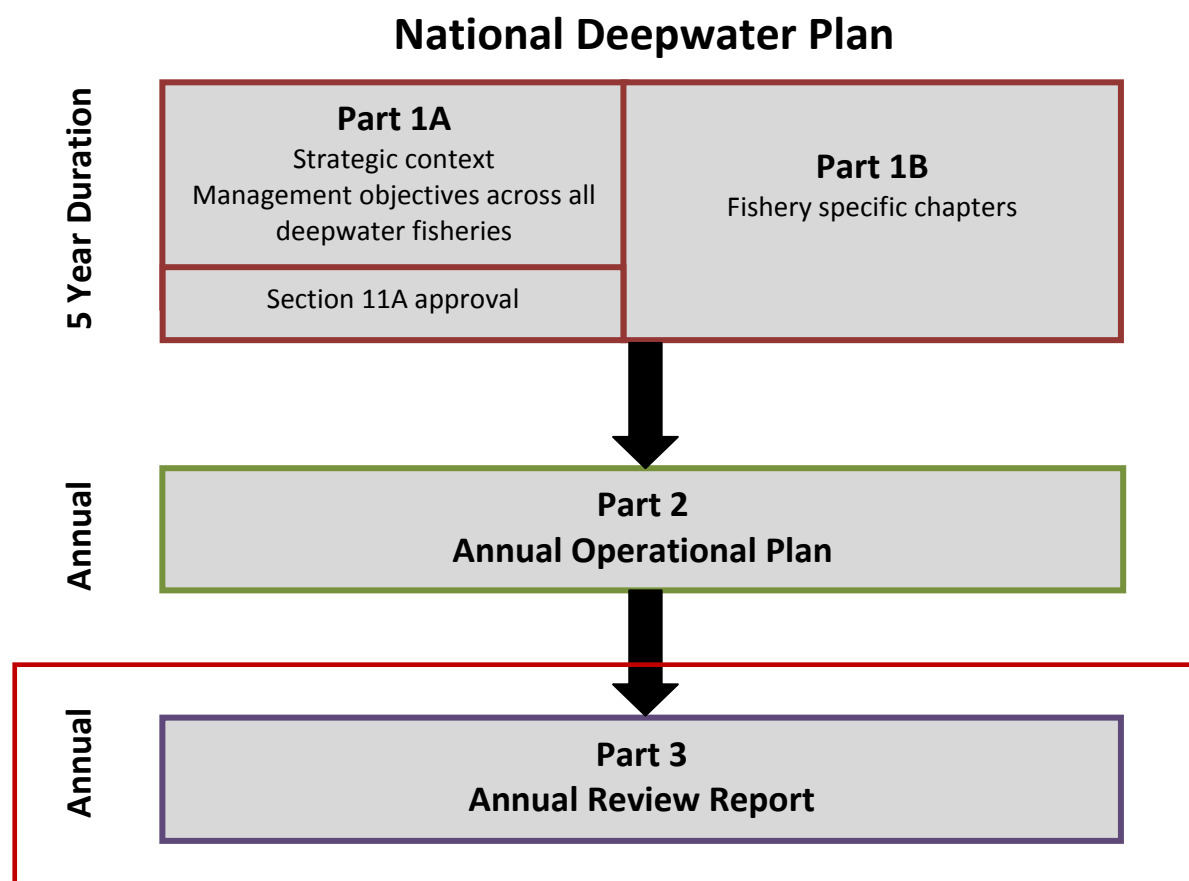
Table 1: Categorisation of deepwater species

	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 (2013) Oreo: All (2013) Jack Mackerel: JMA3 and JMA7 only (2013) Scampi: All (2013) Squid: All (2013)
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)	Rubyfish: All (OEO) Alfonsino: All (OEO) Barracouta: BAR4, BAR5, BAR7 (SQU) Redbait: All (JMA) English mackerel: EMA3, EMA7 (JMA) 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.

From 1 July 2011 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 the three parts shown in 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, and ling fisheries.

The fishery-specific chapters describe the operational objectives for each target fishery and their key 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.

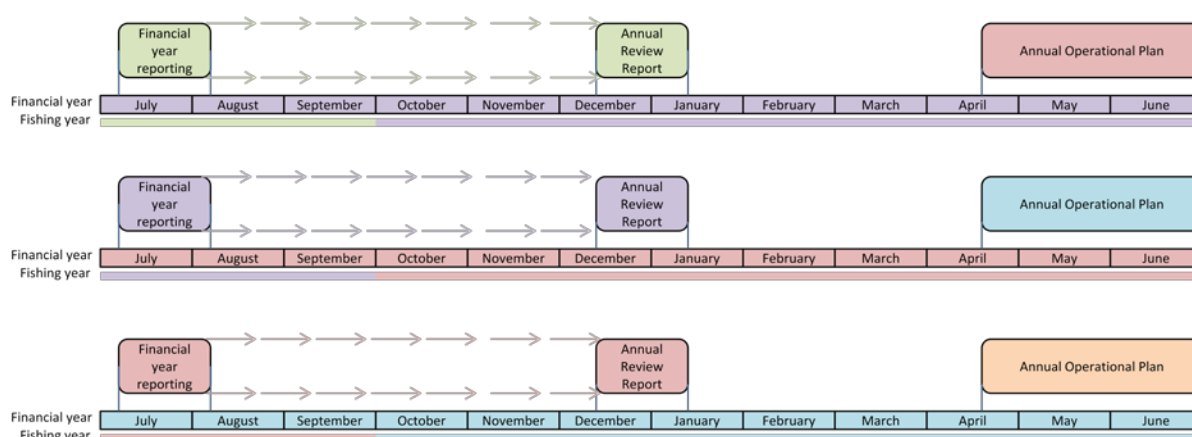
Part 2 of the National Deepwater Plan consists of five Annual Operational Plans, which provide up-to-date management overviews for fisheries with completed chapters in Part 1B, the Management Actions scheduled for delivery during the financial year for which each Operational Plan applies, and the Management Services required to deliver the Management Actions. All Annual Operational Plans will be provided to the Director Fisheries Management for approval, but will not be approved under section 11A. However, any statutory interventions required to regulate deepwater fisheries will be identified in the Annual Operational Plan.

Part 3 of the National Deepwater Plan is the Annual Review Reports, which assess the progress towards meeting the Operational Objectives, Management Objectives and five year priorities described in Part 1 through reviewing delivery of the relevant Annual Operational Plan. The Annual Review Report also reports on annual performance of deepwater fisheries against the management approach specified in the Annual Operational Plan.

The 2011/12 Deepwater Annual Review Report

This Annual Review Report describes the progress towards meeting the Operational Objectives, Management Objectives, and five year priorities described in the 2011/12 Annual Operational Plan. The Annual Review Report reports on work completed during the 2011/12 financial year (July 1 2011 – June 30 2012), but includes fisheries information covering the 2011/12 fishing year (October 1 2011 – September 30 2012). Figure 2 shows three years of the annual cycle.

Figure 2: Annual Planning Process in relation to financial years and fishing years. Colours indicate a single cycle of the process, i.e. the pink financial year is planned in the pink Annual Operational Plan and reported in the pink Financial year reporting which is included in the pink Annual Review Report which also includes information on the pink fishing year.



Part 1: Progress on Management Actions

The 2011/12 Annual Operational Plan (AOP) included 36 Management Actions that aimed to deliver on the Management Objectives specified in Part One of the Deepwater Plan. Table 2 summarises progress relating to each Management Action in the Annual Operational Plan. More detail on any Management Action is available in the 2011/12 Annual Operational Plan (available upon request from MPI). Text in grey boxes in Table 2 below is from the Annual Operational Plan and reflects the situation as it was in July 2011.

Table 2: Management Actions for the 2011/12 financial year and progress against each Action

1	Review up to seven stocks for 1 October and four stocks for 1 April sustainability rounds, including deemed values		
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. Up to seven stocks will be included for review in the October round and four stocks for review for the April round. 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.			
Action linked to Management Objectives 1.1, 1.3, 2.1, 2.2, 2.4, 2.5, and 2.6		Operational Objective(s): HOK 2.2 and 2.3, ORH 2.3, and all deepwater fisheries	Status: Annual
For the 1 October 2011 sustainability rounds, TAC & TACCs were reviewed and changed for: <ul style="list-style-type: none">• Hoki (HOK1)• Black cardinalfish (CDL2)• Orange roughy (ORH3B, ORH2A, ORH2B)(3A was also reviewed, but no changes were made)• Scampi (SCI2) Deemed value rates were reviewed and changed for: <ul style="list-style-type: none">• Alfonsino (BYX2)• Patagonian toothfish (PTO1)• Rubyfish (RBY1)• Sea perch (SPE7) No stocks were reviewed for the 1 April 2012 sustainability round. Details of all TACC and deemed value changes can be found in Appendix II.			
2	Continue implementation of the National Deepwater Plan		
Implementation of the National Deepwater Plan includes the completion of fishery specific chapters for the nine Tier 1 species, as well as the production of an Annual Operational Plan and Annual Review Report. During the 2011/12 financial year, the fishery specific chapters for hake and oreos, the pilot Annual Review Report, and the Annual Operational Plan for 2012/13 will be completed.			
Action linked to all Management Objectives		Operational Objective(s): ORH 1.1 and 1.2 and all deepwater fisheries	Status: Ongoing
In the 2011/12 financial year, fishery-specific chapters for southern blue whiting and ling, the Annual Operational Plan for 2012/13, and the pilot Annual Review Report for 2010/11 were completed. The hake and oreos fishery-specific chapters have been progressed and will be completed in 2013 along with the fishery-specific chapter for jack mackerel.			

3	Deliver collaborative management of deepwater fisheries with Deepwater Group Ltd. (DWG) through implementation of the Memorandum of Understanding		
A memorandum of understanding (MOU) between the Ministry of Fisheries and deepwater quota owners as represented by the DeepWater Group Ltd. was first signed in 2006 and most recently updated in 2010. The most recent revision formalises and adds clarity and transparency to the processes that have been operating in a fluid and relatively informal manner under the previous MOU. This involves the establishment of two new bodies: the Deepwater Management Forum and the Deepwater Secretariat. This Management Action focuses on the implementation of these new structures.			
Action linked to all Management Objectives		Operational Objective(s): HOK 1.4, ORH 1.3, and all deepwater fisheries	Status: Ongoing
Both new bodies have been established and have held meetings during the 2011/12 year. The Deepwater Management Forum is made up of senior managers from MPI and industry. The Deepwater Secretariat is made up of the MPI deepwater fisheries management team and DWG.			
4	Implement the 10 Year Research Programme including specifying and contracting of annual 'additional research' projects		
The 10 Year Research Programme (10YP) details the long-term research projects that will be carried out each year for the next 10 years to support the management of the Tier 1 and 2 deepwater fisheries. Research to be carried out in the 2011/12 year includes:			
<ul style="list-style-type: none">• Stock assessments for hoki (HOK1), southern blue whiting (SBW6B), oreo (TBC), scampi (SCI3), and ling (LIN5&6)• Trawl surveys on the Chatham Rise, west coast of the South Island, and on the Southern Plateau• Acoustic surveys for hoki, orange roughy, and southern blue whiting fisheries• Protected species monitoring and quantification• Benthic impact – mapping of the trawl footprint for all Tier 1 species• Characterisations of several Tier 2 species (Details can be found in Part 2B)• Bycatch monitoring and quantification			
Action linked to Management Objectives 1.1, 1.2, 1.3, 1.4, 1.6, 2.2, 2.4, 2.5, 2.6, and 2.7		Operational Objective(s): All deepwater fisheries	Status: Annual
All contracts for the 10YP have now been finalised and signed. Projects scheduled for 2011/12 progressed as expected. Additional research contracted for the 2011/12 year progressed as expected, and additional research for the 2012/13 year was contracted. Details of research completed and contracted can be found in Part 2 of this Report.			
5	Implement management regime for SQU6T fishery to address interactions with sea lions		
Each year the Minister of Fisheries sets a fishing-related mortality limit (FRML) in order to manage the level of interactions between New Zealand sea lions and the squid trawl fishery around the Auckland Islands. Work to support this decision, including consultation under Section 12 of the Fisheries Act, will be undertaken between July and September 2011. Collaborative monitoring and reporting of the allowed effort against the FRML will be undertaken by the Ministry and DWG once the fishery commences post-February 2012. In addition, work will continue to assess likely impact on sea lion survivability from interactions with Sea Lion Exclusion Devices.			
Action linked to Management Objectives 1.1, 1.3, 1.5, and 2.5		Operational Objective(s): N/A	Status: Annual
The squid fishery around the Auckland Islands, SQU6T, opened on 01 February 2012. Due to a delay in the Minister's decision for the 2012 season, management measures from the 2011 Operational Plan decisions, including a fishing related mortality limit (FRML) of 68 sea lions, were carried over into the 2012 fishing season. The Minister announced new decisions on the SQU6T fishery in August 2012 that will be in place until a review in 2016. Twenty vessels took part in the 2012 SQU6T fishery conducting 1,260 tows over a 20 week period. The total estimated sea lion mortality was 47, equivalent to 69% of the FRML. There were no observed sea lion captures and no industry reported captures this year, making it the second consecutive year with no reported captures. Ministry Observers monitored 49% of all tows conducted in the 2012 season. More detail on the SQU6T management regime may be found in Section 3 of this Report.			

6	Facilitate engagement with environmental stakeholders on the management of deepwater fisheries through the Environmental Advisory Group	
Environmental stakeholders are a key stakeholder group for deepwater fisheries. In order to provide increased engagement beyond or in addition to the Section 12 consultation requirements the Ministry intends to establish an Environmental Advisory Group (EAG). Once established, this group will meet quarterly to discuss the management of New Zealand's deepwater fisheries including Annual Operational Plans, Annual Review Reports and sustainability issues.		
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	Status: Ongoing
The Ministry extended the scope of this group to include Inshore and Highly Migratory Species. This provided a broader engagement opportunity on environmental issues. Now called the Environmental Engagement Forum (EEF), Terms of Reference have been drafted and the initial meeting took place in late 2012.		
7	Ensure sufficient and appropriate engagement with tangata whenua through the integration of Iwi Fisheries Plans (IFP) and Forum Fisheries Plans (FFP) into the National Deepwater Plan and its components	
Iwi and Forum Fisheries Plans will be the primary mechanism to provide for the input and participation of tangata whenua in fisheries management. These plans will enable iwi to identify and integrate their objectives at a fish stock level. As forums become operational, and IFP/FFPs are developed, the Ministry will work to consider how objectives for deepwater fisheries from tangata whenua will be taken into account during the annual prioritisation process detailed in AOPs. In the interim, until iwi forums are established, the Ministry will continue to use existing engagement processes to engage with iwi on deepwater fisheries management decisions.		
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	Status: Ongoing
A structured engagement strategy has been established which utilises the engagement processes already in place for inshore fisheries. No IFP or FFPs drafted thus far have had objectives specific to the deepwater fisheries, but engagement remains a priority.		
8	Enable continued Marine Stewardship Council (MSC) Certification of hoki including delivering on Conditions of Certification (CoCs), passing the annual surveillance audit, and ensuring recertification	
The New Zealand hoki fishery was certified by the MSC in 2001 and recertified in 2007. Upon recertification, 12 CoCs were placed on the hoki fishery. The MSC process requires that the conditions are addressed during the 5 year duration of certification. To date, 11 of the 12 Conditions have been closed by independent auditors during previous annual surveillance audits. For the fishery to retain certification, the one remaining Condition requires an Ecological Risk Assessment (ERA) to be completed and implemented. The ERA has been completed, and the results will now be implemented. The fishery will also seek recertification during 2012.		
Action linked to Management Objectives 1.1 and 1.5	Operational Objective: HOK 1.1	Status: Ongoing
In 2011/12, the final CoC on the MSC certification of the hoki fishery was closed during the final surveillance audit. The fishery commenced the recertification process including site visits by the MSC, and was successfully re-certified in August 2012. Details of MSC certifications can be found at http://www.msc.org .		

9	Ensure recommendations from observer optimisation project are implemented so that 1) sufficient and appropriate data are collected and 2) that information and communication channels are operating effectively			
	<p>In 2010/11 an observer optimisation project was commenced with an overall goal of increasing efficiency of the observer programme in tandem with the phased move to full observer coverage of the deepwater fleet. The three workstreams for the project are 1) technical optimisation of observer activities to ensure data collected are representative and appropriate; 2) improvement of communication channels between observers, fishery managers, fishers, and other stakeholders to allow for clarity and transparency regarding links between observer activities and management objectives; 3) phased implementation to full coverage of the deepwater fleet. The focus in 2011/12 is to finalise and implement the recommendations from the project.</p>			
	<table><tr><td>Action linked to Management Objective 1.4</td><td>Operational Objective: HOK 1.6, ORH 1.2 and all deepwater fisheries</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objective 1.4	Operational Objective: HOK 1.6, ORH 1.2 and all deepwater fisheries	Status: Ongoing
Action linked to Management Objective 1.4	Operational Objective: HOK 1.6, ORH 1.2 and all deepwater fisheries	Status: Ongoing		
	<p>Workstreams 1 and 2 were largely completed during 2011/12. It is expected that the remaining aspects will be completed during 2012/13. Workstream 3 remains to be completed but has been complicated by the decision to place observers on board all foreign charter vessels.</p>			
10	Assess and manage the level of seabird interactions with deepwater fishing activity			
	<p>Deepwater fishing vessels are known to interact with seabirds during fishing operations. Where these interactions are determined to be adverse, management intervention is required. Management currently in place includes both regulatory and non-regulatory measures including mandatory use of bird-scaring devices during fishing, and Vessel Management Plans (VMPs), which are individualised plans for each deepwater trawler that set out the onboard practices that a vessel must follow to avoid or reduce seabird interactions. Recent results from a seabird risk assessment indicate that these management measures are successful. The Ministry will monitor and audit adherence with mitigation measures to ensure the non-regulatory management regime remains effective and is reported transparently to stakeholders and tangata whenua. The focus of this Management Action for 2011/12 is to continue monitoring seabird interactions and at-sea mitigation activities, respond to issues in real time, as well as supporting the existing crew training programme.</p>			
	<table><tr><td>Action linked to Management Objectives 2.5 & 1.6</td><td>Operational Objective: HOK 2.10 and 2.13 and others</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objectives 2.5 & 1.6	Operational Objective: HOK 2.10 and 2.13 and others	Status: Ongoing
Action linked to Management Objectives 2.5 & 1.6	Operational Objective: HOK 2.10 and 2.13 and others	Status: Ongoing		
	<p>Seabird interactions are monitored at-sea by the Ministry and by DWG to enable responses in near real-time to any issues. Interactions are also analysed and statistically modelled annually by contracted scientists and will be reported on a new protected species reporting website. All seabird interactions are assessed in the wider context of all New Zealand fisheries through a Level 2 risk assessment. Details of seabird interactions in deepwater fisheries are provided in Part 3 of this ARR. Full crew training was provided to 30 vessels, with an additional 13 vessels receiving all resource material and a discussion with the skipper and senior crew members.</p>			
11	Assess and manage the level of marine mammal interactions with deepwater fishing activity			
	<p>Deepwater fishing vessels are known to interact with marine mammals during fishing activity. Where these interactions are determined to be adverse, management intervention is required. There are non-regulatory measures in place to minimise marine mammal interactions, including the Marine Mammal Operating Procedures and use of sea lion exclusion devices in the squid fishery. The Ministry will continue to monitor and audit compliance with mitigation measures to ensure the non-regulatory management regime remains effective and to seek solutions where it is not found to be effective. The level of interactions and any additional management measures will be reported to stakeholders and tangata whenua. The focus for 2011/12 is to continue to monitor interactions with marine mammals, at-sea mitigation activities, and to continue the industry crew training programme.</p>			
	<table><tr><td>Action linked to Management Objectives 1.6 and 2.5</td><td>Operational Objective: HOK 2.11 and 2.13, SBW2.2 and 2.3 and all deepwater fisheries</td><td>Status: Ongoing</td></tr></table>	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	Status: Ongoing
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	Status: Ongoing		
	<p>Marine mammal interactions are monitored at-sea by observers and by DWG and the Ministry to enable responses in near real-time to any issues. Interactions are also analysed and statistically modelled annually by contracted scientists and will be reported on a new protected species reporting website. All marine mammal interactions are assessed in the wider context of New Zealand fisheries. Details of marine mammal interactions in deepwater fisheries are provided in Part 3 of this ARR. Full crew training was provided to 30 vessels, with an additional 13 vessels receiving all resource material and a discussion with the skipper and senior crew members.</p>			

12	Develop and implement specific harvest strategies for Tier 1 species, focussing on orange roughy, southern blue whiting and ling for 2011/12		
Under the National Deepwater Plan it is intended that specific harvest strategies be developed for all Tier 1 species. A harvest strategy defines a management target, soft and hard limits, a rebuild strategy, and a harvest control rule for the stock. These provide the basis for a transparent and effective fisheries management regime and will determine when catch limits for a stock are inappropriate and need to be reviewed.			
Action linked to Management Objective 2.1		Operational Objective: ORH 2.1, SBW 2.1, LIN2.1	Status: Ongoing
During 2011/12 work began developing harvest strategies for orange roughy, southern blue whiting, ling and hake. No harvest strategies have yet been completed, however a process is in place to finalise the southern blue whiting harvest strategy by April 2013. Work for other species is ongoing.			
13	Ensure completion of quality Ministerial communications including briefings, Ministerials², and Official Information Act requests within designated timeframes		
The Ministry has a responsibility to provide quality advice and information to the Minister of Fisheries and Aquaculture through Ministerial Briefings. The Ministry is also responsible for maintaining an open relationship with the public and responding to all Official Information Act requests and letters to Government regarding fisheries issues. This Management Action recognises that this is a core function that will require significant attention throughout the year.			
Action linked to all Management Objectives		Operational Objective: N/A	Status: Ongoing
During the 2011/12 financial year, the deepwater fisheries management team completed 36 Ministerial responses, 29 Official Information Act requests, and 20 briefings to the Minister.			
14	Ensure continued implementation of registration process and risk-based observer coverage for foreign charter vessels		
Foreign charter vessels wishing to fish in New Zealand waters must meet the requirements of the vessel registration process. Through the registration process, vessels are assessed and assigned a risk profile based on safety inspections and reviews of past compliance history to minimise any potential risk to fisheries management of having the vessel fish in New Zealand waters. Once registered, observer coverage is assigned to foreign vessels based on the risk profile. This Management Action ensures that the registration process and risk-based observer coverage policy for foreign charter vessels continue to operate effectively.			
Action linked to all Management Objectives		Operational Objective: N/A	Status: Ongoing
In February, the Ministerial Inquiry into the Use and Operation of Foreign Charter Vessels released their report including 15 recommendations to address the management of FCVs in New Zealand. Cabinet elected to immediately implement the first six recommendations and later released a decision to require all FCVs to be re-flagged to New Zealand in four years time. In the interim, the deepwater team has, and will continue to, provided significant input into changes that will be required to implement Cabinet's decisions. This includes changes to the Fisheries Act, Fisheries Regulations, and the processes for assessing risk and implementing management responses. Updates on FCV-related projects can be found on the MPI website at: http://mpi.govt.nz/fisheries/commercial .			

² Responses to the public on behalf of the Minister for Primary Industries, or the Prime Minister.

15	Address outcomes of the risk-based approach to seabird interactions in deepwater fisheries, with a focus on the scampi fishery		
The Ministry has developed a risk-based policy to minimise and mitigate seabird interactions in New Zealand fisheries. Preliminary indications from the policy process indicate that the scampi fishery poses the greatest risk to seabirds of all the deepwater fisheries. Several species in particular are shown to be at risk from scampi fisheries including flesh-footed shearwaters, black petrels, and Salvin's albatross. This issue may be addressed through a range of tools including: increased monitoring to understand the nature and extent of the risk, crew training and education, or working with industry to put in place additional management measures. For 2011/12 the focus of this Management Action is to improve our understanding of the nature and extent of risk through increased monitoring through the observer programme.			
Action linked to Management Objective 2.5		Operational Objective: All deepwater fisheries	Status: Ongoing
As part of a DOC-led project (MIT2011-02), the Ministry attended a seabird workshop with skippers, crew, DOC, and MPI observers. At this workshop a scampi skipper proposed the idea of a 'net restrictor' to mitigate seabird captures. The Ministry is now working with DOC and industry to trial this new method at sea throughout 2012/13. A review of seabird captures and possible mitigation measures within the scampi fishery was also completed. Further progress on this project will be reported by DOC.			
16	Manage the development of the Patagonian toothfish fishery, including any applications for special permits		
Patagonian toothfish entered the QMS on 1 October 2010. There is little information on biomass or potential yield and only limited fishing for this species has taken place over the past 15 years. The Minister has set a nominal TAC of 50 tonnes. Patagonian toothfish is a trans-boundary straddling stock with Australia's Macquarie Island toothfish fishery requiring cooperation and communication with Australia through the Australian Fisheries Management Authority (AFMA). The focus for 2011/12 is to establish a management programme that will increase our knowledge and provide a better understanding of the stock while ensuring support for the commercial development of the fishery.			
Action linked to Management Objectives 1.1, 1.2, 1.3, 2.4, 2.6		Operational Objective(s): N/A	Status: Carried over to 2012/13
There were no applications for special permits for the Patagonian toothfish fishery in 2011/12. Deemed values were reviewed to ensure appropriate disincentives for catching excess PTO and discussions were held with quota holders regarding the future development of the fishery. Further progress is dependent on industry interest and action.			
17	Maintain an open and transparent management environment by ensuring that all management information is available and easily accessible for stakeholder and tangata whenua consideration		
To increase transparency of deepwater fisheries management, an 'information hub' will be developed where information relating to deepwater fisheries management will be available. This will include Annual Operational Plans and Annual Review Reports, minutes of Deepwater Management Forum meetings, the National Deepwater Plan, and general information relating to the management of deepwater fisheries.			
Action linked to Management Objectives 1.6 and 1.7		Operational Objective(s): HOK 1.4, ORH 1.3, 1.8 and all deepwater fisheries	Status: Carried over to 2012/13
The Ministry of Fisheries' merger with the Ministry of Agriculture and Forestry (MAF) and transformation into the new Ministry for Primary Industries has changed the processes surrounding the publication of websites and documents. Work is underway to revise MPI's website and channels for stakeholder communication, work on the 'information hub' will recommence as part of the later stages on this work.			

18	Facilitate continued implementation of the Voluntary Assisted Directed Enforced (VADE) compliance model through monitoring and communicating levels of fisher compliance against agreed benchmarks and non-regulatory management measures			
	Field Operations has developed a suite of performance indicators and performance targets for the deepwater sector. Performance against these indicators and targets is monitored through inspections and reported in quarterly internal reports. Compliance rates are then communicated to industry through the joint Ministry/DWG Compliance Committee. The focus for 2011/12 is to continue this process and to combine both the regulatory and non-regulatory reporting in a succinct report available to all stakeholders and tangata whenua.			
	<table><tr><td>Action linked to Management Objective 1.5</td><td>Operational Objectives: HOK 1.9, ORH 1.6</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objective 1.5	Operational Objectives: HOK 1.9, ORH 1.6	Status: Ongoing
Action linked to Management Objective 1.5	Operational Objectives: HOK 1.9, ORH 1.6	Status: Ongoing		
	The Field Operations team is now the Compliance Directorate under the new Ministry structure. Quarterly reports of performance were provided throughout the year, a summary of which is included in Part 3 of this Report.			
19	Complete risk profiles of two further deepwater fisheries to develop “normal” fishing profile			
	Risk profiles of deepwater fisheries are developed to identify “abnormal” patterns and/or behaviours and determine trigger points for VADE model interventions. Risk profiles can be done at several levels through a tiered approach. A Level 1 risk profile is based on available information, while a Level 2 profile is supported by a targeted monitoring and inspection programme which gathers new information. The focus for 2011/12 is to complete Level 1 assessments for southern blue whiting and orange roughy fisheries.			
	<table><tr><td>Action linked to Management Objective 1.5</td><td>Operational Objectives: HOK 1.9, ORH 1.6</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objective 1.5	Operational Objectives: HOK 1.9, ORH 1.6	Status: Ongoing
Action linked to Management Objective 1.5	Operational Objectives: HOK 1.9, ORH 1.6	Status: Ongoing		
	The Compliance Directorate completed a Level 2 risk assessment for the hoki fishery and work has been initiated to address any deficiencies found. A Level 1 risk assessment for jack mackerel has been carried out, but is yet to be finalised. Data collection for the southern blue whiting risk assessment has been completed and the analysis is underway.			
20	Ensure that appropriate and transparent action is taken when compliance levels in any deepwater fishery fall below the agreed benchmarks			
	When performance targets for the deepwater fishing sector are not met or when the risk profile identifies areas of compliance concern, action must be taken to remedy the problem and ensure continued adherence with management measures. A clear link between offending and response improves transparency and credibility against the management regime.			
	<table><tr><td>Action linked to Management Objective 1.5</td><td>Operational Objectives: HOK 1.10, ORH 1.7</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objective 1.5	Operational Objectives: HOK 1.10, ORH 1.7	Status: Ongoing
Action linked to Management Objective 1.5	Operational Objectives: HOK 1.10, ORH 1.7	Status: Ongoing		
	Performance targets did not fall below the agreed benchmarks during 2011/12. A risk profile was completed for the hoki fishery and released in May 2012. This is discussed in more detail in Part 2 of this report.			
21	Support Marine Stewardship Council Certification for southern blue whiting, hake and ling fisheries including delivering on any CoCs put in place			
	New Zealand southern blue whiting, hake, and ling fisheries are currently being assessed for MSC certification. The focus of this Management Action for 2011/12 is to finalise the certification of these fisheries and address any Conditions of Certification put in place by the MSC committee.			
	<table><tr><td>Action linked to Management Objectives 1.1 and 1.5</td><td>Operational Objective: SBW1.1, LIN1.1, and others</td><td>Status: Ongoing</td></tr></table>	Action linked to Management Objectives 1.1 and 1.5	Operational Objective: SBW1.1, LIN1.1, and others	Status: Ongoing
Action linked to Management Objectives 1.1 and 1.5	Operational Objective: SBW1.1, LIN1.1, and others	Status: Ongoing		
	New Zealand southern blue whiting was certified as sustainable by the MSC in April 2012 with one Condition of Certification relating to New Zealand sea lion interactions in the Campbell Island fishery. An Action Plan has been drafted to address the Condition and is being implemented. Hoki was recertified in August 2012, also with one Condition of Certification. Hake and ling fisheries are still in the very early stages of the assessment process, with hake expected to be progressed in 2012/13. Details of MSC certifications can be found at http://www.msc.org .			

22	Implement an effective management regime to support delivery of the harvest strategy and where possible, the economic yield strategy for the hoki fishery		
The Ministry incorporates a range of non-regulatory agreements and codes of practice in the hoki management regime. This Management Action aims to ensure that these non-regulatory measures are fit for purpose and achieve their stated objectives. The Ministry will also ensure effective communication of the status of monitoring of all non-regulatory management measures through the ARR, which will be available on the deepwater fisheries information hub.			
Action linked to Management Objectives 1.1, 1.2, and 2.1		Operational Objective: HOK 2.5	Status: Ongoing
The Management Strategy Evaluation of the hoki fishery was updated during 2011/12 to incorporate the results of the 2012 stock assessment. This work confirmed that the current TAC and distribution of catch between each of the four main hoki fisheries will enable both stocks to remain within the management target range. This analysis also indicates that the present catch levels on the Chatham Rise provide the optimum catch rates for the current fleet configuration. The final report for the updated MSE will be delivered in 2012/13.			
23	Determine habitats covered by an agreed definition of 'habitat of particular significance for fisheries management' beginning with the hoki fishery in 2011/12		
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'. Work is underway on a definition and consistent application of this phrase. Once completed, the focus will then be to assess how the definition will be applied to the hoki fishery in the first instance.			
Action linked to Management Objective 2.3		Operational Objective: HOK 2.8	Status: Carried over to 2012/13
A definition of 'habitats of particular significance to fisheries management' and guidelines on how it should be applied to New Zealand fisheries are being drafted. This is expected to be finalised in the 2012/13 financial year.			
24	Assess and manage the level of shark interactions with deepwater fishing activity with a focus on minimising the use of generic reporting codes to report bycatch information		
Deepwater fishing vessels are known to occasionally interact with sharks during fishing activity. At present, many of these interactions are reported under generic reporting codes such as DWD (deepwater dogfish unspecified) or OSD (other sharks and dogfish). This leads to difficulties determining the actual level of interactions with specific shark species. However, where interactions with a shark species are determined to be adverse, management intervention is required. The focus of this Management Action is to increase information on interactions with shark species to determine if management intervention is appropriate. This will mainly be achieved through increased observer coverage, which will provide more accurate information because observers are better trained and equipped to distinguish specific species. This also will add to information available for the review of the NPOA-sharks, which is to be reviewed in late 2012.			
Action linked to Management Objectives 1.6, 2.5, and 2.6		Operational Objective: HOK 2.12 and 2.13 and all deepwater fisheries	Status: Ongoing
Work on progressing the better identification of deepwater sharks has been delayed until the review of the NPOA-Sharks is complete to ensure that all actions are in-line with the approach specified in the NPOA. DWG has begun work on an Operational Plan for the correct handling and processing of sharks, expected to be completed after the NPOA-Sharks is finalised. Further progress on this Action will be driven by the revised NPOA-Sharks.			

25	Ensure that all research used to inform management decisions related to deepwater fisheries is assessed against the Ministry of Fisheries Research Standard and the assessment documented in advice papers	
The Minister of Fisheries has recently approved a Research and Science Information Standard for New Zealand Fisheries. The purpose of the Standard is to ensure that research and science information used to underpin fisheries management decisions, develop environmental standards, and formulate fisheries policy is of good quality and high integrity. This Management Action recognises the importance that all science research used to support management of deepwater fisheries is assessed against the research standard.		
Action linked to Management Objective 1.4 and 1.5	Operational Objective(s): HOK 1.5, ORH1.5, SBW1.4 and all deepwater fisheries	Status: Ongoing
All research reviewed by scientific working groups has been assessed against the Research Standard and, where appropriate, assigned a classification dictating the quality of the research. On occasion, the Ministry has also reviewed information that has not been peer reviewed through a science working group in order to provide advice to managers about information quality.		
26	Implement management measures to address unacceptable effects of the hoki fishery as identified by the Ecological Risk Assessment	
The one remaining Condition of the hoki fishery's MSC certification requires the assessment of risk associated with any impacts of hoki fishing on the wider ecosystem, through an Ecological Risk Assessment (ERA). A Level 1 ERA was completed in December 2010 which identified the areas that require additional work, either in order to minimise an unacceptable level of impact, or to acquire additional information to properly assess the level of impact. This Management Action will ensure that the results of the ERA are actioned appropriately (see Management Action #17).		
Action linked to Management Objectives 2.3, 2.4, 2.5, 2.6, and 2.7	Operational Objective: HOK 2.7, 2.13	Status: Implemented
The outcomes of the 2010 hoki ERA continue to be implemented as part of the ongoing work programme for deepwater fisheries. Additional monitoring of interactions with fur seals in the Cook Strait was implemented for the second time during June/July 2012 to improve the information base in this area. A DOC-funded research project (POP2011-05) aiming to determine appropriate genetic markers for New Zealand fur seals has also been contracted, with the future aim of allowing identification of the New Zealand fur seal populations that interact with commercial fisheries. DOC has also contracted projects relating to fisheries interactions with protected coral and shark species.		
27	Monitor the nature and extent of benthic interactions from deepwater fishing activity	
Deepwater fisheries in New Zealand that use bottom contact fishing gear (i.e. bottom trawl and bottom longline) are known to physically impact the benthic environment. As benthic habitats can be important breeding grounds, foraging areas, or refuges, it is an important component of sustainably-managed deepwater fisheries to ensure that any impact is carefully managed and remains within acceptable limits. To date, over 30% of New Zealand's EEZ has been closed to bottom trawling through a series of seamount closures and the benthic protection areas initiative (BPAs). The BPA closures will be reviewed in 2013 and an assessment of the nature and extent of the trawl footprint will be completed for Tier 1 species during 2011/12 to inform this review.		
Action linked to Management Objective 2.7	Operational Objective: HOK 2.15, ORH 2.9, SBW2.4 and all deepwater fisheries	Status: Ongoing
As part of the 10YP, MPI has contracted a research provider to map the annual trawl footprint for all Tier 1 species, and for deepwater fisheries overall. This information is reported in Part 3 of this Report. Further work is ongoing to determine the best way to monitor and evaluate benthic interactions from deepwater fishing activity.		

28	Develop and implement management procedures for Tier 2 species				
<p>Management of Tier 2 species is often limited by information availability. Although this information gap is being addressed by the 10 Year Research Programme, it will not always be possible to implement specific harvest strategies for Tier 2 stocks. An alternative is management procedures, which provide certainty and clarity to management decisions without requiring the detailed information that a Harvest Strategy requires. During the period of this Annual Operational Plan, management procedures will be developed for silver warehou, white warehou, and black cardinalfish. These will vary based on information availability, but may range from development of components of a Harvest Strategy to analysis of CPUE trends or signals from a trawl survey.</p>					
<table><tr><td>Action linked to Management Objective 2.1</td><td>Operational Objective: ORH 2.1, LIN2.2</td><td>Status: Carried over to 2012/13</td></tr></table>			Action linked to Management Objective 2.1	Operational Objective: ORH 2.1, LIN2.2	Status: Carried over to 2012/13
Action linked to Management Objective 2.1	Operational Objective: ORH 2.1, LIN2.2	Status: Carried over to 2012/13			
<p>No management procedures were developed in the 2011/12 year. However, work has been done researching a rapid evaluation method to provide management procedures for low-information stocks. This method is being tested in early 2013 and will inform further work towards management procedures for all Tier 2 species.</p>					
29	Complete an ecological risk assessment (ERA) on the effects of deepwater fisheries on the aquatic environment				
<p>In simple terms, an ERA is a methodological approach to help identify the risks (the likelihood and extent of potential harm) to ecosystems that might be impacted by fishing. To better understand the likely impacts that deepwater fishing activity has on the components of the ecosystem (bycatch species, protected species, benthic habitats and ecosystem function) an ERA, incorporating fishing activity for oreo, orange roughy, alfonso and cardinalfish will be completed during 2011-12. The results of this ERA will determine future management interventions in these fisheries.</p>					
<table><tr><td>Action linked to Management Objectives 2.3, 2.4, 2.5, 2.6, and 2.7</td><td>Operational Objective: ORH 2.4</td><td>Status: Carried over to 2012/13</td></tr></table>			Action linked to Management Objectives 2.3, 2.4, 2.5, 2.6, and 2.7	Operational Objective: ORH 2.4	Status: Carried over to 2012/13
Action linked to Management Objectives 2.3, 2.4, 2.5, 2.6, and 2.7	Operational Objective: ORH 2.4	Status: Carried over to 2012/13			
<p>A project aiming to develop an ERA methodology for New Zealand's deepwater fisheries was contracted as part of the 10YP. This work is ongoing and the results have not yet been finalised and accepted by the Aquatic Environment Working Group.</p>					
30	Monitor non-regulatory management measures including Sub-QMA catch limits and protected species operational procedures				
<p>In conjunction with industry, the Ministry has implemented non-regulatory catch split arrangements in the hoki, orange roughy, and oreo fisheries. These arrangements are in place to prevent unsustainable volumes of catch being taken from the individual biological stocks within each QMA. Also in conjunction with industry, non-regulatory management measures relating to protected species interactions have been implemented. These include Vessel Management Plans to manage seabird interactions and the Marine Mammal Operational Procedures to reduce the risk of marine mammal interactions. Delivery of this Management Action will ensure continued monitoring to confirm effectiveness of these measures.</p>					
<table><tr><td>Action linked to all Management Objectives</td><td>Operational Objective: HOK 2.3, 2.5, ORH 2.1</td><td>Status: Ongoing</td></tr></table>			Action linked to all Management Objectives	Operational Objective: HOK 2.3, 2.5, ORH 2.1	Status: Ongoing
Action linked to all Management Objectives	Operational Objective: HOK 2.3, 2.5, ORH 2.1	Status: Ongoing			
<p>Non-regulatory management measures were monitored throughout the year by the Ministry and DWG. Quarterly reports were provided to both parties and any non-compliance was addressed by DWG by and the relevant vessel operators. Performance of the deepwater fleet against all non-regulatory management measures can be found in Part 3 of this Report.</p>					

31	Provide information and communications to minimise market access limitations for New Zealand deepwater fisheries	<p>Government has a key role in providing accurate information on the fisheries management regime in place in New Zealand. Fulfilling this role can mean responding to requests from students, consumers and the general public, both in New Zealand and overseas, on a range of fisheries management issues, including government's position on bottom trawling and the sustainability of various QMS species. In addition, the Ministry also aims to be proactive in instances where there are inaccuracies about the fisheries management regime in the media or in consumer marketing campaigns. Although this service is ad-hoc, in that it is largely responsive to issues that arise, the intention is that a process will be developed and implemented to (1) monitor the type of information that is provided and to whom and (2) to create a file of information briefs on key issues.</p> <table><tr><td>Action linked to all Management Objectives</td><td>Operational Objective: N/A</td><td>Status: Ongoing</td></tr></table> <p>Information sheets for retail outlets have been finalised and made available for general New Zealand fisheries as well as specifically for orange roughy, hoki, and bottom trawling. Further sheets for southern blue whiting and sharks are being progressed during 2012/13. Completed sheets can be found at: http://mpi.govt.nz/news-resources/publications.</p>	Action linked to all Management Objectives	Operational Objective: N/A	Status: Ongoing
Action linked to all Management Objectives	Operational Objective: N/A	Status: Ongoing			
32	Ensure that management settings for hoki and orange roughy fisheries are peer reviewed and are equivalent to, or exceed, international best practice	<p>New Zealand has been recognised as one of only two countries to achieve a top ranking in a review of fisheries management systems around the world. In order to maintain a well-respected fisheries management system, all management settings must be consistent with international best practice. The focus of this Management Action is to independently review the management settings for hoki and orange roughy fisheries against international best practice.</p> <table><tr><td>Action linked to Management Objective 1.5</td><td>Operational Objective: HOK 1.8, ORH 1.5</td><td>Status: Closed</td></tr></table> <p>The MSC's standard is widely regarded as being consistent with fisheries management international best practice. Two Tier 1 deepwater fisheries (including hoki) were certified to the MSCs standard during 2011/12 and two more fisheries are within the assessment process. While achieving MSC certification across all deepwater fisheries is unlikely to be a cost effective option in the short term, the Ministry aims to ensure that the management of all New Zealand's deepwater fisheries is consistent with the MSCs standard.</p>	Action linked to Management Objective 1.5	Operational Objective: HOK 1.8, ORH 1.5	Status: Closed
Action linked to Management Objective 1.5	Operational Objective: HOK 1.8, ORH 1.5	Status: Closed			
33	Monitor catch of, and assess risks to, non-QMS (Tier 3) species from deepwater fishing activity	<p>Deepwater fisheries are known to catch non-QMS species as bycatch during normal fishing activity. To identify any sustainability issues with non-QMS stocks, the nature and extent of interactions with these species will be monitored and assessed as part of a Level 1 risk assessment.</p> <table><tr><td>Action linked to Management Objectives 2.2 and 2.4</td><td>Operational Objectives: HOK 2.14, ORH 2.6, and all deepwater fisheries</td><td>Status: Carried over to 2012/13</td></tr></table> <p>All landings of Tier 3 species are reported in Appendix IV of this Report. A Level 1 risk assessment for all Tier 3 species has been contracted and will progress upon completion of the ERA methodology.</p>	Action linked to Management Objectives 2.2 and 2.4	Operational Objectives: HOK 2.14, ORH 2.6, and all deepwater fisheries	Status: Carried over to 2012/13
Action linked to Management Objectives 2.2 and 2.4	Operational Objectives: HOK 2.14, ORH 2.6, and all deepwater fisheries	Status: Carried over to 2012/13			
34	Ensure all management measures and controls are assessed in terms of their contribution to the value of deepwater fisheries	<p>In order to ensure the economic viability of deepwater fisheries in New Zealand, it is important to ensure that management measures and controls add value to deepwater fisheries before they are implemented. A cost benefit tool will be developed to enable analysis of potential management measures and controls in terms of their contribution to the long term value of the fishery.</p> <table><tr><td>Action linked to Management Objectives 1.1</td><td>Operational Objective(s): HOK 1.3, ORH 1.11, and all deepwater fisheries</td><td>Status:</td></tr></table> <p>Economic aspects of fisheries are being built into harvest strategies using techniques such as management strategy evaluation. These techniques and early consultation with the industry allow all management measures and controls to be assessed in terms of their contribution to the value of deepwater fisheries.</p>	Action linked to Management Objectives 1.1	Operational Objective(s): HOK 1.3, ORH 1.11, and all deepwater fisheries	Status:
Action linked to Management Objectives 1.1	Operational Objective(s): HOK 1.3, ORH 1.11, and all deepwater fisheries	Status:			

35	Implementation and monitoring of sub-Antarctic MPAs		
	MPAs are being implemented in the territorial seas of the Antipodes, Bounty and Campbell Islands. These MPAs are a combination of marine reserves and restrictions on Danish seining that complement the existing restrictions on trawling and dredging. Once implemented, routine monitoring of these MPAs will occur with a particular focus on the Campbell Islands MPA as this will be reviewed after five years to assess the importance of this area to the developing deepwater crab fishery.		
	Action linked to all Management Objectives	Operational Objective: N/A	Status: Carried over to 2012/13
	These MPAs have yet to be implemented and are awaiting passage of special legislation. Fisheries Act regulations will be enacted when the special legislation comes into force.		
36	Implement industry-led proposals to ensure the structure of Quota Management Areas (QMAs) is consistent with biological and management information, with an initial focus on amalgamating frostfish QMAs		
	QMAs are based on a combination of biological and administrative factors known at the time a species is introduced to the QMS. The starting point for determining QMA boundaries for each species is the ten Fisheries Management Areas (FMAs). Over time, new information may become available which indicates that existing QMAs may not be consistent with biological stocks. In this case, industry can request that a QMA is considered for amalgamation or division providing the majority of quota owners support the request. Frostfish and black cardinalfish will be the initial focus for 2011/12.		
	Action linked to Management Objective 1.1	Operational Objective(s): N/A	Status: Carried over to 2012/13
	No proposals were submitted to the Ministry regarding the amalgamation of any QMAs but work is ongoing to identify opportunities.		

Part 2: Research, Compliance and other work

2.1 Research

Research needs for deepwater fisheries are driven 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 2011/12 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 3: Research contracted for the 2011/12 financial year³

Project code	Title
Trawl surveys	
HOK2010/04	Estimation of hoki and middle depth fish abundance on the West Coast South Island using combined trawl and acoustic surveys (Focus on development of survey design)
HOK2010/05	Estimation of hoki and middle depth fish abundance on the Chatham Rise using trawl surveys
MDT2010/02	Estimation of hoki and middle depth fish abundance on the Southern Plateau using trawl surveys
Acoustic surveys	
JMA2010/01	Estimation of jack mackerel (JMA7) and middle depth fish abundance on the west coast, North Island (Pilot study)
HOK2010/03	Estimation of spawning hoki biomass using acoustic surveys (Cook Strait)
ORH2010/01	Estimating the abundance of orange roughy using acoustic methods (ORH 3B plume)
ORH2010/04	Estimating the abundance of orange roughy using acoustic and trawl surveys (ORH7A)
SBW2010/02	Biomass estimation of southern blue whiting using acoustic surveys (Bounty Platform)
SBW2010/04	Biomass estimation of southern blue whiting using acoustic surveys (Campbell Islands)
Ageing projects	
MID2010/01	Routine age determination of hoki and middle depth species from commercial fisheries and trawl surveys
Stock Assessment	
DEE2010/02	Stock assessment of deepwater and middle depth fish stocks (OEO (SSO 1), SCI3, LIN5&6)
HOK2010/01	Hoki population modelling and stock assessment
SBW2010/01	Southern blue whiting (SBW 6B – Bounty Islands) stock assessment
Stock characterisations	
DEE2010/07	Characterisation and fishery monitoring of deepwater and middle depth species (EMA, BYX, FRO, WWA, GSP, SPE)
Scampi camera surveys	
SCI2010/02	Estimating the abundance of scampi in SCI1 using photographic surveys
SCI2010/03	Estimating the abundance of scampi in SCI2 using photographic surveys
Aquatic environment	
DAE2010/01	Taxonomic identification of benthic samples
DAE2010/02	Bycatch monitoring and quantification of deepwater stocks (SQU)
DAE2010/03	Ecological risk assessment for deepwater stocks (ORH, OEO, CDL, and BYX)
DAE2010/04	Monitoring the trawl footprint for deepwater fisheries
PRO2010/01	Estimating the nature and extent of incidental captures of seabirds, marine mammals and turtles in New Zealand commercial fisheries

³ Progress on projects is not available, reports should be made publically available at the conclusion of each project.

Research reports

Final research reports from previously contracted work that were published in the 2011/12 year that relate to deepwater fisheries are shown in Table 4 below. All published reports can be found on the MPI NZ Fisheries InfoSite (www.fs.fish.govt.nz).

Table 4: Final research reports published during the 2011/12 financial year

Doc #	Title
Annual Documents	
2011 Nov. Plenary	Ministry of Fisheries Science Group 2011: Report from the Mid-Year Fisheries Assessment Plenary, November 2011: stock assessments and yield estimates. 355p. Compiled by the Fisheries Science Group
2012 May Plenary	Ministry for Primary Industries (2012). Report from the Fisheries Assessment Plenary, May 2012: stock assessments and yield estimates. Compiled by the Fisheries Science Group, Ministry for Primary Industries, Wellington, New Zealand. 1194p.
2011 AEBAR	Ministry of Agriculture and Forestry 2012: Aquatic Environment and Biodiversity Annual Review 2011. Ministry of Agriculture and Forestry, Wellington, New Zealand. 196p.
Aquatic Environment and Biodiversity Reports (AEBRs)	
88	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.
89	Baird, S.J.; Wood, B.A. (2012). Extent of coverage of 15 environmental classes within the New Zealand EEZ by commercial trawling with seafloor contact. New Zealand Aquatic Environment and Biodiversity Report No. 88. 43p. Zealand Aquatic Environment and Biodiversity Report No. 88. 43p.
90	Hurst, R.J.; Renwick, J.A.; Sutton, P.J.H.; Uddstrom, M.J.; Kennan, S.C.; Law, C.S.; Rickard, G.J.; Korpela, A.; Stewart, C.; Evans J. (2012). Climate and ocean trends of potential relevance to fisheries in the New Zealand region. New Zealand Aquatic Environment and Biodiversity Report No. 90.202p.
91	Bowden, D.A.; Hewitt, J. (2012). Recommendations for surveys of marine benthic biodiversity: outcomes from the Chatham-Challenger Ocean Survey 20/20 Post-Voyage Analyses Project. New Zealand Aquatic Environment and Biodiversity Report No.91. 34p.
92	Lörz, A.N.; Berkenbusch, K.; Nodder, S.; Ah Yong, S.; Bowden, D.; McMillan, P.; Gordon, D.; Mills, S.; Mackay, K. (2012) A review of deep-sea benthic biodiversity associated with trench, canyon and abyssal habitats below 1500 m depth in New Zealand waters. New Zealand Aquatic Environment and Biodiversity Report No 92.133 p
93	MacDiarmid, A.; McKenzie, A.; Sturman, J.; Beaumont, J.; Mikaloff-Fletcher, S.; Dunne, J. (2012). Assessment of anthropogenic threats to New Zealand marine habitats New Zealand Aquatic Environment and Biodiversity Report No. 93.255 p.
Fisheries Assessment Reports (FARs)	
2011/33	Horn, P.L. (2011). Stock assessment of hake (<i>Merluccius australis</i>) off the west coast of South Island (HAK 7) for the 2010-11 fishing year. New Zealand Fisheries Assessment Report 2011/33.
2011/34	Horn, P.L. (2011). Natal fidelity: a literature review in relation to the management of the New Zealand hoki (<i>Macruronus novaezelandiae</i>) stocks. New Zealand Fisheries Assessment Report 2011/34.
2011/40	Dunn, A.; Hanchet, S.M. (2011). Southern blue whiting (<i>Micromesistius australis</i>) stock assessment for the Campbell Island Rise for 2009-10. New Zealand Fisheries Assessment Report 2011/40.
2011/41	Penney, A.J.; Loveridge C.J.; Moriarty, J.A.; George, K. (2011). Estimation of New Zealand monthly purse-seine and midwater trawl catches of <i>Trachurus novaezelandiae</i> , <i>T. declivis</i> and <i>T. murphyi</i> by fisheries management area from October 1985 to December 2010. New Zealand Fisheries Assessment Report 2011/41
2011/45	Anderson, O.F. (2011). Standardised CPUE analyses for two North Island orange roughy fisheries (ORH 1 and ORH2A North) to the end of the 2009-10 fishing year. New Zealand Fisheries Assessment Report 2011/45.
2011/47	O'Driscoll, R.L.; MacGibbon, D.; Fu, D.; Lyon, W.; Stevens, D.W. (2011). A review of hoki and middle depth trawl surveys of the Chatham Rise, January 1992-2010. New Zealand Fisheries Assessment Report 2011/47
2011/55	Anderson, O.F. (2011). Descriptions of the black oreo and smooth oreo fisheries in OEO 1, OEO 3A, OEO 4, and OEO 6 from 1977-78 to 2009-10. New Zealand Fisheries Assessment Report 2011/55.
2011/56	Fu, D.; Taylor, P.R. (2011). Characterisation and standardised CPUE analyses for blue mackerel (<i>Scomber australasicus</i>) in EMA 7, 1989-90 to 2008-09. New Zealand Fisheries Assessment Report 2011/56.
2011/61	Anderson, O.F. (2011). A summary of biological information on the New Zealand fisheries for orange roughy (<i>Hoplostethus atlanticus</i>) for the 2007-08 and 2008-09 fishing years. New Zealand Fisheries Assessment Report 2011/61.
2011/62	Anderson, O.F.; Dunn, M.R. (2011). Assessment of the Mid-East Coast orange roughy stock (ORH 2A South, ORH 2B & ORH 3A) to the end of the 2009-10 fishing year. New Zealand Fisheries Assessment Report 2011/62.

2011/63	Dunn, M.R. (2011). Investigation of some alternative stock assessment model structures for Mid-East Coast orange roughy. New Zealand Fisheries Assessment Report 2011/63.
2011/64	McKenzie, A. (2011). Assessment of hoki (<i>Macruronus novaezelandiae</i>) in 2011. New Zealand Fisheries Assessment Report 2011/64.
2012/1	Tuck, I.D.; Dunn, A. (2012). Length-based population model for scampi (<i>Metanephrops challenger</i>) in the Bay of Plenty (SCI 1), Wairarapa / Hawkes Bay (SCI 2) and Auckland Islands (SCI 6A) New Zealand Fisheries Assessment Report 2012/01. 125p.
2012/2	Ballara, S.L. (2012). Descriptive analysis of the fishery for hake (<i>Merluccius australis</i>) in HAK 1, 4 and 7 from 1989–90 to 2009–10, and a catch-per-unit-effort (CPUE) analysis for Sub-Antarctic hake. New Zealand Fisheries Assessment Report 2012/02. 47p.
2012/3	Horn, P.L.; Sutton, C.P. (2012). Catch-at-age for hake (<i>Merluccius australis</i>) and ling (<i>Genypterus blacodes</i>) in the 2009–10 fishing year and from a trawl survey in summer 2010–11, with a summary of all available data sets. New Zealand Fisheries Assessment Report 2012/03. 53p.
2012/5	Bagley, N.W.; O'Driscoll, R.L. (2012). Trawl survey of middle depth species in the Southland and Sub-Antarctic areas, November–December 2009 (TAN0911). New Zealand Fisheries Assessment Report 2012/05. 70p.
2012/7	MacGibbon, D.J.; McGregor, V.; Hurst, R.J. (2012). Fishery characterisation and standardised CPUE analyses for lookdown dory, <i>Cyttus traversi</i> (Hutton, 1872) (Zeidae), 1989–90 to 2008–09. New Zealand Fisheries Assessment Report 2012/07. 143p.
2012/10	Stevens, D.W.; O'Driscoll, R.L.; Dunn, M.R.; Ballara, S.L.; Horn, P.L. (2012). Trawl survey of hoki and middle depth species on the Chatham Rise, January 2011 (TAN1101). New Zealand Fisheries Assessment Report 2012/10. 98 p.
2012/12	Hurst, R.J.; Ballara, S.L.; MacGibbon, D. (2012). Fishery characterisation and standardised CPUE analyses for barracouta, <i>Thyrstites atun</i> (Euphrasen, 1791) (Gempylidae), 1989–90 to 2007–08. New Zealand Fisheries Assessment Report 2012/12. 303p.
2012/13	Horn, P.L.; Ballara, S.L. (2012). A descriptive analysis and CPUE from commercial fisheries for ling (<i>Genypterus blacodes</i>) in Fishstocks LIN 2, 3, 4, 5, 6, and 7 from 1990 to 2009. New Zealand Fisheries Assessment Report 2012/13. 69 p.
2012/16	O'Driscoll, R.L. (2012). Acoustic biomass estimates of southern blue whiting on the Bounty Platform in 2011. New Zealand Fisheries Assessment Report 2012/16. 26 p.
2012/17	O'Driscoll, R.L. (2012). Acoustic survey of spawning hoki in Cook Strait during winter 2011. New Zealand Fisheries Assessment Report 2012/17. 50 p.
2012/18	O'Driscoll, R.L.; Dunford, A.J.; Fu, D. (2012). Acoustic estimates of southern blue whiting from the Campbell Island Rise, August–September 2011 (TAN1112). New Zealand Fisheries Assessment Report 2012/18 52 p.
2012/19	Ballara, S.L.; O'Driscoll, R.L. (2012). Catches, size, and age structure of the 2009–10 hoki fishery, and a summary of input data used for the 2011 stock assessment. New Zealand Fisheries Assessment Report 2012/19. 109 p.
2012/20	Anderson, O.F.; Dunn, M.R. (2012). Descriptive analysis of catch and effort data from New Zealand orange roughy fisheries in ORH 1, 2A, 2B, 3A, 3B, 7A, and 7B to the end of the 2008–09 fishing year. New Zealand Fisheries Assessment Report 2012/20. 82 p
2012/23	Ballara, S.L.; O'Driscoll, R.L. (2012). Catches, size, and age structure of the 2010–11 hoki fishery, and a summary of input data used for the 2012 stock assessment. New Zealand Fisheries Assessment Report 2012/23. 117 p.

2.2 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 Field Operations Group was responsible for providing the intervention services to achieve cost-effective compliance with all regulations⁴. In addition to reviewing sustainability advice and components of the Deepwater Plan, the Field Operations Group 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.

⁴ Function is now under the Compliance Directorate in the Compliance and Response Branch of MPI.

Overall, 119 inspections were completed covering 42 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 5: Summary of performance indicators

Performance indicator	Components of indicator	Performance target
1. Pre-fishing preparation	Includes, but not limited to: <ul style="list-style-type: none"> • valid fishing permit • valid certificate of registration • fishing gear meets requirements • sea bird mitigation device / SLED meets requirements • vessel has VMP on board 	100%
2. Fishing documentation	Accurate and timely completion of all relevant returns	90%

Table 6: Summary of performance against Indicator 1 (pre-fishing preparation)

Inspection detail	# of inspections	# of breaches	Compliance rate
Certificate of registry	72	0	100%
Fishing gear	40	1	98%
Fishing permit	78	0	100%
SLED	30	1	99%

It is important to note that SLED inspections are likely to include more than one SLED per inspection. Two breaches were reported against Indicator 1, the first involved an inspected SLED not meeting technical specifications, and the second was tori lines on a vessel that were not compliant with requirements. Both issues were rectified before fishing commenced.

Table 7: Summary of performance against Indicator 2 (fishing documentation)

Inspection detail	# of inspections	# of breaches	Compliance rate
Effort returns	61	1	98%
Landing documents	26	1	96%
Landing return book	51	0	100%

Two breaches were reported against Indicator 2, one involving a TCEPR that had not been filled out for the previous day, and the other a CLR form that was incompletely filled out.

In addition to the monitoring of these performance indicators, a compliance risk profile of the West Coast South Island / East Coast South Island hoki fisheries was released in May 2012. A significant proportion of the analysis was based on work undertaken by Fishery Officers, Observers and other MPI staff during the 2011 WCSI hoki season. The profile contained 44 recommendations, these have been discussed with industry and management responses have been implemented where required.

2.3 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 the 2011/12 financial year from stocks managed under the National Deepwater Plan.

Table 8: Cost recovery levies for deepwater stocks and all New Zealand fisheries for 2011/12 financial year

		Total for stocks managed in National Deepwater Plan	Total for all New Zealand fisheries
Compliance		5,271,470	10,500,000
Registry		2,398,204	4,808,874
Observers	MPI	2,131,650	2,853,170
	DOC	480,091	998,766
Research	MPI	9,307,286	13,839,729
	DOC	678,744	1,084,253
Total		19,101,299	34,084,792

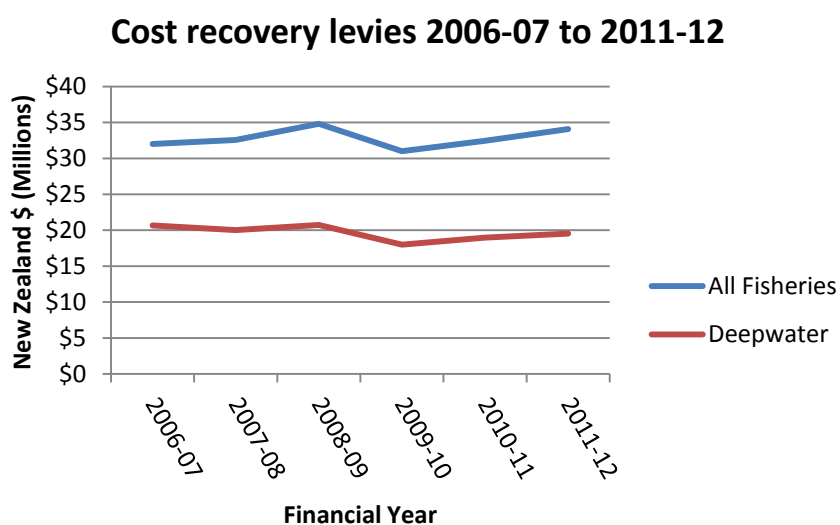


Figure 3: Cost recovery levies for deepwater and all fisheries from 2006-07 to 2011-12

Part 3: Observer coverage, non-regulatory measures, and general environmental reporting

This part of the Annual Review Report summarises observer coverage for the 2011/12 financial year, reports on the overall impacts of deepwater fishing on the marine environment, and reports adherence to non-regulatory environmental mitigation measures for the 2011/12 fishing year. Species-specific environmental interactions are reported in Appendix I.

Biological sampling and environmental monitoring is driven by the 10YP and carried out by the Ministry's Observer Programme. Data collected by the Observer Programme is used:

- As an input to monitor key fisheries against harvest strategies
- As an input to monitor biomass trends for bycatch species
- To assess fishery performance against environmental benchmarks as available
- To enable more timely responses to sustainability and environmental impact issues

Observer coverage is split between the Ministry and the Department of Conservation (DOC). The split is based on the requirements on observer time to meet both Ministry and DOC research objectives. DOC requires observer coverage to collect information regarding interactions of fishing activity with protected species.

3.1 Observer Coverage

Table 9: Planned and achieved observer coverage for 2011/12 financial year⁵

Fishery	Fisheries covered	Days Planned	Days Achieved	Ministry/DOC CR %
Deepwater trawl fisheries:				
ORH 1		65	66 (101%)	90/10
East Coast NI Deepwater	ORH2A BYX2 CDL2	269	19 (7%)	90/10
Chatham Rise Deepwater	ORH3B OEO3A, OEO4 BYX3	310	255 (82%)	90/10
Sub-Antarctic Deepwater	ORH3B OEO1, OEO6	254	100 (39%)	90/10
West Coast NI Deepwater	ORH7A	15	23 (153%)	90/10
Hoki & Middle Depth trawl fisheries:				
West Coast SI (FMA7)	HOK1 HAK7 LIN7 SWA1 JMA7 EMA7	971	670 (69%)	85/15
Cook Strait	HOK1 HAK1, HAK7 LIN2, LIN7	250	122 (49%)	85/15
Chatham Rise (FMA3/FMA4)	HOK1 HAK1, HAK4 LIN3, LIN4 SWA3, SWA4 JMA3 EMA3	961	533 (55%)	85/15
Sub-Antarctic (FMA5/FMA6)	HOK1 HAK1 LIN5, LIN6	895	616 (69%)	85/15

⁵ At present, days covered is the only metric available, in future, more informative metrics will be reported.

Fishery	Fisheries covered	Days Planned	Days Achieved	Ministry/DOC CR %
	SBW6B, SBW6I, SBW6R JMA3 EMA3			
West Coast NI (FMA8)	HOK1 LIN7 SWA1 JMA7 EMA7	230	412 (179%)	85/15
Deepwater bottom longline fisheries:				
Bottom longline	LIN PTO1	190	134 (71%)	85/15
Shellfish:				
Scampi	SCI (all)	450	257 (57%)	85/15
Aquatic Environment:				
Sea lion interactions	SQU6T	700	572 (82%)	80/20
	Total days:	5640	3802 (67%)	

In most areas, achieved observer days were less than planned. Observer coverage does not always meet planned coverage targets for a number of reasons including: vessel's actual fishing behaviour does not always match the notified intentions, 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, requested observer presence on vessels may affect the availability of observers in other areas.

In May 2012, Cabinet decided that, as a result of the findings of the FCV Inquiry, all FCVs will have at least one observer on every trip beginning in October 2012. The observer programme subsequently is working to increase capacity to adhere to the new requirement. This will increase coverage in the majority of deepwater fisheries in future.

3.2 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. Each trip with an observer is reviewed by DWG and MPI to ensure that all non-regulatory measures were adhered to. In any instance where they were not, further follow up action is taken (discussed below). The number of observed trips on trawl vessels >28m completed during the 2011/12 fishing year and the results of the trip reviews is summarised in Table 10 below.

Table 10: Summary of observed in-zone trips on trawl vessels >28m or scampi vessels <28m during the 2011/12 fishing year*

Observed trips on trawl vessels >28m, or scampi vessels <28m in 2011/12	Reviews by DWG	Trips assessed as having no follow-up activity required	Trips requiring follow up for VMP issues	Trips requiring follow up for MMOP issues
105	49	41	7	3

* Data provided by Deepwater Group Ltd.

3.3 Seabirds

Total seabird captures in deepwater fisheries are estimated using mathematical models based on observed captures and fishing effort data from each deepwater fishery and seabird species distribution data.

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 2011/12 fishing year⁶. Table 12 shows industry reported seabird captures from 2011/12 fishing year. Tables 13 and 14 show the observed and model estimated total captures from all trawl fisheries, and by deepwater vessels targeting species in the National Deepwater Plan. Table 15 shows the observed captures and rate for ling longline fisheries for the 2007/08 to 2010/11 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 for the 2011/12 fishing year

Species	Observed interactions	
	Alive	Dead
Albatrosses (Unidentified)	2	10
Gibson's albatross	0	1
Buller's albatross	15	43
Black petrel	1	2
Buller's shearwater	1	0
Chatham Island albatross	0	2
Campbell albatross	1	1
Cape petrels	3	7
Common diving petrel	2	0
Fairy prion	1	0
Flesh-footed shearwater	1	0
Great albatrosses	1	1
Grey-backed storm petrel	1	0
Grey petrel	0	2
Black-browed albatross (Unidentified)	0	5
Smaller albatrosses	0	2
Buller's and Pacific albatrosses	1	6
Petrel (Unidentified)	8	9
Prions (Unidentified)	3	0
Southern royal albatross	4	1
Royal albatrosses	0	2
Salvin's albatross	10	15
Seabird (unspecified)	3	0
Sooty shearwater	11	22
Seabird-small	1	0
Storm petrels	1	0
Shy albatross	2	2
Wandering albatross (Unidentified)	3	2
White-chinned petrel	10	39
New Zealand white capped albatross	16	50
Westland petrel	1	2
Total	103	226

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.

Table 12: Industry-reported seabird interactions from 2011/12 fishing year⁷

	Alive	Dead
Large seabirds	61	172
Small seabirds	56	237
Total	117	409

Table 13: Observed seabird captures and modelled estimates of total captures* in all New Zealand trawl fisheries (includes vessels <28m)⁸

	Tows	Observed				Estimated	
		Tows observed	% of tows observed	Observed captures	Capture rate	Estimated total captures	95% confidence interval
2007/08	89,537	9,046	10.1	234	2.59	2,033	1,585 – 2,560
2008/09	87,589	9,804	11.2	469	4.78	2,746	2,316 – 3,272
2009/10	92,885	8,948	9.6	252	2.82	2,531	2,006 – 3,211
2010/11	86,073	7,445	8.6	348	4.67	2,744	2,138 – 3,570

* Does not include estimates of cryptic mortality

Trawl effort in inshore fisheries is estimated to make up 40,000-50,000 of the tows reported in Table 12 above. Observer coverage is low in inshore fisheries and because of the lack of information about actual captures in inshore fisheries, the modelled estimated total captures are not necessarily representative of capture numbers for the deepwater and middle-depth fisheries.

Table 14: 2010/11 Observed seabird captures and modelled estimates of total captures for New Zealand deepwater and middle-depth fisheries

	Tows	Observed			Estimated	
		Tows observed	% of tows observed	Observed captures	Estimated total captures	95% confidence interval
Hoki	10,403	1,724	16.6	53	305	227-418
Hake	869	227	26.1	1	9	3-19
Ling (trawl)	1,107	104	9.4	8	34	18-63
Squid (trawl)	4,213	1,260	29.9	137	604	453-850
Southern blue whiting	1,171	434	37.1	16	22	17-31
Jack mackerel	1,879	594	31.6	7	22	10-49
Scampi	4,447	536	12.1	86	307	225-433
Deepwater (ORH/OEO)	4,177	1,206	28.9	6	26	13-46
Tier 2 mid-depth*	7,253	616	8.5	32	421	265-673
Total	35,519	6,701	18.9	346	1750	

* Includes all effort targeting Tier 2 middle depths species.

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

	Hooks	Observed				Estimated	
		Hooks observed	% of hooks observed	Observed captures	Capture rate	Estimated total Captures	95% confidence interval
2007/08	19,007,405	3,240,756	17.0	22	0.007	377	260-538
2008/09	17,587,714	3,702,550	21.1	9	0.002	308	194-487
2009/10	18,394,593	1,717,425	9.3	10	0.006	263	174-378
2010/11	18,299,462	1,451,600	7.9	27	0.019	580	371-930

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

⁷ From Non-fish Protected Species Bycatch forms.

⁸ From Thompson, F.N.; Berkenbusch, K.; Abraham, E.R. (2013) Marine mammal bycatch in New Zealand trawl fisheries, 1995-96 to 2010-11. New Zealand Aquatic Environment and Biodiversity Report No. 105. 73 p.

Vessel Management Plans

VMP-related issues identified on the seven trips requiring follow-up (see Table 10) ranged from administrative misunderstandings to vessels not fully complying with their VMP. Issues are categorised into five general categories: administrative, triggers, offal management, net cleaning, and seabird scaring devices (Table 16). Some issues were due to misunderstandings about requirements, or minor issues like faded streamers on tori lines, but all were followed up by DWG for clarification and remedial action.

Table 16: Breakdown of reviews with VMP-related issues

Type of issue	Number reported
Administrative	2
Seabird trigger not reported	0
Offal management	3
Sticker removal	0
Seabird scaring devices	2

Trigger points

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 eight trigger point activations for seabird captures in the 2011/12 fishing year. Trigger point specifics and activations are summarised in Table 17 below. Two trigger point notifications were also received by vessels smaller than 28m, and DWG has worked with those vessels to investigate the cause of trigger breaches and works with vessel operators to take remedial action where appropriate.

Table 17: Number of trigger point activations for seabirds in 2011/12 fishing year from vessels >28 m LOA

Species	Trigger points		No. of trigger activations
	Captures in any 24 hr period	Captures in any 7 day period	
Seabirds - large	3 or more	10 or more of any species	3
Seabirds - small	5 or more		3

3.4 Marine Mammals

Captures in all deepwater fisheries

Total marine mammal interactions and captures in deepwater fisheries are estimated using mathematical models based on observed interactions and fishing effort data from each deepwater fishery. The estimates of total captures do not include any estimates of cryptic mortality, this is however 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 18 reports all observed and industry-reported marine mammal captures in deepwater fisheries for the 2011/12 fishing year.

Table 19 shows the model estimated total captures from trawl fisheries for the 2007/08 to 2010/11 fishing years and Table 20 shows capture estimates from fishing activity targeting species in the National Deepwater Plan. Marine mammal interactions by fishery are reported in Appendix I.

Table 18: Observed and industry reported captures of marine mammals in the 2011/12 fishing year⁹

Species	Observed captures		Industry reported captures	
	Alive	Dead	Alive	Dead
Common dolphin	0	4	0	5
New Zealand fur seal	8	56	12	123
New Zealand sea lion	1	0	1	0

Table 19: Model estimated total captures of marine mammals for the 2007/08 to 2009/10 fishing years from all trawl vessels

	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								
2007/08	89,537	9,046	10.1	141	1.56	765	476-1,348	99.9
2008/09	87,589	9,804	11.2	72	0.73	546	308-961	99.9
2009/10	92,885	8,948	9.6	72	0.80	472	270-914	99.9
2010/11	86,073	7,445	8.6	68	0.91	376	221-669	99.9
Common dolphin								
2007/08	89,537	9,046	10.1	20	0.22	45	25-73	14.8
2008/09	87,589	9,804	11.2	20	0.20	29	13-51	14.7
2009/10	92,885	8,948	9.6	4	0.04	30	7-66	14.8
2010/11	86,073	7,445	8.6	9	0.12	64	24-116	13.6
New Zealand Sea Lion								
2007/08	89,537	9,046	10.1	11	0.12	20	12-31	40.9
2008/09	87,589	9,804	11.2	3	0.03	14	6-25	40.4
2009/10	92,885	8,948	9.6	15	0.17	33	22-46	38.1
2010/11	86,073	7,445	8.6	7	0.09	25	15-38	38.7

Table 20: 2010/11 Observed NZ fur seal captures and modelled estimates of total captures for New Zealand deepwater and middle-depth fisheries

	Tows	Observed			Estimated	
		Tows observed	% of tows observed	Observed captures	Estimated total captures	95% c.i.
Hoki	10,403	1,724	16.6	23	159	76-323
Hake	869	227	26.1	0	10	1-34
Ling (trawl)	1,107	104	9.4	2	19	4-60
Squid (trawl)	4,213	1,260	29.9	5	18	8-37
Southern blue whiting	1,171	434	37.1	36	70	37-214
Jack mackerel	1,879	594	31.6	0	3	0-9
Scampi	4,447	536	12.1	0	4	0-16
Deepwater (ORH/OEO)	4,177	1,206	28.9	0	2	0-13
Tier 2 mid-depth*	7,253	616	8.5	2	76	26-180
Total	35,519	6,701	18.9	68	361	

* Includes all effort targeting Tier 2 middle depths species.

Marine Mammal Operational Procedures

Three observed trips were identified as having MMOP-related issues requiring follow up from DWG (see Table 10). These three issues included two instances of plastic being discarded at sea and one non-reporting of a fur seal trigger.

⁹ These are not cumulative, an observed capture will also have been reported by the vessel (i.e. the NZ sea lion observed capture is the same event as the industry reported NZ sea lion capture).

Trigger points

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 13 trigger point activations for marine mammal captures in the 2011/12 fishing year. These are summarised in Table 21 below.

Trigger point activations were also reported by several vessels smaller than 28 metres fishing in the Cook Strait.

Table 21: Trigger point activations for the 2011/12 fishing year

Species	Trigger Points		No. of trigger activations
	Captures in any 24 hr period	Captures in any 7 day period	
Fur seals	2	5	15
Dolphins	1	n/a	4
Sea lions	1	n/a	1

Of the 15 fur seal trigger activations, two were for five captures in a week, and the remaining 13 were for more than two captures in a 24-hour period. There were, however a few instances where there were multiple triggers reported during a single catch event for example, two capture events that each capture three fur seals in a 48 hour period will result in three trigger activations, although it was only two events.

Squid 6T fishery

In 2012, the FRML was set at 68 New Zealand sea lions, the strike rate at 5.65, and a SLED discount factor of 35%. The FRML translated into a tow limit (for non-discounted tows) of 1,203 tows. If all tows received the discount factor, the limit was 1,852 tows.

All SLEDs (47) were inspected prior to the beginning of the season and found to meet the standard specified in the SQU6T Operational Plan. Forty-three of these SLEDs were subsequently inspected again by Ministry observers deployed on vessels fishing for squid. Fisheries Officers conducted further in-port inspections of the SLEDs resulting in all but one vessel receiving an in-season SLED check. All SLEDs were found to be compliant and the discount factor was applied to all but 28 tows. Those 28 tows were not given the discount because the vessels failed to provide sufficient notification to the Ministry before entering and fishing in SQU6T as is required.

There were no observed or reported captures of sea lions, and the FRML was not reached before fishing ceased for the year as vessels moved to other fisheries.

Table 22: Summary of 2011/12 SQU6T fishery

FRML	Completed tows	Observer coverage (tows observed)	Observed NZ sea lion captures	Estimated captures
68	1260	49%	0	47

3.5 Elasmobranches

Management Objectives 2.4 and 2.5 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 specifies a focus on the reduction of the use of generic reporting codes and the elimination of finning of live sharks (a crime under the Animal Welfare Act 1999). Progress on monitoring interactions with protected shark species is also reported. There is a scheduled review of the NPOA-sharks in 2012/13 and information that will feed into that review is being compiled.

Elasmobranches 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 will include information on the total interactions with shark species during deepwater fishing activity, interactions with protected species, use of generic reporting codes, and

some information about the utilisation by processing of sharks for their fins in deepwater fisheries. All information regarding 'landings' is based on a 'core deepwater fleet' which includes all trawl vessels over 28 m, scampi fishing vessels, and bottom longline vessels over 28 m. Information is also reported from observer records, this information is based on Tier 1 target fishing.

Table 23: Reported landings (tonnes) of four categories of elasmobranchs from the core deepwater fishing fleet in 2011/12

	Chimaeras	Rays & Skates	Sharks & Dogfish
Generic reporting code	1	4	734
Protected species	0	0	0
QMS species	1,441	536	3,610
Other	106	19	389
Total	1,548	559	4,733

* Observer identification of ODO is uncertain and has not been verified.

Table 24: Observed and industry reported captures (by number) of protected shark species from deepwater Tier 1 target fisheries in the 2011/12 fishing year

	Observed Captures	Industry-reported
Basking shark	1	2
Spine-tailed devil ray	0	0
Smalltooth sandtiger shark	4*	0
Manta ray	0	0
White pointer shark	0	0
Whale shark	0	0

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 2011/12 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

Only five species of sharks caught in deepwater fisheries have been reported with fins as the primary landed state. Landings reported as finned and proportion of total catch for those five 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 2011/12 fishing year by the core deepwater fleet

	Total landings (t)	% of total QMS 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	4.81	0.5%	4.3	89%
Mako shark	15.2	15%	11.9	78%
Porbeagle shark	19.21	35%	15.4	80%
School shark	104.9	3%	0.5	0.06%
Spiny dogfish	3,457	59%	5	0.1%

3.5 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 2011/12 and three years of catch history.

Species code	Common name	2008/09	2009/10	2010/11	2011/12
JAV	Javelinfish	4,892	4,981	4,000	3,298
RAT	Rattails	3,744	3,685	3,193	3,243
OSD	Other sharks and dogfish	602	583	580	656
NCB	Smooth red swimming crab	353	565	586	203
SDO	Silver dory	566	416	194	189
SSI	Silverside	210	196	144	164
RHY	Common roughy	119	146	92	153
BSH	Seal shark	303	243	143	145
SBO	Southern boarfish	16	33	22	109
CRB	Crab (Unspecified)	379	167	81	103
LCH	Long-nosed chimaera	106	130	95	99
SND	Shovel-nosed dogfish	266	149	127	97
FHD	Deepsea flathead	87	96	92	84
WSQ	Warty squid	114	105	79	81
BEL	Bellowsfish	63	102	162	81
DWD	Deepwater dogfish (unspecified)	220	234	98	78
STU	Slender tuna	56	53	108	74
SFI	Starfish	65	64	60	73
OPE	Orange perch	32	19	39	67
SLK	Slickhead	132	127	39	58
CDO	Capro dory	42	52	54	46
CAR	Carpet shark	27	27	68	43
POP	Porcupine fish	27	42	26	40
CON	Conger eel	80	54	63	37
RUD	Rudderfish	61	55	36	32
ETB	Baxter's lantern dogfish	34	44	47	30
MOD	Morids	133	140	19	27
ETL	Lucifer dogfish	18	26	17	25
SRH	Silver roughy	7	64	32	24
MDO	Mirror dory	7	13	9	20
SCG	Scaly gurnard	17	14	13	20
BBE	Banded bellowsfish	53	37	63	20
WIT	Witch	13	15	27	16
JFI	Jellyfish (Unspecified)	0.8	6	30	16
SUN	Sunfish	4	8	15	15
OCT	Octopus	8	4	12	15
DWE	Deepwater eel (Unspecified)	14	9	11	14
HCO	Hairy conger	54	72	71	14
BEN	Scabbardfish	58	34	23	14
GON	Sandfish	15	23	17	14

3.6 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 benthic bycatch for the 2011/12 fishing year from all target Tier 1 species

Phyla	Common name	Total amount recorded (kg wet weight)
Cnidaria	Corals (protected species)	653
	Corals (generic codes)	571
	Soft corals	5
	Anemones	1,835
	Sea pens	73
	Hydroids	44
Porifera	Sponges	15,909

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 4 below shows the cumulative swept area from 1989/90 – 2009/10 relative to the fishable area. Figure 5 shows only the 2009/10 swept area.

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

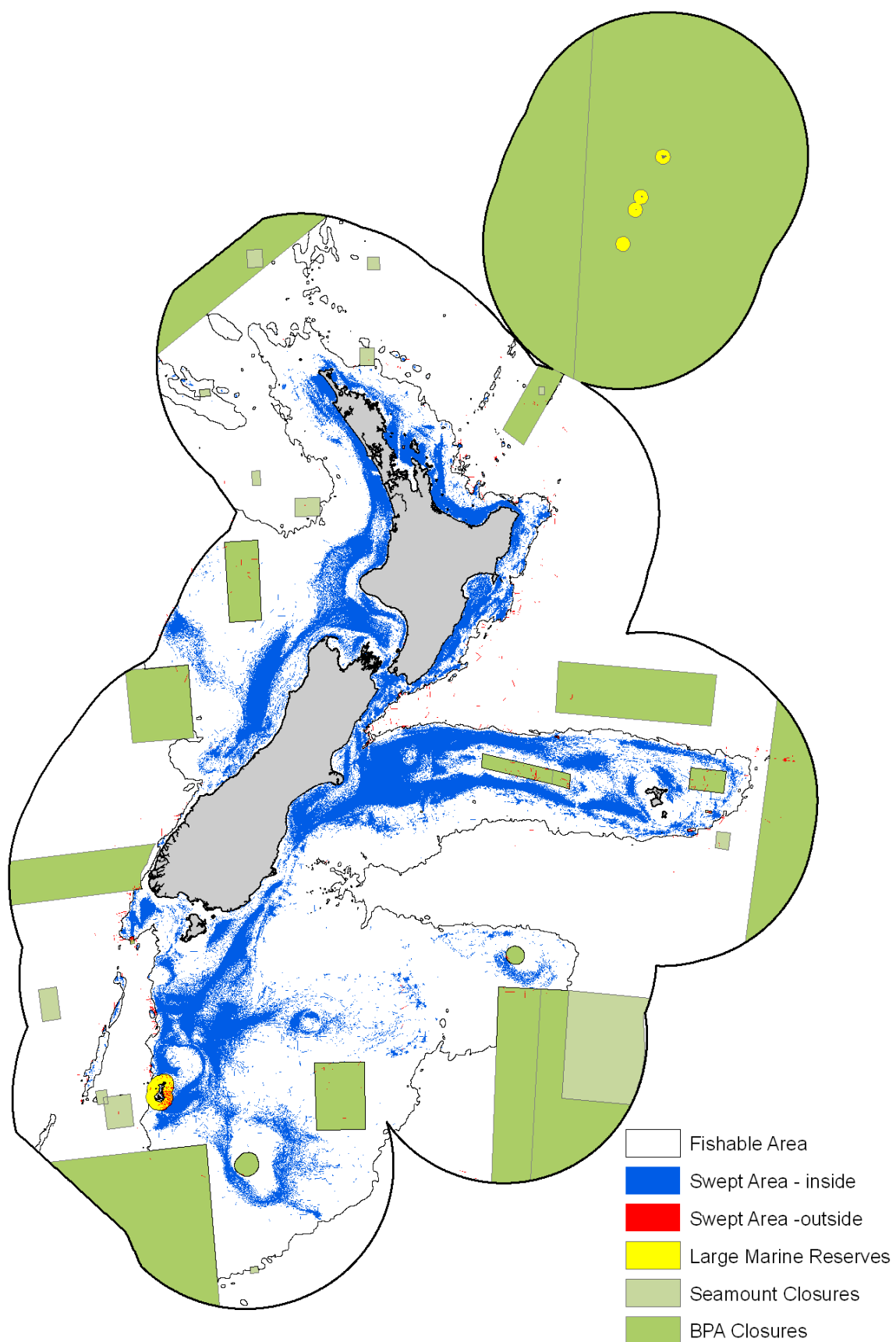


Figure 4: Trawl footprint for all deepwater species in relation to the fishable area for the period 1989/90 to 2009/10.

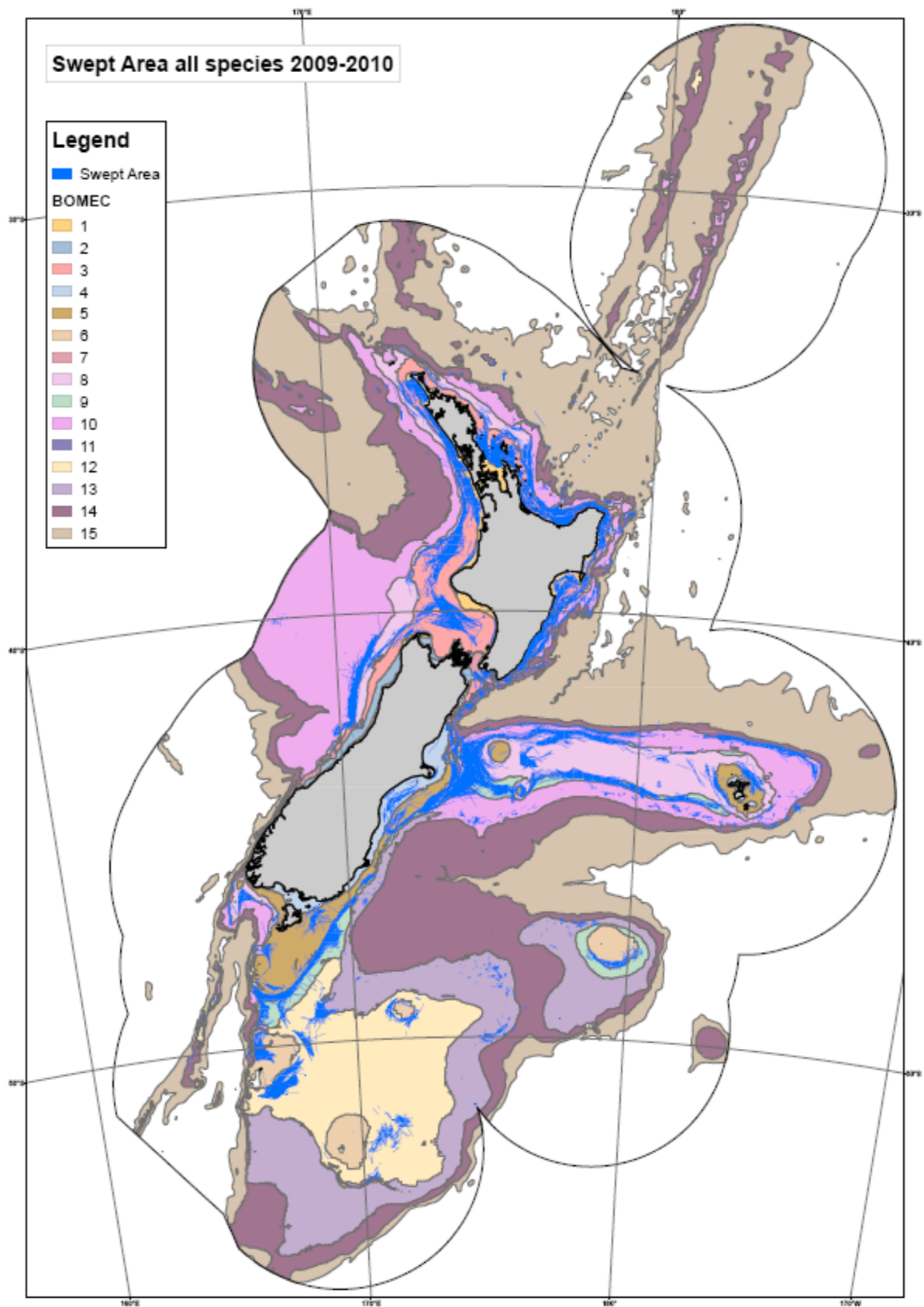
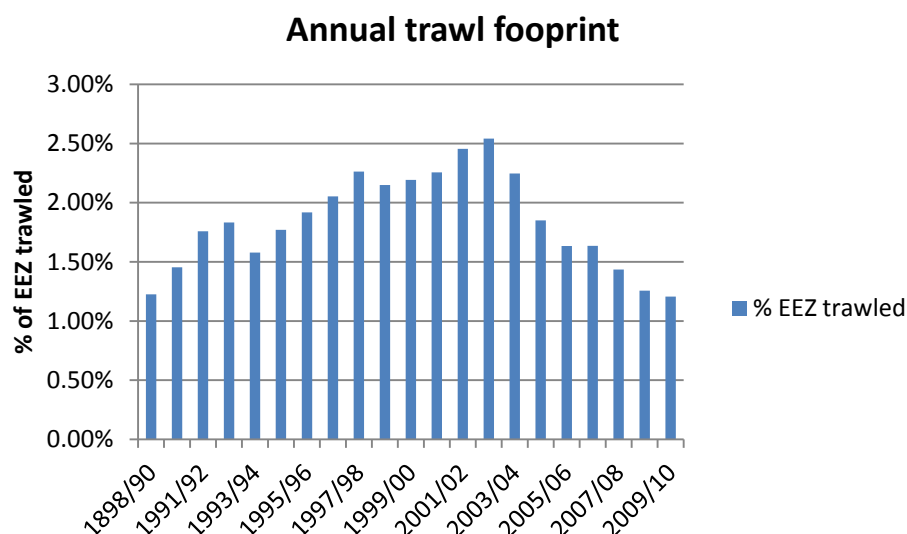


Figure 5: Trawl footprint for all deepwater species in relation to BOMECS areas for the 2009/10 fishing year.

Figure 6: Estimated annual percentage of the EEZ seafloor contacted by trawling each year.



Trawl footprint vs. Benthic Optimised Marine Environmental Classification (BOMECE)¹⁰

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

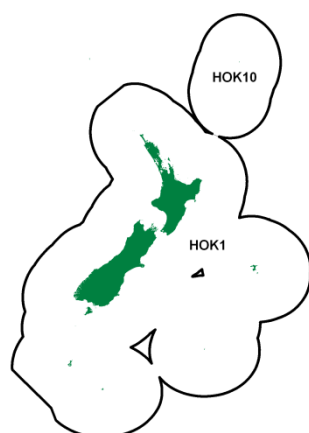
Table 29: The BOMECE classification and swept area for all species, 1989/90 to 2009/10.

BOMECE code	Area (km ²)	Swept Area (km ²)	Swept Area (%)
1	27,557	12,400	45%
2	12,420	3,324	27%
3	89,710	57,840	64%
4	27,268	9,592	35%
5	60,990	26,612	44%
6	38,609	6,691	17%
7	6,342	3,043	48%
8	138,551	68,389	49%
9	52,224	38,238	73%
10	311,361	71,594	23%
11	1,289	14	1.1%
12	198,577	54,337	27%
13	233,825	18,503	8%
14	493,034	11,369	2%
15	935,315	2,431	0.3%

¹⁰ Details regarding the definition of BOMECE 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 (BOMECE) for New Zealand waters. New Zealand Aquatic Environment and Biodiversity Report No. 89. 54p.'

Appendix I: Summaries of 2011/12 Deepwater fisheries

HOK: Hoki (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
HOK1	130,106	131,340	130,000	20	20	1,300
Reference points and current status						
Metric			Status			
Target range		35-50% B ₀				
B _{MSY}	Eastern stock	24% B ₀	B ₂₀₁₂ : 47 % B ₀			
	Western stock	25% B ₀	B ₂₀₁₂ : 41 %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	2011/12 Actual		
HOK1	\$0.45 per kg	\$0.90 per kg	\$1.30 @ >102%	\$2,651		
Environmental indicators and observer coverage*						
Observer coverage		2010/11: 16.6% of tows observed				
Seabirds		2010/11: 53 observed; 305 estimated captures			2011/12: 63 observed captures	
Marine mammals	NZ fur seal	2010/11: 23 observed; 159 estimated captures			2011/12: 31 observed captures	
	NZ sea lion	2010/11: 0 observed: 1 estimated capture			2011/12: 0 observed captures	
Benthic interactions (fishable area trawled)		2009/10: 18,640 (1.32%)		1989/90 to 2009/10: 168,077 km ² (11.94%)		
Economic indicators (calendar year)						
Quota value 2009		\$815m				
Export earnings 2011		\$183.6m				

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

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 2011/12 fishing year, owners of approximately 85% of the hoki quota had entered into the catch limit agreement requested by the Minister. The catch split is administered by FishServe and monitored by DWG.

Table 30 below provides details on the catch limits and catch amounts for the 2011/12 fishing year.

Table 30: Catch limits and actual catch estimates for 2011/12 fishing year.

Catch limits	2011/12 Planned	2011/12 Catch within agreement (from FishServe)	2011/12 Catch estimates for all fishers	Estimated catch scaled up to total landings
Eastern stock	60,000 tonnes	53,033 tonnes	56,573 tonnes	58,371
Western stock	70,000 tonnes	60,662 tonnes	69,525 tonnes	71,735

Although the total catch of the Western stock has exceeded 70,000 tonnes, this may be covered by ACE carried forward from the 2010/11 fishing year. In 2010/11, vessels in the agreement did not fish all of the ACE available for the Western stock (1,482 t remained). Some proportion of that 1,482 tonnes would have been carried over to the 2011/12 fishing year for the vessels in the agreement.

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 fishing year

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	24	16	454	494	7,301
Mernoo Bank	17	14	68	456	1,310
Puysegur	14	2	98	197	1,167
Cook Strait	-	-	-	-	-

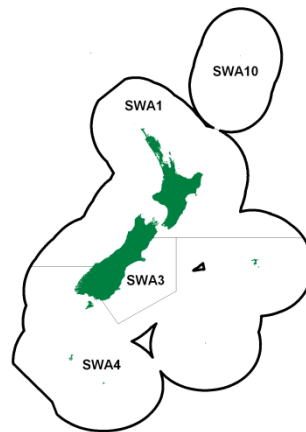
Vessels are required to notify DWG prior to entering and fishing inside an HMA. A summary of performance against the notification requirement is shown in Table 32 below.

Table 32: Summary of performance against requirement to notify DWG before fishing in HMA

HMA	# of vessels that notified DWG every time before fishing in HMA	# of vessels that notified DWG on some occasions before fishing in HMA	# of vessels that never notified DWG before fishing in HMA
Canterbury Banks	1	13	10
Mernoo Bank	4	4	9
Puysegur	6	4	4
Cook Strait	-	-	-

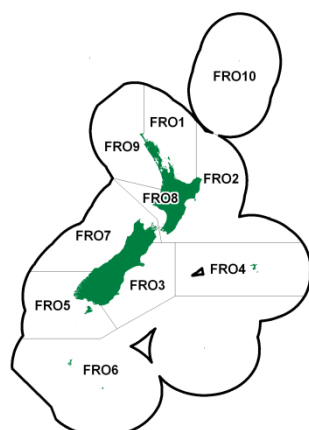
Of the 23 instances of a vessel failing to notify an entry to an HMA during the fishing year, 13 involved only a single tow. All instances were followed up with the vessel operator by DWG.

SWA: Silver warehou (Tier 2)



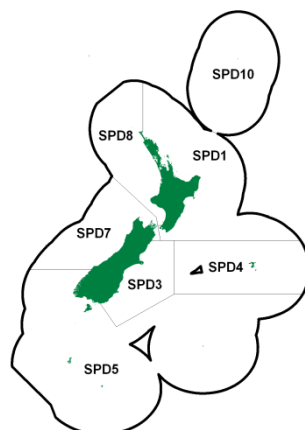
2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
SWA 1	1,029	3,003	3,000	2	1	0
SWA 3	3,318	N/A	3,280	N/A	N/A	N/A
SWA 4	2,783	N/A	4,090	N/A	N/A	N/A
Reference points and current status (as per Harvest Strategy 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		2011/12 Actual	
SWA 1	\$0.50 per kg	\$1.22 per kg	\$1.74 @ 110-130% \$3.00 @ >130%		\$1,592	
SWA 3					\$61,424	
SWA 4					\$0	
Economic indicators (calendar year)						
Quota value 2009			\$83m			
Export earnings 2011			\$19.8m			

FRO: Frostfish (Tier 2)



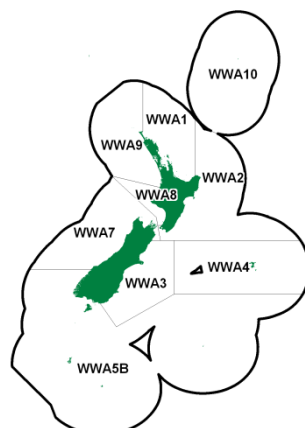
2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
FRO 3	8	176	176	0	0	N/A
FRO 4	14	28	28	0	0	N/A
FRO 5	3	135	135	0	0	N/A
FRO 6	0	11	11	0	0	N/A
FRO 7	500	2,625	2,623	1	1	N/A
FRO 8	893	649	649	0	0	N/A
FRO 9	198	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	Differential	2011/12 Actual	
FRO 3	\$0.17 per kg		\$0.34 per kg	na	0	
FRO 4	\$0.12 per kg		\$0.24 per kg	na	0	
FRO 5	\$0.08 per kg		\$0.15 per kg	na	0	
FRO 6					\$1	
FRO 7					0	
FRO 8					\$31,526	
FRO 9					\$8,687	
Economic indicators (calendar year)						
Quota value 2009		\$2.8m				
Export earnings 2011		No export information specific to frostfish is currently available				

SPD: Spiny dogfish (Tier 2)



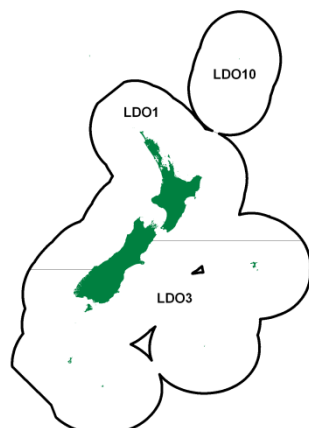
2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
SPD 4	739	1,666	1,626	10	10	20
SPD 5	1,391	3,753	3,700	8	8	37
Reference points and current status (as per Harvest Strategy Standard defaults)						
Target	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	2011/12 Actual	
SPD 4	\$0.05 per kg		\$0.10 per kg	na	\$660	
SPD 5					\$91	
Economic indicators (calendar year)						
Quota value 2009		\$6.1m				
Export earnings 2011		\$1.9m (includes all SPD stocks)				

WWA: White warehou (Tier 2)



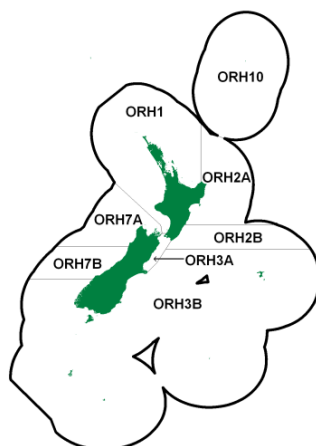
2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
WWA3	204	585	583	1	1	0
WWA4	112	332	330	1	1	0
WWA5B	978	2,621	2,617	2	2	0
WWA7	77	129	127	1	1	0
WWA8	<1	1	1	0	0	0
WWA9	<1	0	0	0	0	0
Reference points and 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	2011/12 Actual	
WWA3	\$0.52 per kg		\$1.03 per kg	\$2.00 @ >110%	\$71	
WWA4					0	
WWA5B					\$2	
WWA7					\$24	
WWA8	\$0.27 per kg		\$0.54 per kg	na	0	
WWA9					0	
Economic indicators (calendar year)						
Quota value 2009		\$16.8m				
Export earnings 2011		No export information specific to white warehou is currently available				

LDO: Lookdown dory (Tier 2)



2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
LDO1	153	168	168	0	0	0
LDO3	229	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	Differential	2011/12 Actual		
LDO1	\$0.21 per kg	\$0.42 per kg	na	\$445		
LDO3	\$0.21 per kg	\$0.42 per kg	na	\$94		
Economic indicators (calendar year)						
Quota value 2009		\$0.9m				
Export earnings 2011		Primarily sold domestically and does not feature in export statistics				

ORH: Orange roughy (Tier 1)



2011/12 Landings, Catch limits, and Allowances (tonnes)						
Stock	2011/12 Catch	TAC	TACC	Recreational	Customary	Other fishing related mortality
ORH 1	1,114	1,470	1,400	0	0	70
ORH 2A	876	919	875	0	0	44
ORH 2B	140	194	185	0	0	9
ORH 3A	428	436	415	0	0	21
ORH 3B	2,765	3,780	3,600	0	0	180
ORH 7A	511	525	500	0	0	25
ORH 7B	0.06	1	1	0	0	0
Reference points and current status						
Target	B _{MSY} is currently used as a default target level	ORH 1				
		ORH 2A North			B ₂₀₀₃ : 24% B ₀	
		ORH 2A South, 2B, 3A (MEC)			B ₂₀₁₁ : 9% or 23% B ₀	
		ORH 3B NW Chatham Rise			B ₂₀₀₆ : 9-11% B ₀	
		ORH 3B E & S Chatham Rise			B ₂₀₁₁ : 15-38%B ₀	
		ORH 3B Puysegur				
		ORH 3B Sub-Antarctic				
		ORH7A			B ₂₀₁₂ : 25%B ₀	
ORH7B			B ₂₀₀₄ : 17% B ₀			
B _{MSY}	30% B ₀					
Soft limit	20%B ₀	ORH 1				
		ORH 2A North			Unlikely (<40%) below	
		ORH 2A, 2B, 3A (MEC)			Likely (>60%) below	
		ORH 3B NW Chatham Rise			Very Likely (>90%) below	
		ORH 3B E & S Chatham Rise			About as Likely as Not (40-60%) below	
		ORH 3B Puysegur				
		ORH 3B Sub-Antarctic				
		ORH7A			Unlikely (<40%) below	
ORH7B			Likely (>60%) below			
Hard limit	10%B ₀	ORH 1				
		ORH 2A North			Very Unlikely (<10%) below	
		ORH 2A, 2B, 3A (MEC)			Unlikely (<40%) below	
		ORH 3B NW Chatham Rise			About As Likely As Not (40-60%) below	
		ORH 3B E & S Chatham Rise			Unlikely (<40%) below	
		ORH 3B Puysegur				
		ORH 3B Sub-Antarctic				
		ORH7A			Very Unlikely (<10%) below	

		ORH7B	Unlikely (<40%) below	
Harvest strategy				
Exploitation rate (F)		4.5% of target biomass		
Deemed value rates and charges				
Stock	Interim	Annual	Differential	2011/12 Actual
ORH 1	\$1.70 per kg	\$3.40 per kg	\$5.00 @ > 110%	0
ORH 2A	\$2.50 per kg	\$5.00 per kg	\$6.00 @ 120-140%	\$70,280
ORH 2B			\$7.00 @ 140-160%	\$460
ORH 3A			\$8.00 @ 160-180%	\$20
			\$9.00 @ 180-200%	
			\$10.00 @ > 200%	
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 3B	\$2.50 per kg	\$5.00 per kg	\$6.25 @ > 110%	0
ORH 7B	\$1.60 per kg	\$3.20 per kg	\$5.00 @ > 110%	0
Environmental indicators and observer coverage ¹¹				
Observer coverage*		2010/11: 28.9% tows observed		
Seabirds		2010/11: 6 observed; 26 estimated captures	2011/12: 1 observed capture	
Marine mammals	NZ fur seal	2010/11: 0 observed; 2 estimated captures	2011/12: 0 observed captures	
	NZ sea lion	2010/11: 0 observed; 0 estimated captures	2011/12: 0 observed captures	
Benthic impacts (fishable area trawled)		2009/10: 2,529 (0.18%)	1989/90 – 2009/10: 36,890 km ² (2.62%)	
Economic indicators (calendar year)				
Quota value 2009		\$282m		
Export earnings 2011		\$36.7m (may include some catch from outside the EEZ)		

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

Catch split

Table 33: Sub-area catch limits and actual 2011/12 catch for orange roughy stocks.

Sub-area catch limits (in tonnes)			
Stock	Sub-area	Agreed catch limit	2011/12 Catch ¹²
ORH 1	Area A	1,000 tonnes combined	586
	Area B		275
	Area C	500	1
	Area D	200 (incl. 30 tonnes bycatch limit in the Mercury-Colville Box)	183 (incl. 10 tonnes in MC Box)
ORH 2A	ORH 2A North	200	200
ORH 2A South, 2B and 3A	MEC	1,500	1,255
ORH 3B	NW Chatham Rise	750 ¹³	65
	E and S Chatham Rise ¹⁴	1,950 (increased to 2,353)	2,338
		250 research allowance	259
	Puysegur	150	0
	Sub-Antarctic	500	103

* Previous catch limits were 200t from Area A and 500t from Area B, this was changed by agreement between MPI and industry to a combined catch limit of 1000t.

¹¹ Capture information is based on all fishing activity targeting both oreo and orange roughy

¹² From industry-reported catch records, monitored by MPI

¹³ Subject to an industry agreement not to target ORH in this area

¹⁴ In June 2012 MPI agreed that 403 tonnes of ACE from the Sub-Antarctic sub-area could be made available for catch on the East and South Rise, bringing the total ACE available for the East and South Rise up to 2,353 tonnes.

Feature limits

Area limits apply to each of the four sub-areas (A-D) in ORH1. Within sub-area D, a separate limit of 30 tonnes applies to the Mercury Colville Box, which is reserved for orange roughy that is taken as bycatch while targeting other species, predominantly cardinalfish. Target fishing for ORH in the Mercury Colville Box should not occur.

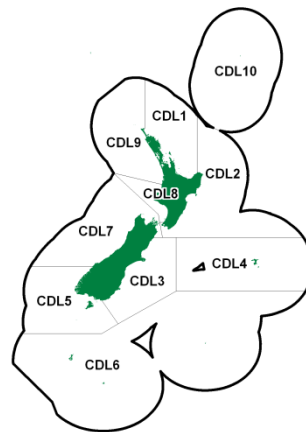
Feature limits apply to discrete features (usually seamounts) within each sub-area. There are over 60 named features distributed throughout the ORH1 QMA. Table 34 provides a summary of performance against feature limits in ORH 1.

Table 34: ORH 1 feature limits and 2011/12 performance.

Sub-area	Yearly catch limit (t)	Sum of estimated catch reported in TCEPRs 2011/12	Yearly feature limit (t)	# of features over limits
A	200*	542	100	0
B	500*	339	150	0
C	500	1	150	0
D (incl. Box)	200	162 (excludes MC Box)	75	1
Mercury-Colville Box	30 (<i>part of the catch limit for sub-area D</i>)	4		
Total (TACC)	1,400	1,049		

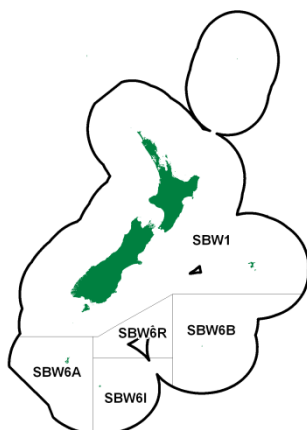
* Combined catch limit for sub-Areas A and B now 1,000 t.

CDL: Black cardinalfish (Tier 2)



2011/12 Landings, Catch limits, and Allowances (in tonnes)						
Stock	2011/12 Catch	TAC	TACC	Recreational	Customary	Other fishing related mortality
CDL 1	148	1,320	1,200	0	0	120
CDL 2	376	460	440	0	0	20
CDL 3	79	196	196	0	0	N/A
CDL 4	44	66	66	0	0	N/A
CDL 5	93	22	22	0	0	N/A
CDL 6	0.5	1	1	0	0	N/A
CDL 7	0.3	39	39	0	0	N/A
CDL 8	0	0	0	0	0	N/A
CDL 9	0.2	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	2011/12 Actual	
CDL 1	\$0.15 per kg		\$0.30 per kg	na	0	
CDL 6					\$55	
CDL 7					0	
CDL 8					0	
CDL 9					0	
CDL 2	\$0.30 per kg		\$0.60 per kg	\$0.69 @> 120%	\$4	
CDL 5	\$0.26 per kg		\$0.52 per kg	na	\$36,244	
CDL 3	\$0.26 per kg		\$0.52 per kg	\$0.60 @ > 120%	0	
CDL 4					0	
Economic indicators (calendar year)						
Quota value 2009			\$4.2m			
Export earnings 2011			\$1.4m			

SBW: Southern blue whiting (Tier 1)



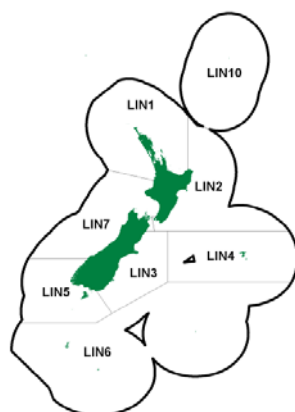
Landings, Catch limits and Allowances as of 1 April 2011 (tonnes)						
Stock	2011/12 Landings ¹⁵	TAC	TACC	Recreational	Customary	Other fishing related mortality
SBW 1	3	8	8	0	0	N/A
SBW 6A	73	1,640	1,640	N/A	N/A	N/A
SBW 6B	6,660	7,000	6,860	0	0	140
SBW 6I	30,922	30,000	29,400	0	0	600
SBW 6R	682	5,500	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	2011/12 Actual		
SBW1	\$0.45 per kg	\$0.90 per kg	\$1.30 @ >102%	\$1,679		
SBW 6A	\$0.41 per kg	\$0.46 per kg @ 100-102%	N/A	\$24		
SBW 6B		\$0.60 per kg @ 102-150%		0		
SBW 6I		\$0.92 per kg @ 150%+		0		
SBW 6R				0		

¹⁵ The 2011-12 SBW fishing year is not complete, however, the fishing season is completed and so provisional numbers are provided for reference only.

Environmental indicators and observer coverage			
Observer coverage*		2010/11: 37.1% tows observed	
Seabirds		2010/11: 16 observed; 22 estimated total captures	2011/12: 4 observed captures
Marine mammals	NZ fur seals	2010/11: 36 observed; 70 estimated captures	2011/12: 23 observed captures
	NZ sea lion	2010/11: 6 observed; 15 estimated captures (Campbell Island only)	2011/12: 0 observed captures
Benthic interactions (fishable area trawled)		2009/10: 1,464 (0.10%)	1989/90 – 2009/10: 18,679 km ² (1.33%)
Economic indicators (calendar year)			
Quota value 2009		\$74.3m	
Export earnings 2011		\$36.3m	

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

LIN: Ling (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
LIN 2	504	N/A	982	N/A	N/A	N/A
LIN 3	1,292	2,060	2,060	0	0	0
LIN 4	2,305	4,200	4,200	0	0	0
LIN 5	3,649	3,633	3,595	1	1	36
LIN 6	2,047	8,590	8,505	0	0	85
LIN 7	2,771	2,501	2,474	1	1	25
Reference points and Current status (as per Harvest Strategy Standard defaults)						
Target	40% B ₀	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 ₂₀₀₈ : 69% 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 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 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						
Stock	Interim	Annual 100-102%	Annual 102-120%	Annual 120%+	2011/12 Actual	
LIN 2	\$1.20 per kg	\$2.38 per kg	\$3.40 per kg	\$6.00 per kg	\$134	
LIN 3					\$1,494	
LIN 4					\$1,081	
LIN 5					\$160,854	
LIN 6					0	
LIN 7					\$1,032,649	

Environmental indicators and observer coverage			
Observer coverage*		Trawl - 2010/11: 9.4% tows observed	Longline – 2010/11: 7.9% hooks observed
Seabirds	Trawl	2010/11: 8 observed; 34 estimated total captures	2011/12: 6 observed captures
	Longline	2010/11: 27 observed; 580 estimated total captures	2011/12: 11 observed captures
Marine mammals	NZ fur seal	2010/11: 2 observed; 19 estimated total captures	2011/12: 1 observed capture
	NZ sea lion	2010/11: 0 observed; 0 estimated total captures	2011/12 0 observed captures
Benthic interactions (fishable area trawled)		2009/10: 568 km ² (0.04%)	1989/90 – 2009/10: 13,720 km ² (0.97%)
Economic indicators (calendar year)			
Quota value 2009		\$246.2m	
Export earnings 2011		\$43.5m	

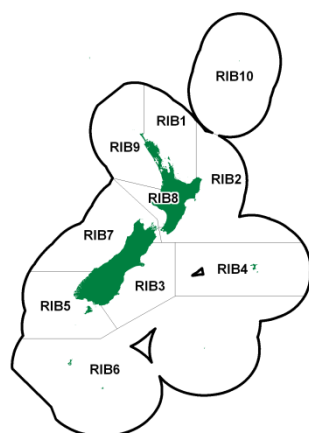
* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

PTO: Patagonian toothfish (Tier 2)



2011/12 Landings, Catch limits and Allowances (tonnes)						
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
PTO 1	34	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% +	2011/12 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 2011		\$1.6m				

RIB: Ribaldo (Tier 2)



2011/12 Landings, Catch limits and Allowances (tonnes)									
Stock	2011/12 Landings	TAC		TACC	Recreational	Customary		Other fishing related mortality	
RIB 3	174	394		394	0	0		0	
RIB 4	304	357		357	0	0		0	
RIB 5	32	52		52	0	0		0	
RIB 6	76	231		231	0	0		0	
RIB 7	177	330		330	0	0		0	
RIB 8	3	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%+	2011/12 Actual
RIB 3	\$0.15	\$0.30		\$0.36	\$0.42	\$0.48	\$0.54	\$0.60	0
RIB 4									0
RIB 5									0
RIB 8									\$759
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					\$2
Economic indicators (calendar year)									
Quota value 2009		\$2.7m							
Export earnings 2011		No export information specific to ribaldo is currently available							

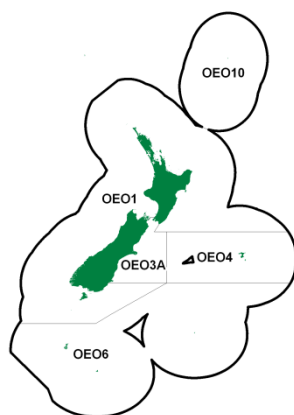
Hake (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)								
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality		
HAK 1	1,948	N/A	3,701	N/A	N/A	N/A		
HAK 4	161	1,818	1,800	0	0	18		
HAK 7	4,459	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%+	2011/12 Actual
HAK 1								\$572
HAK 4	\$0.80	\$1.60	\$1.92	\$2.24	2.56	2.88	3.20	0
HAK 7								\$37
Environmental indicators and observer coverage								
Observer coverage*			2010/11: 26.1% tows observed					
Seabirds			2010/11: 1 observed; 9 estimated total captures				2011/12: 7 observed captures	
Marine mammals	NZ fur seal		2010/11: 1 observed; 10 estimated total captures				2011/12: 1 observed capture	
	NZ sea lion		2010/11: 0 observed; 0 estimated total captures				2011/12: 0 observed captures	
Benthic interactions (fishable area trawled)		2009/10: 1,054 km ² (0.07%)				1989/90 – 2009/10: 17,654 km ² (1.25%)		
Economic indicators (calendar year)								
Quota value 2009			\$135.5m					
Export earnings 2011			\$15.7m					

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

Oreos (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)								
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality		
OEO 1	581	2,500	2,500	0	0	0		
OEO 3A	3,324	3,518	3,350	0	0	168		
OEO 4	6,858	7,000	7,000	0	0	0		
OEO 6	2,325	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 (<10%) to be below					
OEO 6								
Deemed value rates and charges								
Stock	Interim	100-120%	120-140%	140-160%	160-180%	180-200%	200%+	2011/12 Actual
OEO 1								0
OEO 4	\$0.39	\$0.78	\$0.936	\$1.092	\$1.248	\$1.404	\$1.56	\$16,341
OEO 6								0
OEO 3A	\$0.38	\$0.76	\$0.912	\$1.064	\$1.216	\$1.368	\$1.52	\$124

Environmental indicators and observer coverage ¹⁶			
Observer coverage*		2010/11: 28.9% tows observed	
Seabirds		2010/11: 6 observed; 26 estimated total captures	2011/12: 0 observed captures
Marine mammals	NZ fur seal	2010/11: 0 observed; 2 estimated total captures ⁹	2011/12: 0 observed captures
	NZ sea lion	2010/11: 0 observed; 0 estimated total captures	2011/12: 0 observed captures
Benthic interactions (fishable area trawled)		2009/10: 1,105 km ² (0.08%)	1989/90 – 2009/10: 15,739 km ² (1.12%)
Economic indicators (calendar year)			
Quota value 2009		\$74.4m	
Export earnings 2011		\$19.0m	

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

Catch split

OE01

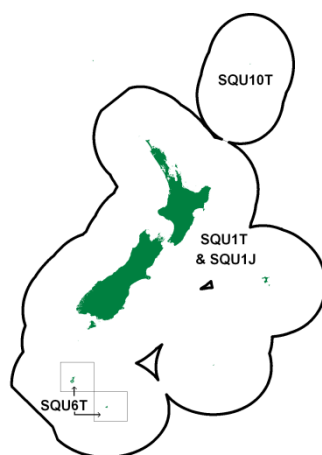
Area	Catch limit for 2011/12 (t)	Sum of estimated catch reported on TCEPRs (t)
Southland (<i>smooth oreo only</i>)	400	122
Southland (<i>black oreo only</i>)	N/A	267
OE01 excluding Southland (<i>all species</i>)	N/A	173
OE01 (<i>all species</i>)	2,500	563

OE03A

Species	Catch limit (t)	Sum of catch reported on CLRs (t)
Black oreo	1,700	1,682
Smooth oreo	1,650	1,632
<i>Totals</i>	<i>3,350</i>	<i>3,328</i>

¹⁶ Capture information is based on all fishing activity targeting both oreo and orange roughy

Squid (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)								
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality		
SQU 1J	1,811	N/A	50,212	N/A	N/A	N/A		
SQU 1T	18,969	44,741	44,741	0	0	0		
SQU 6T	14,427	N/A	32,369	N/A	N/A	N/A		
Reference points and Current status (as per Harvest Strategy Standard defaults)								
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%+	2011/12 Actual
SQU 1J								0
SQU 1T	\$0.44	\$0.88	\$1.056	\$1.232	\$1.408	\$1.584	\$1.76	\$112
SQU 6T								0
Environmental indicators and observer coverage								
Observer coverage*		2010/11: 29.9% tows observed						
Seabirds	2010/11: 137 observed; 604 estimated total captures						2011/12: 107 observed captures	
Marine mammals	NZ fur seals	2010/11: 5 observed; 18 estimated total captures					2011/12: 8 observed captures	
	NZ sea lion	2010/11: 0 observed; 4 estimated total captures					2011/12: 0 observed captures	
Benthic interactions (fishable area trawled)		2009/10: 4,194 km² (0.30%)				1989/90 – 2009/10: 37,020 km² (2.63%)		
Economic indicators (calendar years)								
Quota value 2009		\$116.5m						
Export earnings 2011		\$104.6m						

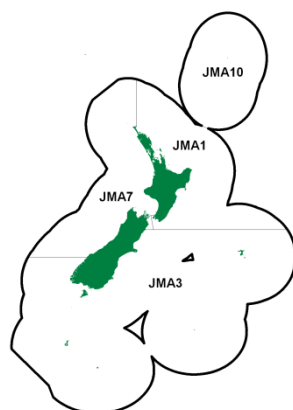
* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

Squid Operational Plan

FRML	Completed tows	Tows reported from TCEPR	% of tows observed	Observed sea lion captures	Estimated captures	% of FRML reached
68	1260	1283*	49%	0	47	55%

*Includes null returns and any tows that may have been aborted before any catches were made

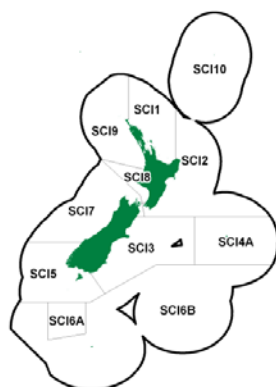
Jack Mackerel (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)								
Stock	2011/12 Landings		TAC	TACC	Recreational		Customary	
JMA 3	3,085		NA	18,000	NA		NA	
JMA 7	28,266		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%+	2011/12 Actual
JMA 3	\$0.08	\$0.09	\$0.108	\$0.126	\$0.144	\$0.162	\$0.18	\$47
JMA 7	\$0.08	\$0.15	\$0.18	\$0.21	\$0.24	\$0.27	\$0.30	\$197
Environmental indicators and observer coverage								
Observer coverage*			2010/11: 31.6% tows observed					
Seabirds			2010/11: 7 observed; 22 estimated total captures				2011/12: 4 observed captures	
Marine mammals	NZ fur seal		2010/11: 0 observed; 3 estimated total captures				2011/12: 4 observed captures	
	Common dolphin		2010/11: 7 observed; 64 estimated total captures				2011/12: 4 observed captures	
Benthic interactions (fishable area trawled)		2009/10: 5,050 km ² (0.36%)				1989/90 – 2009/10: 42,345 km ² (3.01%)		
Economic indicators (calendar year)								
Quota value 2009		\$53.6m (for all stocks)						
Export earnings 2011		\$ 41.7m (for all stocks)						

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

SCI: Scampi (Tier 1)



2011/12 Landings, Catch limits and Allowances (tonnes)								
Stock	2011/12 Landings	TAC	TACC	Recreational	Customary	Other Mortality		
SCI 1	114	126	120	0	0	6		
SCI 2	99	105	100	0	0	5		
SCI 3	278	357	340	0	0	17		
SCI 4A	41	126	120	0	0	6		
SCI 6A	166	321	306	0	0	15		
SCI 7	6	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 ₂₀₁₁ : Likely (> 60%) 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%+	2011/12 Actual
SCI 1	\$25.65	\$51.30	\$61.56	\$71.82	\$82.08	\$92.34	\$102.60	0
SCI 2								0
SCI 3								\$51
SCI 4A								0
SCI 6A								0
SCI 7								0
Environmental indicators and observer coverage								
Observer coverage*		2010/11: 12.1% tows observed						
Seabirds		2010/11: 86 observed; 307 estimated total captures				2011/12: 12 observed captures		
Marine mammals	NZ fur seal	2010/11: 0 observed; 4 estimated total captures				2011/12: 1 observed capture		
	NZ sea lion	2010/11: 0 observed; 9 estimated total captures				2011/12: 0 observed captures		
Benthic interactions (fishable area trawled)		2009/10: 4,030 km ² (0.29%)				1989/90 – 2009/10: 18,671 km ² (1.33%)		
Economic Indicators (calendar year)								
Quota value 2009			\$132.3m					
Export earnings 2011			\$22.4m					
Port Price 2011			\$11.08 M					

* 2011/12 observer coverage not yet available, observed captures are not directly comparable across years.

Appendix II: Results of 2011 Sustainability rounds

TAC reviews

Species	Stock	Pre-1 Oct 2011 TAC	Pre-1 Oct 2011 TACC	1 Oct 2011 TAC	1 Oct 2011 TACC
Hoki	HOK1	121,240	120,000	131,340	130,000
Black cardinalfish	CDL2	1,120	1,020	460	440
Orange roughy	ORH3B		4,840	4,610	3,780
	ORH MEC	ORH2A	1,158	1,100	919
		ORH2B	194	185	147
Scampi	SCI2	210	200	105	100
		Pre-1 April 2011 TAC	Pre-1 April 2011 TACC	1 April 2011 TAC	1 April 2011 TACC
Southern blue whiting	SBW6B	15,000	14,700	7,000	6,860
	SBW6I	23,460	23,000	30,000	29,400

Deemed value changes

	Black cardinalfish (CDL2)		Rubyfish (RBY1)		Sea perch (SPE7)	
	Pre-Oct 2011	Oct 2011	Pre-Oct 2011	Oct 2011	Pre-Oct 2011	Oct 2011
Interim	\$0.26	\$0.30	\$0.07	\$0.14	\$0.08	\$0.13
100-120%	\$0.52	\$0.60	\$0.14	\$0.28	\$0.15	\$0.25
120-140%	\$0.60	\$0.69		\$0.34	\$0.18	\$0.30
140-160%				\$0.39	\$0.21	\$0.35
160-180%				\$0.45	\$0.24	\$0.40
180-200%				\$0.50	\$0.27	\$0.45
200%+				\$0.56	\$0.30	\$0.50

	Alfonsino (BYX2)		
	Pre-Oct 2011		Oct 2011
Interim	\$0.83	Interim	\$1.00
100-120%	\$1.66	100-110%	\$2.00
120-140%	\$1.992	110-130%	\$2.40
140-160%	\$2.324	130-150%	\$2.80
160-180%	\$2.656	150-170%	\$3.20
180-200%	\$2.988	170-190%	\$3.60
200%+	\$3.32	190%+	\$4.00

	Patagonian toothfish (PTO1)	
	Pre-Oct 2011	Oct 2011
Interim	\$11.25	\$13.50
100-110%	\$12.50	\$15.00
110%+	\$20.00	\$25.00

Appendix III: Landings of all Tier 3 species from core deepwater fleet 2008/09 to 2011/12 (in kgs)

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
JAV	Javelinfish	<i>Lepidorhynchus denticulatus</i>	4891635	4981178	3999681	3297768
RAT	Rattails	<i>Macrouridae</i> spp.	3744401	3685041	3192849	3243432
OSD	Other sharks and dogfish	Order Selachii	601624	582778	580440	656006
NCB	Smooth red swimming crab	<i>Nectocarcinus bennetti</i>	353185	564711	586358	203438
SDO	Silver dory	<i>Cyttus novaezealandiae</i>	565682	416054	194102	189183
BSH	Seal shark	<i>Dalatias licha</i>	302551	242712	142558	145298
CRB	Crab (unspecified)	N/A	378818	167195	81479	103281
SSI	Silverside	<i>Argentina elongate</i>	209661	195743	144449	164095
SND	Shovelnose dogfish	<i>Deania calcea</i>	266051	149001	126803	97137
DWD	Deepwater dogfish	N/A	220288	233628	97601	78218
RHY	Common roughy	<i>Paratrachichthys trailli</i>	118612	145921	91762	153240
LCH	Long-nosed chimaera	<i>Harriotta raleighana</i>	106392	130480	95437	99080
BEL	Bellowsfish	<i>Centriscoops</i> spp.	63330	102495	161999	80812
WSQ	Warty squid	<i>Onykia</i> spp.	113592	105452	78926	81447
FHD	Deepsea flathead	<i>Hoplichthys haswelli</i>	87372	96217	92243	84391
SLK	Slickhead	<i>Alepocephalidae</i> spp.	132213	126536	39159	57635
MOD	Morids	<i>Moridae</i> spp.	132610	139775	19442	27109
STU	Slender tuna	<i>Allothunnus fallai</i>	56497	52554	108476	74076
SFI	Starfish	N/A	64824	64000	60344	72810
CON	Conger eel	Family Congridae	79528	53773	62687	37301
HCO	Hairy conger	<i>Bassanago hirsutus</i>	53633	72009	70532	13815
CDO	Capri dory	<i>Capromimus abbreviatus</i>	41787	52053	53762	45930
RUD	Rudderfish	<i>Centrolophus niger</i>	60698	54541	35536	32094
SBO	Southern boarfish	<i>Pseudopentaceros richardsoni</i>	16315	32762	21643	109319
BCD	Black cod	<i>Paranotothenia magellanica</i>	136558	9069	22795	10858
BBE	Banded bellowsfish	<i>Centriscoops humerosus</i>	53364	36822	63224	19663
CAR	Carpet shark	<i>Cephaloscyllium isabellum</i>	27423	27094	68184	42999
OPE	Orange perch	<i>Lepidoperca aurantia</i>	32437	19161	39133	66665
ETB	Baxter's lantern dogfish	<i>Etmopterus baxteri</i>	34464	43909	47157	30218
POP	Porcupine fish	<i>Tragulichthys jaculiferus</i>	26716	42371	26232	40368
BEN	Scabbardfish	<i>Benthodesmus</i> spp.	57553	34129	23328	13773
TOA	Toadfish	<i>Neophrynichthys</i> spp.	39705	33795	29866	23000
SRH	Silver roughy	<i>Hoplostethus mediterraneus</i>	7130	63605	31531	23734
BEE	Basketwork eel	<i>Diastobranchus capensis</i>	51518	36027	18231	11808
MCA	Ridge scaled rattail	<i>Macrourus carinatus</i>	30422	38503	26273	
ETL	Lucifer dogfish	<i>Etmopterus lucifer</i>	17652	25718	17393	24735
PIG	Pigfish	<i>Congiopodus leucopaecilus</i>	10261	8646	46389	13269
WIT	Witch	<i>Arnoglossus scapha</i>	13364	15303	26942	16394
GON	Sandfish	<i>Gonorynchus</i> spp.	15167	23401	17213	13739

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
CSQ	Leafscale gulper shark	<i>Centrophorus squamosus</i>	22429	19780	13756	8968
SCG	Scaly gurnard	<i>Lepidotrigla brachyoptera</i>	16701	13772	13297	19752
HJO	Johnson's cod	<i>Halargyreus johnsonii</i>	25171	13997	14825	9168
CBE	Crested bellowsfish	<i>Notopogon lilliei</i>	40050	4768	2865	11290
NSD	Northern spiny dogfish	<i>Squalus griffin</i>	8631	16796	21962	9755
JFI	Jellyfish (unspecified)	N/A	752	5742	29594	16390
HSI	Jack-knife prawn	<i>Haliporoides sibogae</i>	8744	19267	12761	8888
MDO	Mirror dory	<i>Zenopsis nebulosa</i>	7209	12658	9090	20207
DWE	Deepwater eel (unspecified)	N/A	14404	9177	11281	14119
ERA	Electric ray	<i>Torpedo fairchildi</i>	14174	10127	12225	12360
DSK	Deepwater spiny skate	<i>Amblyraja hyperborean</i>	17363	10811	12685	7637
THR	Thresher shark	<i>Alopias vulpinus</i>	8622	9017	15166	13593
HAG	Hagfish	<i>Eptatretus cirrhatous</i>	14943	14014	13513	2469
SUN	Sunfish	<i>Mola mola</i>	4376	8072	15147	15431
LAN	Lanternfish	<i>Myctophidae</i> spp.	18463	11026	8491	2730
OCT	Octopus	<i>Pinnoctopus cordiformis</i>	7889	3786	12480	14726
BSK	Basking shark	<i>Cetorhinus maximus</i>	9800	19200	7000	
ANT	Anemones	N/A	5478	7959	11669	10590
VCO	Violet cod	<i>Antimora rostrata</i>	10666	4300	3268	13475
BOA	Sowfish	<i>Paristioporus labiosus</i>	6023	16540	7597	68
DWO	Deepwater octopus	<i>Graneledone</i> spp.	6292	3823	13513	6200
SBK	Spineback	<i>Notacanthus seipinis</i>	11258	6479	7592	3679
PDG	Prickly dogfish	<i>Oxynotus brunensis</i>	9251	5612	7249	4030
SSH	Slender smooth-hound	<i>Gollum attenuates</i>	5277	5018	8792	6992
DEA	Dealfish	<i>Trachipterus trachipterus</i>	9570	7524	2473	5110
MIQ	Warty squid	<i>Onykia ingens</i>	7289	7142	4694	2810
CHG	Purple chimaera	<i>Chimaera lignaria</i>	13455	1218	6356	688
OPA	Opalfish	<i>Hemerocoetes</i> spp.	2641	7783	5494	3638
BSL	Black slickhead	<i>Xenodermichthys</i> spp.	9892	6112	2	376
PAH	Opah	<i>Lampris immaculatus</i>	2572	3257	3390	6878
EPR	Cardinal fish, robust	<i>Epigonus robustus</i>	4167	3869	5253	2356
CHI	Chimaera spp.	<i>Chimaeras</i> pp.	2011	2033	10616	599
URO	Sea urchin other (except SUR-Kina)	N/A	1105	2022	5568	4784
SQX	Squid (unspecified)	N/A	6428	2530	2156	2054
ALB	Albacore tuna	<i>Thunnus alalunga</i>	8215	251	2238	2451
VSQ	Violet squid	<i>Histioteuthis</i> spp.	4245	3870	3351	1531
RAY	Rays	N/A	4526	4122	725	3302
NCA	Hairy red swimming crab	<i>Netocarcinus antarcticus</i>	11804	476	163	11
TSQ	Todarodes filippovae	<i>Todarodes filippovae</i>	3482	4377	2390	1978
SNI	Snipefish	<i>Macroramphosus scolopax</i>	9090	1543	266	431
EPL	Cardinal fish, bigeye	<i>Epigonus lenimen</i>	2796	1538	4413	2114
BER	Electric ray	<i>Typhlonarke</i> spp.	4638	1351	2757	1776

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
APR	Cat shark	<i>Apristurus</i> spp.	8034	1449	241	570
JGU	Japanese gurnard	<i>Pterygotrigla picta</i>	603	551	5226	3901
RSQ	Ommastrephes bartrami	<i>Ommastrephes bartrami</i>	3179	2004	4317	755
WHX	Unicorn rattail	<i>Trachyrincus</i> sp.	2176	772	2754	3395
PSK	Longnosed deepsea skate	<i>Bathyraja shuntovi</i>	3160	4795	360	575
YCO	Yellow cod	<i>Parapercis gilliesi</i>	747	2298	3070	2588
PRA	Prawn (unspecified)	N/A	90	2741	3412	1885
SPZ	Spotted stargazer	<i>Genyagnus monopterygius</i>	4094	896	1612	1512
VOL	Volute	Family Volutidae	5255	125	587	1830
HYD	Hydrolagus spp.	<i>Hydrolagus</i> spp.	7767	14		11
GSQ	Giant squid	<i>Architeuthis</i> sp.	1078	990	2233	3184
OPI	Umbrella octopus	<i>Opisthoteuthis</i> spp.	484	1091	2579	3176
COD	Cod (unspecified)	N/A	1942	3349	1481	207
HEX	Sixgill shark	<i>Hexanchus griseus</i>	1239	1423	2158	1916
HYP	Pointynose blue ghost shark	<i>Hydrolagus trolli</i>		149	231	6351
PLS	Plunket's shark	<i>Centroscyrnus plunketi</i>		1323	5071	169
GRV	Macrourus spp.	<i>Macrourus</i> spp.				6516
RDO	Rosy dory	<i>Cyttopsis rosea</i>	249	2944	2267	1033
YBO	Yellow boarfish	<i>Pentaceros decacanthus</i>	509	1249	3077	1570
BAT	Slickheads	<i>Rouleina</i> spp.		2295	3560	21
UNI	Unidentified fish	N/A	729	801	2590	1669
EGR	Eagle ray	<i>Myliobatis tenuicaudatus</i>	1705	1352	967	1629
BRZ	Brown stargazer	<i>Xenopcephalus armatus</i>	1176	1424	1003	1797
PHO	Lighthouse fish	<i>Photichthys argenteus</i>	2351	991	621	979
UNX	All and any unidentified species	N/A	222	423	2295	1766
OSK	Skate, other	Family Rajidae	1502	1607	929	605
SCM	Roughskin dogfish	<i>Scymnodon macracanthus</i>	657	1810	1635	146
CYP	Longnose velvet dogfish	<i>Centroscyrnus crepidater</i>	1262	2219	531	210
WGR	Macrourus whitsoni	<i>Macrourus whitsoni</i>				4121
SKJ	Skipjack tuna	<i>Katsuwonus pelamis</i>	3578	388	8	3
ICX	Icefishes	Family Channichthyidae				3636
WRA	Whiptail ray	<i>Dasyatis thetidis</i>	1484	449	455	1114
SBR	Southern bastard cod	<i>Pseudophycis barbata</i>	697	1135	896	642
LSK	Long-tailed skate	<i>Arhynchobatis asperimus</i>	154	1598	973	588
STR	Stingray (unspecified)	N/A	707	227	1010	778
HEP	Sharpnose sevengill shark	<i>Heptanchias perlo</i>	90	325	476	1762
SSC	Giant masking crab	<i>Leptomithrax australis</i>	2250		245	
CYO	Smmoth skin dogfish	<i>Centroscyrnus owstoni</i>	178	210	1415	654
MAN	Finless flounder	<i>Neoachirosetta milfordi</i>	750	644	484	454
OFH	Oilfish	<i>Ruvettus pretiosus</i>	614	698	442	534
BRA	Short-tailed black ray	<i>Dasyatis brevicaudata</i>	2260			

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
SPI	Spider crabs (unspecified)	N/A	371	308	1034	416
TAM	Tam O'Shanter urchins	N/A	61	514	369	971
GRC	Grenadier cod	<i>Tripteryphycis gilchristi</i>	1776		3	87
SEV	Broadnose sevengill shark	<i>Notorynchus cepedianus</i>	243	473	487	656
PLZ	Scaly stargazer	<i>Pleuroscopus pseudodorsalis</i>	141	517	540	560
NOT	Antarctic rock cods	<i>Paranotothenia</i> spp.	1524			186
TRA	Roughies	Family Trachichthyidae			1697	
RPE	Red perch	Unspecified	1663			3
EEL	Eels, Marine (unspecified)	N/A	110	126	803	615
CSH	Cat shark	Other than <i>Apristurus</i> spp.	300	616	449	174
SCD	Smallscaled cod	<i>Paranotothenia microlepidota</i>	161	435	139	789
SMC	Small-headed cod	<i>Lepidion microcephalus</i>	477	142	472	405
LEG	Giant lepidion	<i>Lepidion schmidtii</i> , <i>L. inosimae</i>	60	203	46	1184
BWH	Bronze whaler shark	<i>Carcharhinus brachyurus</i>	58	247	660	425
EUC	Eucla cod	<i>Euclichthys polynemus</i>	609	27	157	400
BTU	Butterfly tuna	<i>Gasterochisma melampus</i>	1192			
HTH	Sea cucumber (other than <i>Stichopus mollis</i>)	Holothuroidea (Class)	30	289	285	532
WHE	Whelks	N/A	290	177	388	259
WOE	Warty oreo	<i>Allocyttus verrucosus</i>				1104
BSP	Big-scale pomfret	<i>Taractichthys longipinnis</i>	111	88	258	555
SLL	Slipper lobsters	<i>Scyllaridae</i> spp.	785	4	99	112
SOP	Pacific sleeper shark	<i>Somniosus pacificus</i>	1000			
ONG	Sponges	Porifera	887			6
FMA	Fusitriton magellanicus	<i>Fusitriton magellanicus</i>	378	153	270	70
CYL	Portuguese dogfish	<i>Centroscymnus coelolepis</i>	301		555	
MOB	Blunthead lightfish	<i>Margrethia obtusirostra</i>	143	82	60	546
SOS	Sockeye salmon	<i>Oncorhynchus nerka</i>			807	
CHP	Chimaera, purple	<i>Chimaera</i> sp.	215	97	374	95
LHO	Omega prawn	<i>Lipkius holthuisi</i>	522	128	42	10
BPE	Butterfly perch	<i>Caesioperca Lepidoptera</i>	227	142	183	150
MOR	Moray eel	<i>Muraenidae</i> spp.	171	63	382	63
BOT	Lefteye flounders	<i>Bothidae</i> spp.	47		407	200
WPS	White pointer shark	<i>Carcharodon carcharias</i>	650			
SNE	Snubnosed eel	<i>Simenchelys parasitica</i>	629		20	
GUL	Gulper eel	<i>Eurypharynx pelecyanoides</i>	40	120	365	62
BAC	Codheaded rattail	<i>Bathygadus cottoides</i>		1	319	207
HAT	Hatchetfish	<i>Sternoptychidae</i> sp.				524
CUC	Cucumber fish	<i>Chlorophthalmus nigripinnis</i>	277	9	20	218
CHX	Pink frogmouth	<i>Chaunax pictus</i>	105	365	15	36
AGR	Ribbonfish	<i>Agrostichthys parkeri</i>	176	98	131	112
MRL	Moray cods	<i>Muraenolepididae</i> sp.				512

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
ROC	Rock cod	<i>Lotella rhacina</i>				485
SDF	Spotted flounder	<i>Azygopus pinnifasciatus</i>	1		270	212
WHR	White rattail	<i>Trachyrincus longirostris</i>	349	50	80	
API	Alert pigfish	<i>Alertichthys blacki</i>	84	99	155	108
CUB	Cubeheads	<i>Cubiceps</i> spp.	283	1		146
SDE	Seadevil	<i>Cryptosaras couesi</i>	10	398		
AER	Aeneator recens	<i>Aeneator recens</i>	400			5
SAL	Salps	N/A		74	12	314
DCS	Dawson's cat shark	<i>Halaelurus dawsoni</i>	335	61		
LFB	Long-finned boarfish	<i>Zanclistius elevatus</i>		382	3	3
RAG	Ragfish	<i>Icichthys australis</i>	23	339	11	12
RMU	Red mullet	<i>Upeneichthys lineatus</i>	74	16	212	52
OAR	Oarfish	<i>Regalecus glesne</i>	60	88	118	67
MNI	Krill, squat lobsters	<i>Munida</i> spp.	7	3	265	
SKJ	Skipjack tuna	<i>Katsuwonus pelamis</i>			264	6
LEP	Escolar	<i>Lepidocybium flavobrunneum</i>	258			12
TRS	Cape scorpionfish	<i>Trachyscorpia capensis</i>	43	27	97	93
GPF	Girdled wrasse	<i>Notolabrus cinctus</i>	7	18	224	
PSP	Scissortail	<i>Psenes pellucidus</i>		135		113
FTU	Frigate tuna	<i>Auxis thazard</i>	27		49	161
SSM	Smallscaled brown slickhead	<i>Alepocephalus antipodanus</i>		158		63
WSE	Wrasses	N/A	3	71	78	64
SYN	Cutthroat eels (except Basketwork eels)	N/A	128	87		
SEE	Silver conger	<i>Gnathopis habenatus</i>	40	2	97	72
SCO	Swollenhead conger	<i>Bassanago bulbiceps</i>	17	14	1	178
EBI	Pygmy shark	<i>Euprotomicrus bispinatus</i>				161
PAG	Pagurid	N/A		1	153	6
EPD	Cardinal fish, white	<i>Epigonus denticulatus</i>		156		
WLP	Wavy line perch	<i>Lepidoperca tasmanica</i>				150
NTU	Northern bluefin tuna	<i>Thunnus thynnus</i>	139			
BPF	Banded wrasse	<i>Notolabrus fucicola</i>		1	124	14
BSQ	Broad squid	<i>Sepioteuthis australis</i>	27	16	71	16
BEA	Eaton's skate	<i>Bathyraja eatoni</i>				129
BRC	Northern bastard cod	<i>Pseudophycis breviuscula</i>	11			118
EPO	Limp eelpout	<i>Melanostigma gelatinosum</i>	121			
PAL	Barracudinas	N/A		83	32	3
SLS	Slender sole	<i>Peltorhamphus tenuis</i>	53	65		
NOC	Notocanthus chemnitzi	<i>Notocanthus chemnitzi</i>	114			
BBR	Bronze bream	<i>Xenobrama microlepis</i>				110
SOL	Sole (unspecified)	N/A	104			6
SPP	Splendid perch	<i>Callanthias allporti</i>				103
TOP	Pale toadfish	<i>Neophrynichthys angustus</i>		93		2

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
ECO	Prickly shark	<i>Echinorhinus cookie</i>	53	20	17	
SPK	Spikefish	<i>Macrorhamphosodes uradoi</i>			88	
BCA	Barracudina	<i>Magnisudis prionosa</i>	9	35	11	17
GFL	Greenback flounder	<i>Rhombosolea tapirina</i>				68
TOD	Dark toadfish	<i>Neophrynichthys latus</i>	9	6		50
TIN	Tinselfish	<i>Xenolepidichthys dalgleishi</i>	7	5	45	6
SRR	Amblyraja Georgiana	<i>Amblyraja georgiana</i>				57
CAX	White brotula	<i>Cataetyx</i> sp.		55		
KAN	Krefflichthys anderssoni	<i>Krefflichthys anderssoni</i>				45
CFA	Banded rattail	<i>Coelorinchus rasciatus</i>				44
DSP	Deepsea pigfish	<i>Congiopodus coriaceus</i>			42	2
SPF	Scarlet wrasse	<i>Pseudolabrus miles</i>			40	2
INV	Invertebrate (unknown)	N/A	24			15
FLO	Flounder (unspecified)	N/A			37	
TOH	Toheroa	<i>Paphies ventricosa</i>			37	
CHA	Viper fish	<i>Chauliodus sloani</i>	31			
STG	Stargazer (unspecified)	N/A	21	8		1
CEN	Deepsea sharks	<i>Centroscyrnus</i> spp.	30			
CTU	Cook's turban shell	<i>Cookia sulcata</i>				27
DIS	Discfish	<i>Diretmus argenteus</i>	5	1	10	11
RRC	Red scorpion fish	<i>Scorpaena cardinalis</i> , <i>S. papillosus</i>	2	22		3
GPA	Parasol urchin	<i>Goniocidaris parasol</i>		27		
FRS	Frill shark	<i>Chlamydoselachus anguineus</i>		24		2
GSA	Giant sawbelly	<i>Hoplostethus gigas</i>			4	20
SPT	Purple-heart urchin	<i>Spatangus multispinus</i>		7		17
PGR	Plunderfish	<i>Pogonophryne permitini</i>				23
GAS	Gastropods	N/A				22
COL	Olivers rattail	<i>Coelorinchus oliverianus</i>			20	
BAN	Borostomias antarcticus	<i>Borostomias antarcticus</i>				17
SFN	Spinyfin	<i>Diretmichthys parini</i>		3		14
RCH	Widenosed chimaera	<i>Rhinochimaera pacifica</i>			17	
AME	Sculpin	<i>Antipodocottus megalops</i>				17
GSE	Snake mackerel	<i>Gempylus serpens</i>		16		
TAS	Rough pomfret	<i>Taractes asper</i>			10	5
ETM	Etmopterus spp.	<i>Etmopterus</i> spp.			15	
MST	Scaleless black dragonfishes	N/A	12	1		
EPT	Deepsea cardinalfish	<i>Epigonus telescopus</i>				12
PMA	Pink maomao	<i>Caprodon longimanus</i>				12
DHO	Deepsea urchin	<i>Dermechinus horridus</i>			12	
LLC	Long-legged masking crab	<i>Leptomithrax longipes</i>	9	2		
MUR	Moray cod	<i>Muraenolepis marmoratus</i>		11		

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12
SAM	Quinnat salmon	<i>Oncorhynchus tshawytscha</i>		10		
SHR	Sea hare	N/A		4	6	
GVO	Golden volute	<i>Provocator mirabilis</i>		6	2	
ART	Brine shrimp	<i>Artemia salina</i>			6	
BRE	Codlet	<i>Bregmaceros maclellandi</i>				4
BAF	Black anglerfish	N/A	3			1
BCR	Blue cusk eel	<i>Brotulotaenia crassa</i>	3	1		
ASR	Sea stars	N/A	2			
ABR	Shortsnouted lancetfish	<i>Alepisaurus brevirostris</i>				1
BYD	Longfinned beryx	<i>Beryx decadactylus</i>	1			
CAM	Sabre prawn	<i>Campylonotus rathbunae</i>	1			

Appendix IV: Cost recovery levies breakdown for deepwater stocks 2011/12

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
BAR4	12,715	5,784	0	0	1,076	1,851	0	9	-689	20,746
BAR5	28,232	12,844	2,747	0	2,655	4,109	0	23	-12,632	37,978
BAR7	51,879	23,602	5,047	0	5,809	11,893	0	260	-18,892	79,598
BYX1	7,483	3,404	0	0	199	15,887	0	0	-447	26,526
BYX10	249	113	0	0		27	0	0	-21	369
BYX2	39,282	17,871	6,409	51,286	1,045	15,712	0	0	-62,883	68,722
BYX3	25,204	11,466	1,534	12,326	670	47,980	0	0	-1,291	97,889
BYX7	1,608	732	0	0	43	174	0	0	-130	2,426
BYX8	499	227	0	0	13	54	0	0	-30	763
CDL1	11,533	5,247	0	0	307	1,249	0	0	3,740	22,075
CDL10	0	0	0	0		0	0	0	0	0
CDL2	11,345	5,161	1,851	14,812	302	40,939	0	0	-253	74,156
CDL3	2,053	934	0	0	55	222	0	0	611	3,875
CDL4	599	272	0	0	16	65	0	0	201	1,153
CDL5	242	110	0	0	6	26	0	0	67	452
CDL6	11	5	0	0	0	1	0	0	3	21
CDL7	430	195	0	0	11	47	0	0	122	804
CDL9	44	20	0	0	1	5	0	0	12	83
CHC1	392	178	0	0			0	0	-28	543
CHC10	0	0	0	0			0	0	0	0
CHC2	392	178	0	0			0	0	-28	543
CHC3	157	71	0	0			0	0	-11	217

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
CHC4	157	71	0	0			0	0	-11	217
CHC5	157	71	0	0			0	0	-11	217
CHC6	157	71	0	0			0	0	-11	217
CHC7	157	71	0	0			0	0	-11	217
CHC8	157	71	0	0			0	0	-11	217
CHC9	157	71	0	0			0	0	-11	217
EMA3	2,148	977	139	952	98	183	0	11	-129	4,379
EMA7	18,449	8,393	1,199	4,956	1,014	61,958	0	97	705	96,771
FRO3	2,015	916	0	0	54	172	0	0	-73	3,083
FRO4	118	54	0	0	3	10	0	0	-8	176
FRO5	1,545	703	0	0	41	132	0	0	-36	2,385
FRO6	126	57	0	0	3	11	0	0	-3	194
FRO7	25,775	11,726	0	0	686	17,461	0	0	-779	54,869
FRO8	7,429	3,380	0	0	198	15,910	0	0	-192	26,723
FRO9	1,580	719	0	0	42	15,194	0	0	-41	17,493
GSC1	39	18	0	0			0	0	-3	54
GSC10	0	0	0	0			0	0	0	0
GSC3	549	250	0	0			0	0	-39	760
GSC5	745	339	0	0			0	0	-53	1,031
GSC6A	5,801	2,639	0	0			0	0	-409	8,032
GSC6B	9,290	4,226	0	0			0	0	-655	12,861
GSH4	999	454	0	0	46	54	0	15	-117	1,451
GSH5	518	236	50	0	14	28	0	0	-34	811
GSH6	482	219	0	0	13	26	0	0	-31	710
GSP1	6,209	2,825	0	0	283	23,799	0	51	-425	32,741

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
GSP5	2,451	1,115	0	0	65	23,474	0	-1	-168	26,937
GSP7	950	432	0	0	43	81	0	8	-65	1,449
HAK1	56,752	25,819	4,517	45,813	3,789	17,194	0	467	-21,881	132,467
HAK10	128	58	0	0		15	0	0	-9	193
HAK4	23,907	10,876	859	5,998	1,372	13,271	0	-2,230	-54,053	0
HAK7	98,945	45,014	6,572	7,306	6,605	20,791	0	1,031	-11,223	175,041
HOK1	1,049,596	477,504	151,737	894,188	70,070	2,546,853	0	7,608	-567,470	4,630,086
HOK10	87	40	0	0		11	0	0	-6	133
JMA3	85,523	38,908	5,545	37,909	3,898	10,628	0	298	-16,715	165,993
JMA7	154,591	70,329	10,046	51,763	10,320	600,198	0	535	-21,979	875,802
KIC1	392	178	0	0			0	0	-28	543
KIC10	0	0	0	0			0	0	0	0
KIC2	392	178	0	0			0	0	-28	543
KIC3	392	178	0	0			0	0	-28	543
KIC4	392	178	0	0			0	0	-28	543
KIC5	392	178	0	0			0	0	-28	543
KIC6	392	178	0	0			0	0	-28	543
KIC7	392	178	0	0			0	0	-28	543
KIC8	392	178	0	0			0	0	-28	543
KIC9	392	178	0	0			0	0	-28	543
LDO1	2,903	1,321	0	0	77	9,014	0	0	-820	12,494
LDO10	16	7	0	0		1	0	0	-1	24
LDO3	9,813	4,464	0	0	261	30,712	0	0	-399	44,851
LIN3	55,611	25,300	15,786	21,656	12,175	12,220	0	2,568	-25,311	120,005
LIN4	116,103	52,820	21,661	45,212	12,031	19,402	0	4,982	-35,025	237,186

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
LIN5	91,227	41,503	13,679	30,190	11,385	30,851	0	102	-27,777	191,160
LIN6	258,069	117,406	13,589	85,403	32,207	50,667	0	241	-42,804	514,778
LIN7	65,719	29,898	13,194	26,858	6,810	19,164	0	875	-43,889	118,629
OEO1	24,296	11,053	1,434	11,674	1,108	31,019	0	-38	6,925	87,470
OEO10	97	44	0	0		21	0	0	-7	155
OEO3A	32,557	14,811	1,982	15,923	1,484	455,238	0	-47	-13,740	508,207
OEO4	68,029	30,949	4,141	33,271	3,101	141,750	0	-107	-150,862	130,273
OEO6	58,311	26,528	3,441	28,018	3,346	74,444	0	-92	-3,567	190,430
ORH1	48,830	22,215	3,528	26,550	2,802	123,609	0	-80	-2,544	224,910
ORH10	298	136	0	0		64	0	0	-27	471
ORH2A	32,784	14,915	5,349	42,802	1,881	9,231	0	-63	-16,239	90,659
ORH2B	5,514	2,508	0	0	316	1,553	0	-11	-1,857	8,023
ORH3A	11,696	5,321	0	0	533	3,293	0	6	-4,094	16,756
ORH3B	130,922	59,562	15,695	126,938	8,740	92,240	0	-112	-6,674	427,311
ORH7A	14,902	6,779	1,008	6,300	396	539,537	-15,139	0	-3	553,781
ORH7B	30	14	0	0	1	6	0	-1	-50	0
PRK1	913	415	0	0	24	78	0	0	-6	1,424
PRK2	130	59	0	0	3	11	0	0	-1	203
PRK3	37	17	0	0	1	3	0	0	0	58
PRK4A	37	17	0	0	1	3	0	0	0	58
PRK5	37	17	0	0	1	3	0	0	0	58
PRK6A	37	17	0	0	1	3	0	0	0	58
PRK6B	37	17	0	0	1	3	0	0	0	58
PRK7	37	17	0	0	1	3	0	0	0	58
PRK8	37	17	0	0	1	3	0	0	0	58

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
PRK9	37	17	0	0	1	3	0	0	0	58
PTO	1,940	883	46	269		61	0	0	0	3,198
RBT1	80	36	0	0	2	7	0	0	139	265
RBT10	0	0	0	0		0	0	0	0	0
RBT3	9,223	4,196	0	0	245	786	0	0	16,055	30,505
RBT7	11,964	5,443	0	0	318	1,019	0	0	20,828	39,572
RBY1	4,147	1,886	0	0	110	15,044	0	0	-217	20,970
RBY10	0	0	0	0		0	0	0	0	0
RBY2	5,377	2,446	0	0	143	20,437	0	0	-5,352	23,052
RBY3	37	17	0	0	1	119	0	0	-1	173
RBY4	224	102	0	0	6	784	0	0	-3	1,112
RBY7	246	112	0	0	7	944	0	0	-17	1,291
RBY8	75	34	0	0	2	237	0	-2	-345	0
RBY9	160	73	0	0	4	590	0	0	-10	818
RIB3	4,212	1,916	0	0	112	11,548	0	0	-177	17,611
RIB4	2,467	1,122	0	0	66	6,785	0	0	-161	10,280
RIB5	421	192	0	0	11	1,189	0	0	-23	1,790
RIB6	1,272	579	0	0	34	3,454	0	0	-103	5,235
RIB7	2,779	1,265	0	0	74	7,619	0	0	-146	11,591
RIB8	8	4	0	0	0	1	0	0	0	13
SBW1	48	22	0	0	1	6	0	0	-2	76
SBW6A	7,438	3,384	0	0	409	924	0	31	-371	11,815
SBW6B	41,483	18,872	1,200	7,981	1,891	22,561	0	281	1,313	95,582
SBW6I	161,910	73,659	4,682	31,150	8,900	1,957,019	0	382	8,830	2,246,533
SBW6R	33,259	15,131	962	6,399	1,828	4,133	0	105	-353	61,463

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
SCI1	20,694	9,414	3,684	18,523	14,772	562,609	0	18	-59,863	569,852
SCI10	0	0	0	0		0	0	0	0	0
SCI2	29,069	13,225	5,175	26,020	16,544	342,387	0	57	-17,259	415,217
SCI3	51,070	23,234	9,091	45,713	28,576	143,109	0	0	-23,299	277,492
SCI4A	17,441	7,935	3,105	15,612	10,090	2,167	0	-16	-9,430	46,905
SCI5	5,814	2,645	1,035	5,204	3,199	722	0	0	-2,548	16,071
SCI6A	44,476	20,234	7,917	39,811	26,255	236,448	0	46	316,153	691,339
SCI6B	7,267	3,306	1,294	6,505	4,222	903	0	8	-3,186	20,319
SCI7	10,901	4,959	1,940	9,758	5,997	1,355	0	0	-4,778	30,132
SCI8	727	331	129	651	400	90	0	0	-319	2,009
SCI9	5,087	2,314	906	4,554	2,799	632	0	0	-2,230	14,061
SKI3	4,898	2,228	0	0	223	530	0	78	-1,508	6,450
SKI7	4,114	1,872	0	0	188	930	0	70	-1,344	5,830
SPD4	4,565	2,077	0	0	473	494	0	100	-836	6,873
SPD5	17,180	7,816	0	0	3,964	4,168	0	-3,298	-14,489	15,341
SPE3	6,911	3,144	0	0	716	72,315	0	53	-3,377	79,762
SPE4	6,289	2,861	0	0	652	29,766	0	53	-427	39,193
SPE5	179	81	0	0	15	43	0	0	-18	301
SPE6	33	15	0	0	1	4	0	0	-4	48
SPE7	708	322	0	0	73	172	0	5	-40	1,241
SQU10T	124	56	0	0		19	0	0	-7	192
SQU1J	623,537	283,672	0	0		74,696	0	12	-36,286	945,631
SQU1T	555,595	252,763	36,020	0	37,091	83,944	0	6,060	-41,903	929,569
SQU6T	401,965	182,870	70,566	252,000	275,084	60,733	0	-1,081	-31,105	1,211,031
SWA1	36,930	16,801	2,400	12,366	1,683	4,384	0	512	-3,704	71,373

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2011/12
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
SWA10	104	47	0	0		12	0	0	-12	151
SWA3	27,275	12,408	979	6,842	1,821	3,238	0	628	-9,777	43,415
SWA4	48,580	22,101	1,745	12,187	2,787	5,768	0	783	-12,384	81,568
WWA1	66	30	0	0	2	8	0	0	-5	100
WWA10	0	0	0	0		0	0	0	0	0
WWA2	1,198	545	0	0	55	142	0	13	-91	1,862
WWA3	11,269	5,127	0	0	619	19,608	0	100	-720	36,003
WWA4	5,416	2,464	0	0	247	18,865	0	58	-408	26,643
WWA5B	42,954	19,541	0	0	2,464	23,404	0	450	-24,228	64,587
WWA7	2,085	948	0	0	95	247	0	22	-156	3,241
WWA8	16	7	0	0	0	2	0	0	-1	25
Grand Total	5,271,470	2,398,204	480,091	2,131,650	678,744	9,307,286	-15,139	19,440	-1,170,447	19,101,299

Table 35: Levies by stock as a percent of landed value

Stock	Total levies 2011/12 (\$)	2011/12 Landings (tonnes)	2011/12 Port price (\$/kg)	2011/12 Landed value (\$000's)	Levies as % landed value (11/12)
BAR4	20,746	1,423	0.39	554.97	3.74
BAR5	37,978	7,068	0.35	2,473.8	1.54
BAR7	79,598	8,629	0.43	3,710.47	2.15
BYX1	26,526	45	2.31	85.07	31.18
BYX10	369	0	2.31	0	
BYX2	68,722	1,603	2.31	3017.94	2.28
BYX3	97,889	1,037	2.31	1951.2	5.02
BYX7	2,426	14	1.85	30.6	7.93
BYX8	763	0	2.31	0	
CDL1	22,075	148	0.89	77.28	28.56
CDL10	-	0	1.02	0	
CDL2	74,156	376	1.03	713.92	10.39
CDL3	3,875	79	0.97	16.32	23.74
CDL4	1,153	44	0.84	14.63	7.88
CDL5	452	93	1.02	4.8	9.42
CDL6	21	1	1.02	0	
CDL7	804	0	1.02	0.96	83.75
CDL9	83	0	1.02	0.96	8.65
CHC1	543	0	3.63	21.72	2.5
CHC10	-	0	3.63	0	
CHC2	543	0	3.63	0	
CHC3	217	0	3.63	0	
CHC4	217	0	3.63	0	
CHC5	217	0	3.63	0	
CHC6	217	0	3.63	0	
CHC7	217	0	3.63	0	
CHC8	217	0	3.63	0	
CHC9	217	0	3.63	0	
EMA3	4,379	28	0.51	4.59	95.40
EMA7	96,771	2,707	0.51	1756.48	5.51
FRO3	3,083	8	1.06	0.59	522.54
FRO4	176	14	0.39	2.36	7.46
FRO5	2,385	3	1.06	8.26	28.87
FRO6	194	0	1.06	0	
FRO7	54,869	500	0.91	146.32	37.50
FRO8	26,723	893	1.06	341.02	7.84
FRO9	17,493	198	1.06	76.82	22.77
GSC1	54	0	3.63	0	
GSC10	-	0	3.63	0	
GSC3	760	0	3.63	3.62	20.99

Stock	Total levies 2011/12 (\$)	2011/12 Landings (tonnes)	2011/12 Port price (\$/kg)	2011/12 Landed value (\$000's)	Levies as % landed value (11/12)
GSC5	1,031	5	3.63	68.78	1.50
GSC6A	8,032	7	3.63	83.26	9.65
GSC6B	12,861	0	3.63	0	
GSH4	1,451	482	0.25	142.6	1.02
GSH5	811	72	0.44	47.45	1.71
GSH6	710	37	0.47	14.44	4.92
GSP1	32,741	447	0.50	240.95	13.59
GSP5	26,937	201	0.50	101.5	26.54
GSP7	1,449	10	0.50	7.28	19.90
HAK1	132,467	1,948	1.42	2399.04	5.52
HAK10	193	0	1.19	0	
HAK4	0	161	1.23	384.85	0
HAK7	175,041	4,459	1.19	4617.42	3.79
HOK1	4,630,086	130,134	0.81	97349.58	4.76
HOK10	133	0	0.81	0	
JMA3	165,993	3,084	0.44	1688.24	9.83
JMA7	875,802	28,266	0.44	12960.96	6.76
KIC1	543	0	3.63	0	
KIC10	-	0	3.63	0	
KIC2	543	2	3.63	0	
KIC3	543	0	3.63	0	
KIC4	543	0	3.63	7.24	7.5
KIC5	543	0	3.63	0	
KIC6	543	0	3.63	3.62	15
KIC7	543	0	3.63	0	
KIC8	543	0	3.63	0	
KIC9	543	0	3.63	0	
LDO1	12,494	153	1.60	229.35	5.45
LDO10	24	0	1.51	0	
LDO3	44,851	229	1.48	318.2	14.10
LIN3	120,005	1,288	2.50	4012.65	2.99
LIN4	237,186	2,305	2.56	3943.21	6.02
LIN5	191,160	3,645	2.35	8714.56	2.19
LIN6	514,778	2,047	2.81	4445.55	11.58
LIN7	118,629	2,766	2.46	6926.64	1.71
OE01	87,470	581	0.90	312.42	28.00
OE010	155	0	0.90	0	
OE03A	508,207	3,324	0.90	2763.4	18.39
OE04	130,273	6,858	0.90	5790.02	2.25
OE06	190,430	2,325	0.90	2960.2	6.43
ORH1	224,910	1,114	3.23	2223.36	10.12

Stock	Total levies 2011/12 (\$)	2011/12 Landings (tonnes)	2011/12 Port price (\$/kg)	2011/12 Landed value (\$000's)	Levies as % landed value (11/12)
ORH10	471	0	2.76	0	
ORH2A	90,659	876	2.76	2693.46	3.37
ORH2B	8,023	140	2.76	374.46	2.14
ORH3A	16,756	428	2.61	814.8	2.06
ORH3B	427,311	2,765	2.63	8261.82	5.17
ORH7A	553,781	511	2.76	1128.12	49.09
ORH7B	0	0	2.76	0	
PRK1	1,424	0	3.45	5.04	28.25
PRK2	203	0	3.45	0	
PRK3	58	0	3.45	0	
PRK4A	58	0	3.45	0	
PRK5	58	0	3.45	0	
PRK6A	58	0	3.45	0	
PRK6B	58	0	3.45	0	
PRK7	58	1	3.45	1.26	4.60
PRK8	58	0	3.45	0	
PRK9	58	0	3.45	0	
PTO	3,198	34	3.63	83.26	3.84
RBT1	265	2	0.39	8.19	3.24
RBT10	-	0	0.39	0	
RBT3	30,505	1,229	0.39	110.76	27.54
RBT7	39,572	369	0.39	278.07	14.23
RBY1	20,970	278	1.28	317.79	6.60
RBY10	-	0	1.15	0	
RBY2	23,052	73	1.15	439.35	5.25
RBY3	173	1	1.15	0	
RBY4	1,112	4	1.15	2.97	37.44
RBY7	1,291	18	0.69	3.2	40.34
RBY8	0	0	1.15	0	
RBY9	818	1	0.78	0	
RIB3	17,611	174	0.99	341.04	5.16
RIB4	10,280	304	0.64	80.83	12.72
RIB5	1,790	32	0.75	20.7	8.65
RIB6	5,235	231	0.51	41.54	12.60
RIB7	11,591	330	0.78	182.16	6.36
RIB8	13	3	0.78	2.76	0.47
SBW1	76	3	0.56	6.32	1.20
SBW6A	11,815	16	0.42	103.49	11.42
SBW6B	95,582	6,826	0.56	9321.71	1.03
SBW6I	2,246,533	20,809	0.51	15976.96	14.06
SBW6R	61,463	1,476	0.56	3502.07	1.76

Stock	Total levies 2011/12 (\$)	2011/12 Landings (tonnes)	2011/12 Port price (\$/kg)	2011/12 Landed value (\$000's)	Levies as % landed value (11/12)
SCI1	569,852	114	15.97	2566.14	22.21
SCI10	-	0	13.46	0	
SCI2	415,217	99	13.46	2881.28	14.41
SCI3	277,492	278	13.46	5762.56	4.82
SCI4A	46,905	41	13.46	967.93	4.85
SCI5	16,071	0	13.46	0	
SCI6A	691,339	166	13.46	4456.98	15.51
SCI6B	20,319	0	13.46	0	
SCI7	30,132	6	13.46	90.04	33.47
SCI8	2,009	0	13.46	0	
SCI9	14,061	0	13.46	0	
SKI3	6,450	11	1.51	56.43	11.43
SKI7	5,830	260	1.27	514.71	1.13
SPD4	6,873	734	0.26	477.92	1.44
SPD5	15,341	1,384	0.43	841.58	1.82
SPE3	79,762	348	0.64	315.56	25.28
SPE4	39,193	555	0.64	297.44	13.18
SPE5	301	13	0.46	12.76	2.36
SPE6	48	3	0.34	1.16	4.14
SPE7	1,241	82	0.80	83.08	1.49
SQU10T	192	0	1.15	0	
SQU1J	945,631	1,811	1.15	1527.12	61.92
SQU1T	929,569	18,969	1.15	16153.56	5.75
SQU6T	1,211,031	14,427	1.15	21980.7	5.51
SWA1	71,373	1,029	1.14	1425.76	5.01
SWA10	151	0	0.96	0	
SWA3	43,415	3,318	0.77	3594.59	1.21
SWA4	81,568	2,783	1.10	3577.14	2.28
WWA1	100	0	1.52	0	
WWA10	-	0	1.52	0	
WWA2	1,862	3	1.52	29.88	6.23
WWA3	36,003	204	1.79	715.53	5.03
WWA4	26,643	112	1.52	127.98	20.81
WWA5B	64,587	978	1.52	1959.63	3.30
WWA7	3,241	77	1.52	129.48	2.50
WWA8	25	0	1.52	0	