



Annual Review Report for Deepwater Fisheries for 2012/13

MPI Technical Paper No:

Prepared by the Ministry for Primary Industries

ISBN No:

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Introduction

Overview of New Zealand's deepwater fisheries

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

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

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

Table 1: Categorisation of deepwater species

	Stocks included the National Deepwater Plan ¹ (Tier 1 plan)	Stocks not currently included in National Deepwater Plan (date of expected inclusion or Tier 1 plan containing species)
Tier 1 Species	Hoki : All Orange Roughy: All Southern Blue Whiting: All Ling: LIN3 - LIN7 Hake: All Jack Mackerel: JMA3 and JMA7 only Oreo: All (2013)	Scampi: All (2014) Squid: All (2014)
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.

Overview of the National Deepwater Plan

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

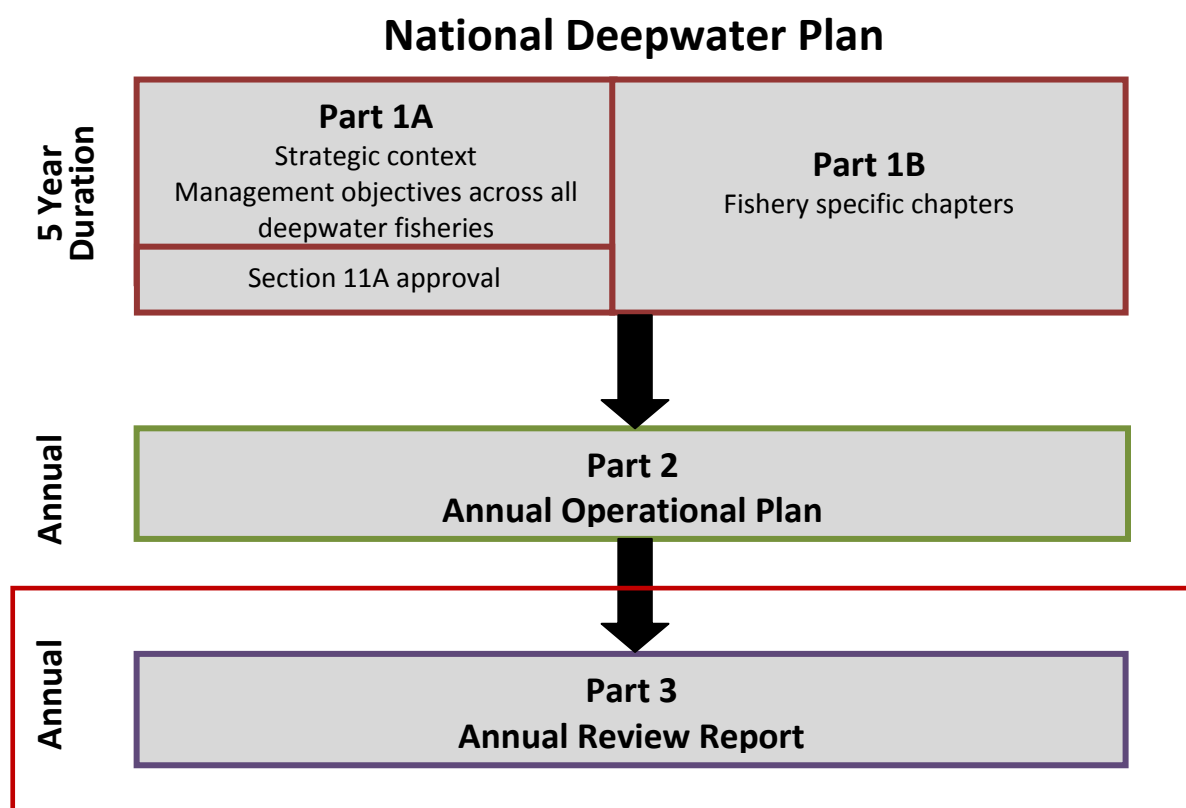


Figure 1: The three components of the National Deepwater Plan.

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

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

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

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

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

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

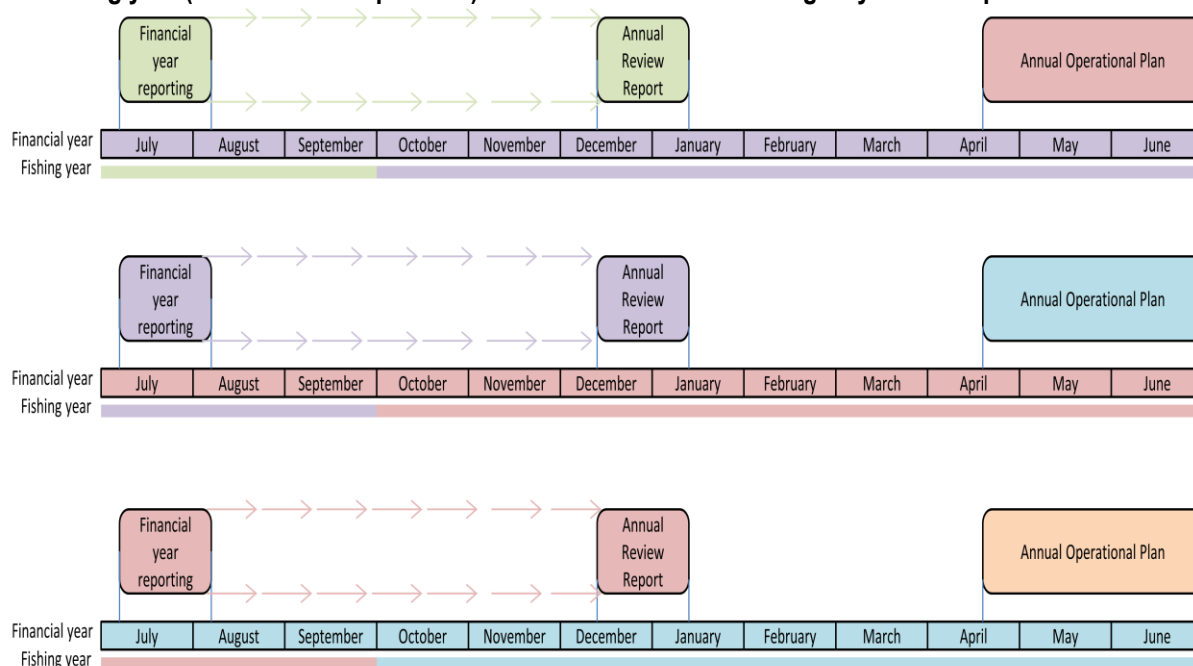
Parts 2 and 3 of the National Deepwater Plan are delivered annually and form the Annual Fisheries Planning Process. Figure 2 shows a schematic of three years of this annual cycle, which incorporates planning and reporting by both financial year (1 July – 30 June) and fishing year (1 October – 20 September).

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

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

Part 3 of the National Deepwater Plan consists of the five Annual Review Reports. Each Review Report assesses progress during the previous financial year towards meeting the year's management priorities, by reviewing delivery of the relevant Annual Operational Plan. Achievement of annual management priorities contributes towards meeting the Management Objectives and Operational Objectives set out in Part 1 of the National Deepwater Plan. Each Annual Review Report also reports on the annual performance of deepwater fisheries against the management approach specified in the Annual Operational Plan.

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



The 2012/13 Deepwater Annual Review Report

This Annual Review Report provides is also split into three parts:

Part 1 describes the progress that has been made during the 2012/13 financial year towards meeting the five year management priorities set out in the 2012/13 Annual Operational Plan.

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

Part 2 provides detail on MPI work that is relevant to deepwater fisheries management and is planned by financial year (1 July – 30 June). These processes include the planning and contracting of fisheries and conservation research projects, planning observer coverage on the deepwater fleet and the cost recovery regime. Progress made during the 2012/13 financial year is detailed.

Part 3 reports on the combined environmental impacts of deepwater fishing, and on the deepwater fleet's adherence to the non-regulatory management measures that were in place for the 2012/13 fishing year (1 October 2012 – 30 September 2012).

Part 1: Progress on Management Actions

The 2012/13 Annual Operational Plan included 33 Management Actions to progress delivery of the Management Objectives specified in Part 1 of the National Deepwater Plan. Table 2 summarises progress relating to each of these Management Actions.²

For reference, the 2012/13 Management Actions are listed in the grey boxes in Table 2, taken verbatim from the 2012/13 Annual Operational Plan, reflecting the situation in July 2012.

Progress made between 1 July 2012 and 30 September 2013 is listed in the white boxes in Table 2.

Table 2: Management Actions for the 2012/13 financial year and progress against each Action

1	Review stocks for the 1 October and 1 April sustainability rounds, including deemed values		
	Sustainability decisions consist primarily of catch limit (TAC & TACC) and deemed value rate reviews. These are completed in two rounds, one for stocks with a 1 October fishing year and another for stocks with a 1 April fishing year. In addition to stock-specific reviews, the deemed value rates for all deepwater stocks will be assessed against the criteria in the deemed value standard.		
	<table border="1"> <tr> <td data-bbox="248 748 778 826">Linked to Management Objectives 1.1, 1.3, 2.1, 2.2, 2.4, 2.5, and 2.6</td><td data-bbox="778 748 1396 826">Operational Objective(s): HOK 2.2 and 2.3, ORH 2.3, SBW, LIN and all deepwater fisheries</td></tr> </table>	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, SBW, LIN and all deepwater fisheries
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, SBW, LIN and all deepwater fisheries		
	<p>For the 1 October 2012 sustainability round, no TAC & TACCs were reviewed and changed. Deemed value rates were reviewed and changed for:</p> <ul style="list-style-type: none"> • Alfonsino (BYX 1, 2, 3, 7, 8, and 10) • Ghost shark (GSH 4, 5, and 6) <p>No stocks were reviewed for the 1 April 2013 sustainability round, however an industry-agreed shelving arrangement to limit harvest to 4,000 tonnes plus under-catch from the previous season has been put in place in SBW 6B for the 2013/14 fishing year.</p>		
2	Continue the implementation of the National Deepwater Plan		
	Implementation of the National Deepwater Plan for the 2012/13 financial year includes:		
	<table border="1"> <tr> <td data-bbox="248 1193 778 1406"> Actions for 12/13 <ul style="list-style-type: none"> • Completion of fishery-specific chapters for HAK, OEO, SCI, and JMA • Integrating actions resulting from the NPOA-Seabird review into Fisheries Plan process </td><td data-bbox="778 1193 1396 1406"> Business as usual: <ul style="list-style-type: none"> • Annual Operational Plan for 2013/14 • Annual Review Report 2011/12 </td></tr> </table>	Actions for 12/13 <ul style="list-style-type: none"> • Completion of fishery-specific chapters for HAK, OEO, SCI, and JMA • Integrating actions resulting from the NPOA-Seabird review into Fisheries Plan process 	Business as usual: <ul style="list-style-type: none"> • Annual Operational Plan for 2013/14 • Annual Review Report 2011/12
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	<table border="1"> <tr> <td data-bbox="248 1406 778 1485">Linked to all Management Objectives</td><td data-bbox="778 1406 1396 1485">Operational Objective(s): HOK1.4, ORH 1.1 and 1.2 and all deepwater fisheries</td></tr> </table>	Linked to all Management Objectives	Operational Objective(s): HOK1.4, ORH 1.1 and 1.2 and all deepwater fisheries
Linked to all Management Objectives	Operational Objective(s): HOK1.4, ORH 1.1 and 1.2 and all deepwater fisheries		
	<p>In the 2012/13 financial year, the fishery-specific chapter for hake, the Annual Operational Plan for 2013/14, and the Annual Review Report for 2011/12 were completed. The jack mackerel fishery plan chapter has been completed and approved, while the oreo chapter has been completed in draft form and is ready for approval as of late 2013. Work on the scampi fishery plan chapter is underway. Actions supporting the requirements of the NPOA-Seabirds were incorporated into the AOP for 2013/14. All National Deepwater Plan documents may be found online here: http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm</p>		
3	Ensure completion of Ministerial communications including briefings, Ministerials,³ Special Permits, and Official Information Act (OIA) requests within designated timeframes		
	<p>This Management Action will require significant attention throughout the year. As such the Ministry has responsibility to:</p> <ul style="list-style-type: none"> • Provide quality advice and information to the Minister for Primary Industries • Maintain an open relationship with the public and respond to all OIA requests and letters to Government 		

² More detail on any Management Action in Table 2 is available in the 2012/13 Annual Operational Plan (available online here: <http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm>).

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

	<p>regarding fisheries issues</p> <ul style="list-style-type: none"> Review and assess any deepwater special permits
	<p>Action linked to all Management Objectives</p> <p>Operational Objective: N/A</p>
	<p>3 special permit applications, 6 Aide Memoirs, 11 Briefing Papers, 2 Ministerial OIAs, 22 OIA Requests, 1 Select Committee Paper, 14 Written Parliamentary Questions (WPs), 32 Ministerials.</p>
4	<p>Ensure sufficient and appropriate engagement with tangata whenua through the integration of Iwi Fisheries Plans (IFPs) and Forum Fisheries Plans (FFPs) into the National Deepwater Plan and its components</p> <p>The IFP strategy was established in 2011/12, and is designed to provide for those iwi recognised under Schedule 3 of the <i>Treaty of Waitangi (Fisheries Claims) Settlement Act 1992</i>. Currently there are five completed FFPs: CIFF @ 44 representing Chatham Island Iwi, Te Waka a Maui me ona Toka representing South Island Iwi, Te Hiku o te Ika representing Far North Iwi, Mai i nga Kuri a Whareki Tihirau representing the Bay of Plenty Iwi and Te Taihaururu representing the Manawatu/Horowhenua/Kapiti/Taranaki Iwi. One IFP is completed by Rangitane who represent the Manawatu/Wairapa Iwi.</p> <p>Business as Usual:</p> <ul style="list-style-type: none"> Continue engagement with tangata whenua and address any issues as necessary through the FFPs <p>Action linked to Management Objectives 1.6 and 1.7</p> <p>Operational Objective(s): HOK 1.4, 1.10, 1.11, 1.12, ORH 1.3, 1.9, 1.10, and all deepwater fisheries</p> <p>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. Summary information was provided to the iwi forums regarding the current work programme for deepwater fisheries. Further information and attendance at forum meetings has been provided when requested.</p>
5	<p>Ensure continued implementation of registration process and risk-based observer coverage for foreign charter vessels (FCVs)</p> <p>Although the Ministerial Inquiry into the use and operation of FCVs was submitted to government in February 2012, the usual registration process will continue until recommendations are formally implemented.</p> <p>Business as Usual:</p> <ul style="list-style-type: none"> Aid where needed in the risk profiling, registration, and subsequent observer coverage process <p>Action linked to all Management Objectives</p> <p>Operational Objective: N/A</p> <p>Advice has been provided to inform the FCV registration process where necessary, and work is ongoing on revising the risk policy guiding observer coverage and other compliance actions.</p>
6	<p>Monitor management regime for SQU6T fishery to address interactions with sea lions</p> <p>Actions for 12/13</p> <ul style="list-style-type: none"> Contract and support the review of the Breen-Fu-Gilbert model Contract and support research into pup production decline at the Auckland Islands <p>Business as Usual:</p> <ul style="list-style-type: none"> Collaborative monitoring and reporting of effort within SQU6T between Ministry and the Deepwater Group Ltd (DWG) <p>Action linked to Management Objectives 1.1, 1.3, 1.5, and 2.5</p> <p>Operational Objective(s): N/A</p> <p>The 2013 squid fishery at the Auckland Islands (SQU6T) commenced on 21 January 2013. The management of the fishery was governed by the 2012-2016 SQU6T Operational Plan (OP), signed by the Minister in 2012. The OP includes a fishing related mortality limit (FRML) of 68 sea lions, a strike rate of 5.89 and a sea lion exclusion device (SLED) discount rate of 82%. Nineteen vessels took part in the fishery and conducted 1,015 tows, all of which qualified for the SLED discount rate. Using the strike rate and discount factor, that number of tows results in the estimated mortality of 11 sea lions, equivalent to 16% of the FRML. 86% of all tows conducted in the fishery this season were observed and three sea lion captures were observed. More detail on the SQU6T management regime can be found in Part 3 of this Report.</p> <p>The Breen-Fu-Gilbert model was independently reviewed by three international panel members in July 2013. Their</p>

	<p>final report was released on 30 September 2013 and is available on request. The recommendations from this review will be addressed within upcoming financial years. DWG provided additional funding to allow a vet to undertake autopsies of dead sea lion pups during the Auckland Island pup count. This work will be reviewed through DOC's Conservation Services Programme technical working group in 2014.</p>	
7	Maintain an open and transparent management environment by ensuring that all management information is available and easily accessible for stakeholder and tangata whenua consideration	
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Work with the Communications and Channels Directorate to determine an appropriate internet location to post important deepwater fisheries management information 	<p>Business as Usual:</p> <ul style="list-style-type: none"> Increase and uphold transparency of deepwater fisheries management through distribution of the AOP, ARR, new chapters within the National Deepwater Plan, and general information relating to the management of deepwater fisheries
	Action linked to Management Objectives 1.6 and 1.7	Operational Objective(s): HOK 1.4, ORH 1.8, and all deepwater fisheries
	<p>The deepwater fisheries management website was implemented in August 2013. The website includes key documents and external links relating to the management of New Zealand's deepwater fisheries and can be found here: http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm</p>	
8	Monitor non-regulatory management measures relating to Sub-QMA catch limits and Hoki Management Areas (HMAs)	
	<p>In conjunction with industry, the Ministry has implemented non-regulatory catch split arrangements in the hoki, orange roughy, and oreo fisheries. HMAs, also non-regulatory, have been created to protect important areas for juvenile hoki.</p>	
	<p>Business as Usual:</p> <ul style="list-style-type: none"> Ensure continued monitoring to confirm effectiveness of these measures Communicate monitoring results with stakeholders through the ARR 	
	Action linked to all Management Objectives	Operational Objective: HOK 2.3, 2.5, ORH 2.1
	<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 and Appendix 1 of this Report.</p>	
9	Assess and manage the level of seabird interactions with deepwater fishing activity	
	<p>Seabird interactions are managed using regulatory and non-regulatory measures, including Vessel Management Plans (VMPs) which outline vessel-specific seabird mitigation practices.</p>	
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Work with the DWG to further develop the VMP process Implement any relevant results from the review of the NPOA-Seabirds into the VMP process 	<p>Business as Usual:</p> <ul style="list-style-type: none"> Continue to monitor interactions with seabirds, at-sea risk mitigation activities, and continue to support the industry education programme Continue to audit compliance with mitigation measures to ensure the non-regulatory management regime remains effective and is reported transparently to stakeholders through the ARR
	Action linked to Management Objectives 2.5 & 1.6	Operational Objective: HOK 2.10 and 2.13 and all deepwater fisheries
	<p>Interactions between seabirds and the deepwater fleet are monitored at-sea by Ministry observers and by DWGs Environmental Liaison Officer (ELO), which enables responses in near real-time if interaction triggers are breached. Seabird interactions triggers are detailed in each Vessel Management Plan (VMP).</p> <p>The DWG ELO also visits crew members within the deepwater fleet to increase awareness of best practice environmental standards, mitigation practices and measures within the DWG Operational Procedures. During the 2012/13 year these visits were conducted on 33 vessels more than 28m and 14 vessels less than 28m in length.</p> <p>Captures reported by Observers are also statistically modelled each year by research providers to account for any unobserved captures. Observed captures and modelled estimates are reported on the Protected Species website</p>	

	<p>(http://data.dragonfly.co.nz/psc/). All seabird interactions are assessed in the wider context of New Zealand fisheries. Details of seabird interactions with the deepwater fisheries are also provided in Part 3 of this Report.</p>	
10	Assess and manage the level of marine mammal interactions with deepwater fishing activity	
	<p>Marine mammal interactions are managed using regulatory and non-regulatory measures, including a Marine Mammal Operation Procedure (MMOP) which outlines vessel-specific risk mitigation practices and proper handling of incidental marine mammal captures.</p>	
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Work with DWG as they lead on increasing communication with coastal vessel operators, to better understand the level of interactions between these fisheries and marine mammals 	<p>Business as Usual:</p> <ul style="list-style-type: none"> Continue to monitor interactions with marine mammals, at-sea risk mitigation activities, and continue to support the industry education programme Continue to audit adherence to MMOP to ensure the non-regulatory management regime remains effective and is reported transparently to stakeholders through the ARR
	<p>Action linked to Management Objectives 1.6 and 2.5</p>	<p>Operational Objective: HOK 2.11 and 2.13, SBW2.2 and 2.3 and all deepwater fisheries</p>
	<p>Interactions between marine mammals and the deepwater fleet are monitored at-sea by Ministry observers and by DWGs Environmental Liaison Officer (ELO). Reporting processes enable responses in near real-time if interaction triggers are breached. Marine mammal interactions triggers are detailed in the MMOP.</p> <p>Captures reported by Observers are also statistically modelled each year by research providers to account for any unobserved captures. 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. The note above regarding DWG Liaison Officer providing outreach to the fleet is also relevant to this management action.</p>	
11	Assess and manage the nature and extent of benthic interactions from deepwater fishing activity	
	<p>As benthic habitats can be important breeding grounds, foraging areas, or refuges, it is important to ensure that any impact is carefully managed and remains within acceptable limits.</p>	
	<p>Business as Usual:</p> <ul style="list-style-type: none"> Continue to assess the nature and extent of the historical and most recent trawl footprint by Tier 1 species Monitor the impact of fishing on benthic species Work with the wider Ministry as spatial management of New Zealand's EEZ develops 	
	<p>Action linked to Management Objective 2.7</p>	<p>Operational Objective: HOK 2.15, ORH 2.9, SBW2.4 and all deepwater fisheries</p>
	<p>As part of the 10-Year Research Programme (10YRP), MPI has contracted a research provider to map the annual trawl footprint for all Tier 1 species, and for deepwater fisheries overall. This information, as well as interactions with benthic species, 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.</p>	
12	Develop and implement specific harvest strategies for Tier 1 species, which enable economically viable deepwater and middle-depth fisheries over the long-term	
	<p>A harvest strategy defines a management target, soft and hard limits, a rebuild strategy, and a harvest control rule for a stock. In developing a harvest strategy, a Management Strategy Evaluation (MSE) may be undertaken to assess a range of different management strategies, including those which incorporate economic aspects of the fishery.</p>	
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Continue with development and implementation of harvest strategies for ORH, SBW, HAK, and CDL2 Start development of a harvest strategy for SCI Update the MSE for HOK, and implement any subsequent results 	
	<p>Action linked to Management Objective 1.1, 1.2, 2.1</p>	<p>Operational Objective: HOK 1.3, HOK2.5, ORH 1.11, ORH 2.1, SBW 2.1, LIN2.1, and all deepwater fisheries</p>
	<p>An updated harvest strategy was agreed with quota owners for the East and South Chatham Rise ORH stock. The strategy now includes a target management range, soft and hard limit reference points and a harvest control rule that</p>	

	reduces fishing mortality below F_{MSY} if the stock is assessed to be below the management target range. Details of this harvest strategy are found in Appendix 1. Work is ongoing on the development of harvest strategies for SBW, HAK, CDL2, and SCI.
13	<p>Assist the wider Ministry in implementing Cabinet decisions made in response to the report of the Ministerial Inquiry into the Use and Operation of FCVs</p> <p>Following the Inquiry's report, Cabinet immediately decided to implement recommendations 1-6. In May 2012 Cabinet made a further decision to require all FCVs to re-flag to New Zealand within four years.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Aid in the implementation of recommendations when required • Work with the Ministry of Business, Innovation, and Employment, and Maritime New Zealand throughout the re-flagging process <p>Action linked to Management Objective 1.1, 1.2, 2.1 Operational Objective: NA</p> <p>The deepwater fisheries management team has provided support to the implementation of Cabinet decisions including providing data and information to support the Select Committee process, drafting a policy to guide risk rating assignment, and liaising with MBIE and MNZ in the administration of the Steering Group. Work is ongoing, as the Fisheries (Foreign Charter Vessels and Other Matters) Amendment Bill is still being finalised. From October 2012, one Ministry observer has been placed on every FCV, on every trip. This gives effect to Cabinet's decision in May 2012, in response to the findings of the Ministerial Inquiry into the Use and Operation of FCVs.</p>
14	<p>Facilitate Marine Stewardship Council (MSC) Certification of deepwater fisheries, including addressing conditions of certification and passing annual surveillance audits for already certified fishstocks</p> <p>The hoki 2012 recertification was scheduled for a decision by August 2012 and the SBW certification was completed in April 2012. An audit will occur in the 2012/13 year for each of these certifications.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Support the DWG on annual surveillance audit(s) • Implement the Action Plan to address any conditions of certification • Update the PBR estimates for the SBW fishery by 2013 • Aid DWG in compiling necessary information for any further MSC candidate fisheries <p>Action linked to Management Objectives 1.1 and 1.5 Operational Objective: HOK 1.1, SBW 1.1, LIN 1.1</p> <p>The hoki fishery was recertified in September 2012 and is now certified without condition. The SBW fishery successfully passed its first annual surveillance audit in February 2013, with an expedited audit in September in response to multiple sea lion captures. The SBW fishery also has no conditions of certification. The annual surveillance audits for both SBW and hoki are planned for March 2014.</p> <p>A pre-assessment was conducted on four orange roughy stocks in August 2013. Fisheries Improvement Plans will be developed for these stocks in 2014. The full assessments of the hake and ling fisheries are progressing. If successful, MSC certification would be anticipated for these fisheries during mid-2014. Engagement with MSC on the Fisheries Standard Review and other consultations to be conducted in 2014. Further information on MSC certifications and assessments can be found at www.msc.org.</p>
15	<p>Assist in finalising the National Plan of Action for Seabirds (NPOA Seabirds)</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Assist where needed in finalising the National Plan of Action (NPOA) for Seabirds and consulting with deepwater stakeholders • Ensure the management of seabird interactions within deepwater fisheries is consistent with the NPOA <p>Action linked to Management Objectives 1.6 and 2.5 Operational Objective: HOK 2.10 and 2.13, SBW2.2 and 2.3 and all deepwater fisheries</p> <p>The NPOA-Seabirds was approved in early 2013 and is now being implemented. The NPOA-Seabirds 2013 sets out 5-year objectives to guide the management of risk to seabirds in New Zealand fisheries. Specific actions to address the objectives of the NPOA-Seabirds 2013 as they relate to deepwater fisheries have been incorporated into the 2013/14 AOP. Further detail on the NPOA-Seabirds 2013 can be found in Part 3 of this Report.</p>

16	Assess and manage the level of shark interactions with deepwater fishing activity and assist with the review of the National Plan of Action for Sharks (NPOA Sharks)
<p>The NPOA for Sharks is scheduled for review in the 2012/13 financial year, and will require input from the Deepwater Fisheries Management team.</p>	
<p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Support the review of the NPOA Sharks • Conduct a Level 1 Risk Assessment for Tier 3 species (October 2013) • Collaborate with DWG to develop a Shark Operational Process for all deepwater vessels 	<p>Business as Usual:</p> <ul style="list-style-type: none"> • Continue to increase our information about shark interactions • Continue to minimise the use of generic reporting codes through observer training and circulation of the updated Identification Guide
<p>Action linked to all Management Objectives 1.6, 2.5, and 2.6</p>	<p>Operational Objective: HOK 2.12, 2.13, and all deepwater fisheries</p>
<p>The review of the NPOA-Sharks 2008 was completed and a stakeholder group was initiated to complete a revised NPOA-Sharks 2013. The group included representatives from environmental organisations and industry, as well as officials from MPI, DOC, and MFAT. The NPOA-Sharks 2013 was released for public consultation in late 2013, and was finalised prior to the end of 2013.</p> <p>To ensure consistency with the NPOA-Sharks 2013 goals and objectives, the DWG Operational Procedure regarding sharks was deferred until the direction of the NPOA-Sharks 2013 was clear. The Risk Assessment for Tier 3 deepwater species is expected to be completed in 2014/15. Details on shark interactions in deepwater fisheries and generic code usage can be found in Part 3 of this Report.</p>	
17	Ensure recommendations from the 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. The three main areas of focus for the project are 1) technical optimisation; 2) improvement of communication; 3) phased implementation to full coverage of the deepwater fleet.</p>	
<p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Finalise the observer optimisation project • Begin to formalise and implement recommendations resulting from the project • Adapt coverage as necessary to take account of increased observer services required on FCV as a result of the government's decision to require observers on all FCVs 	
<p>Action linked to Management Objective 1.4</p>	<p>Operational Objective: HOK 1.6, ORH 1.2 and all deepwater fisheries</p>
<p>Full implementation of the observer optimisation project has been put on hold, given the requirement for full observer coverage on all FCVs. Work will now focus on ensuring an appropriate and effective observer sampling regime is in place, given the increased level of coverage.</p>	
18	Whilst working to achieve credible third party certification, provide information and communications to maximise market access for New Zealand deepwater fisheries
<p>The focus on this Management Action is to research opportunities for MPI to provide market driven assurance for New Zealand's seafood. As part of this action, MPI must increase the availability of accurate consumer information to combat inaccuracies about the fisheries management regime in the media and in consumer marketing campaigns.</p>	
<p>Actions for 12/13:</p> <ul style="list-style-type: none"> • Research credible third party certification schemes • Create market fact sheets where needed (SBW, HAK, JMA and sharks) 	<p>Business as Usual:</p> <ul style="list-style-type: none"> • Update information sheets on key issues as needed
<p>Action linked to all Management Objectives</p>	<p>Operational Objective: N/A</p>
<p>Market communications (including social media engagement and information species sheets) will be created where required. Third party certification schemes have been investigated, including research of market trends and</p>	

	assurance and/or certification requirements. MPI will support industry adoption of the New Zealand Story in conjunction with other government agencies (such as Tourism NZ and the Ministry of Foreign Affairs and Trade). More about the New Zealand Story can be found here: http://story.newzealand.com/about-us	
19	Engage on environmental issues relating to management of deepwater fisheries through the Environmental Engagement Forums	
	In order to provide increased engagement beyond the section 12 consultation requirements, the Ministry will establish Environmental Engagement Forums (EEFs). The EEFs will focus on Inshore, Deepwater, and National environmental issues.	
	Actions for 2012/13: <ul style="list-style-type: none"> • Hold initial EEF (National-level Forum) • Finalise Terms of Reference 	
	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
	The initial EEF was held in September 2012. Eight additional EEF meetings have been held during the 2012/13 year to address a wide variety of issues, both national and specific to deepwater. Meetings of the EEF will continue, with an aim of developing a regular meeting schedule to link with the annual fisheries planning processes, maintaining the ability for one-off issue-specific meetings to be held.	
20	Develop and implement a process for identifying additional research, including a formalised process for tender evaluations	
	The 10YRP recognises that not all research required can be planned in advance. For this reason, the 10YRP allows for annual planning and prioritisation of additional research.	
	Actions for 12/13: <ul style="list-style-type: none"> • Develop and implement a process for identifying and tendering additional research in consultation with the wider Ministry, the Deepwater Group, and stakeholders 	
	Action linked to Management Objectives 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.4, 2.5, 2.6, and 2.7	Operational Objective(s): HOK1.6, ORH1.5, SBW1.4, LIN1.4, and All deepwater fisheries
	Additional research needs will be identified and planned as a two-stage process: shorter term (annual) cycles; and a longer, medium-term cycle within the second five-year stage of the 10YRP. Details around how the processes will work are yet to be finalised, but at this stage it is intended that an Additional Research Committee will consider medium-term research projects, and shorter-term projects will be identified through the Deepwater Management Forum.	
21	Address outcomes of the risk-based approach to seabird interactions in deepwater fisheries, focusing on the scampi fishery	
	Preliminary results from the risk assessment on seabird interactions indicate that the scampi fishery poses the greatest risk to seabirds of all the deepwater fisheries. This Management Action is focused on addressing and minimising that risk.	
	Actions for 12/13: <ul style="list-style-type: none"> • Improve the Ministry's understanding of the nature and extent of risk through optimised observer monitoring • Continue to develop and implement seabird mitigation measures within the scampi fleet, calling on results from the Scampi Seabird Mitigation Workshop (March 2012) for guidance 	
	Action linked to Management Objective 2.5	Operational Objective: All deepwater fisheries
	Research project MIT2011/02 was contracted by DOC and aimed to reduce seabird bycatch in scampi trawl fisheries. The project was finalised in July 2013 and the outcomes highlighted that improving offal management, improving the paired streamer design, and using a restrictor can mitigate risk of seabird captures by the scampi fleet. These three operational changes have been adapted within Vessel Management Plan for the scampi fleet, which will be implemented during the 2013/14 fishing year.	
22	Develop and implement management procedures for Tier 2 species	
	Management of Tier 2 species is often limited by information availability, therefore management procedures may	

	range from developing components of a Harvest Strategy to analysis of CPUE trends or signals from a trawl survey.
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Identify most appropriate way to draw on completed characterisations, to develop management protocols for Tier 2 Species
	<p>Action linked to Management Objective 2.1</p> <p>Operational Objective: HOK 2.4, ORH 2.1, LIN2.2</p>
	No management procedures were developed in the 2012/13 year. Work to contract and complete a trial of a Management Procedure Evaluation technique is ongoing. Investigations into other techniques including indicator analyses have also been considered.
23	<p>Determine habitats covered by an agreed definition of 'habitat of particular significance for fisheries management'</p> <p>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'.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> Continue work on definition of habitat of particular significance for fisheries management Identify potential habitats of particular significance for deepwater fisheries beginning with the hoki fishery in 2012-13 <p>Action linked to Management Objective 2.3</p> <p>Operational Objective: HOK 2.8</p> <p>The deepwater team liaised with members of the inshore team to develop a draft definition of 'habitat of particular significance for fisheries management'. The definition has been reviewed within MPI and work to finalise and implement the definition will continue into the 2013/14 year.</p>
24	<p>Ensure continued monitoring of fisher compliance against agreed benchmarks and non-regulatory management measures and ensure appropriate action is taken when compliance drops below these agreed benchmarks and non-regulatory measures</p> <p>The Ministry's Compliance Directorate has developed a suite of performance indicators and performance targets for the deepwater sector. When performance targets for the deepwater fishing sector are not met, or when a risk profile identifies areas of compliance concern, appropriate management action will be taken.</p> <p>Business as Usual:</p> <ul style="list-style-type: none"> Ensure transparent and appropriate action is taken when compliance levels drop below agreed benchmarks or where compliance risks are identified Continue to communicate results through the Compliance Directorate and through the ARR <p>Action linked to Management Objective 1.5</p> <p>Operational Objectives: HOK 1.9, HOK 1.10, ORH 1.6, ORH1.7, SBW1.3, LIN1.3</p> <p>Quarterly reports of performance were compiled during the year, a summary of which is included in Part 3 of this Report.</p>
25	<p>Continue the compliance risk profile process for hoki and begin another risk profile for a further deepwater fishery</p> <p>A Level 1 risk profile was conducted on the hoki fishery in 2011/12. Risk profiling for 2012/13 will focus on SBW and ORH fisheries.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> Work with wider Ministry and industry to implement any recommendations from previous risk profiling Work with Compliance to finalise risk profiles for SBW and ORH <p>Action linked to Management Objective 1.5</p> <p>Operational Objectives: HOK 1.9, ORH 1.6, SBW1.3</p> <p>The southern blue whiting fishery was profiled during 2012/13. The first phase of data collection was completed during the 2012 SBW season; the report has yet to be finalised. A second phase of data collection was planned for the 2013 SBW season to collect additional information regarding issues identified during 2012.</p>
26	When required, work with industry to change QMA boundaries to align with biological distributions

	Over time, new information may become available which indicates that existing QMAs may not be consistent with biological stocks. In this case, industry (or the Ministry) can request that a QMA is considered for amalgamation or division provided that 75% of quota owners support the request.
	<p>Actions for 12/13:</p> <ul style="list-style-type: none"> Assess the QMA boundaries with a focus on Tier 2 species Respond to any industry requests for changes to stock boundaries
	<p>Action linked to Management Objective 1.1</p> <p>Operational Objective(s): LIN 1.5 and all deepwater fisheries</p>
	Analyses have been completed investigating candidate species and stocks for amalgamation or modification of QMA boundaries. Industry has not made any requests or submitted any applications to amend QMA boundaries.
27	<p>Implement the 10 Year Research Programme and ensure that all information used in management decisions meets the requirements of the Research and Science Information Standard for New Zealand Fisheries (the Research Standard).</p> <p>The 10 Year Research Programme Statements of Work were finalised in 2011/12 and detail research projects that will be carried out each year over the next 10 years.</p> <p>Business as Usual:</p> <ul style="list-style-type: none"> Assist Fisheries Science as necessary to implement the 12/13 10 YRP research projects as listed in Table 9 Assist Fisheries Science as necessary to ensure that all science research used to support management of deepwater fisheries is assessed against the Research Standard Contract any annual "additional research" projects, consistent with process developed through MA 20 <p>Action linked to Management Objectives 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.4, 2.5, 2.6, and 2.7</p> <p>Operational Objective(s): HOK1.6, ORH1.5, SBW1.4, LIN1.4, and All deepwater fisheries</p> <p>Details of research completed and contracted can be found in Part 2 of this Report.</p>
28	<p>Deliver collaborative management of deepwater fisheries with Deepwater Group Ltd (DWG) through implementation of the Memorandum of Understanding (MOU)</p> <p>The 2010 updated MOU called for the establishment of two new bodies: the Deepwater Management Forum and the Deepwater Secretariat. The Deepwater Management Forum was established in 2011/12.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> Formalise the Deepwater Secretariat <p>Business as Usual:</p> <ul style="list-style-type: none"> Progress Deepwater Management Forum <p>Action linked to all Management Objectives</p> <p>Operational Objective(s): HOK 1.4, ORH 1.9, and all deepwater fisheries</p> <p>The Deepwater Management Forum met four times during the 2012/13 year. The Deepwater Secretariat provides executive support to the Forum and members of the Deepwater Secretariat attend each Forum meeting.</p>
29	<p>Finalise a framework for Ecological Risk Assessment (ERA)</p> <p>An ERA is conducted to identify and evaluate the risk of undesirable consequences to the ecosystem due to fishing. Developing this technique supports an ecosystem-based approach of fisheries management as it better enables management to prioritise and reduce risk across fisheries.</p> <p>Actions for 12/13:</p> <ul style="list-style-type: none"> Finalise the development of an appropriate ERA process Pilot the ERA process with a selected deepwater fishery during 2012/13 <p>Action linked to Management Objectives 2.3, 2.4, 2.5, 2.6, and 2.7</p> <p>Operational Objective: ORH 2.4</p> <p>MPI has progressed development of a comprehensive ERA framework that will complement the existing risk assessment work that has been occurred to date for seabirds and marine mammals. Following completion of a comprehensive literature review of ERA methodologies available, the recommended ERA methodology has moved away from a fishery based "Level 1" (expert-based) qualitative approach towards a more quantitative approach. Such an approach was considered to provide a more objective and repeatable assessment of risk, and makes use of the considerable data available for the deepwater fisheries.</p>

30	Monitor catch of, and assess risks to, non-QMS (Tier 3) species from deepwater 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.	
Actions for 12/13: <ul style="list-style-type: none"> Continue to monitor catch of Tier 3 species through commercial catch records and report to stakeholders through the ARR Use the ERA process in development to assess the risk to New Zealand's Tier 3 species 	
Action linked to Management Objectives 2.2 and 2.4	Operational Objectives: HOK 2.14, ORH 2.6, and all deepwater fisheries
Catch reporting of Tier 3 species is provided in Appendix III of this document. The ERA project scope has been refined to align with the approach identified in Management Action 29. This research project will be progressed during the 2013/14 year.	
31	Assist the Ministries' Policy Branch with review of policy developments and any necessary fisheries management information
Actions for 12/13: <ul style="list-style-type: none"> The Policy Branch within the Ministry may from time to time need information, feedback, and review of working documents that relate to New Zealand fisheries 	
Action linked to Management Objectives 1.2, 1.5	Operational Objective(s):N/A
Most interaction with members of the Policy Branch was in relation to the FCV bill (Fisheries (Foreign Charter Vessels and Other Matters) Amendment Bill).	
32	Monitor Subantarctic Marine Protected Areas (MPAs) as needed
MPAs have been approved for implementation in the territorial seas of the Antipodes, Bounty and Campbell Islands. These MPAs will be a combination of marine reserves and restrictions on Danish seining that complement the existing restrictions on trawling and dredging.	
Actions for 12/13: <ul style="list-style-type: none"> Contribute to the development of a monitoring programme once MPAs are implemented 	Business as Usual: <ul style="list-style-type: none"> Continue to monitor until a formalised monitoring programme has been established
Action linked to all Management Objectives	Operational Objective: N/A
Legislation (the Subantarctic Islands Marine Reserves Bill) is expected to be passed in March 2014. Regulations to prohibit Danish seining will commence in a timeframe which is as congruent as possible to the enactment of the Bill.	
33	Manage the development of the Patagonian toothfish fishery, including any applications for special permits
Patagonian toothfish entered the QMS on 1 October 2010. Research into this fishery is planned and may require special permits to be approved.	
Actions for 12/13: <ul style="list-style-type: none"> Assist with establishing a management programme that will increase our understanding of the stock while supporting 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
There were no applications for special permits for the Patagonian toothfish fishery in 2012/13. Informal discussions were held with quota holders regarding the future development of the fishery. Further progress is dependent on industry interest and action.	

Part 2: Deepwater Fisheries Research, Compliance, Observer Coverage and Cost Recovery Levies

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

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

2.1 Observer Coverage

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.

2012/13 Coverage Performance

In most areas during 2012/13, more observer days were achieved than were planned. The level of coverage in relation to the coverage target for each fishery area is shown in Table 3. 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.

Table 3: Planned and achieved observer coverage for 2012/13 financial year⁴

Fishery	Fisheries covered	Days Planned	Days Achieved	MPI / DOC cost recovery %
Deepwater trawl fisheries:				
ORH 1		46	29 (63%)	85/15
East Coast NI Deepwater	ORH2A BYX2 CDL2	191	18 (9%)	85/15
Chatham Rise Deepwater	ORH3B OEO3A, OEO4 BYX3	220	50 (227%)	65/35
Sub-Antarctic Deepwater	ORH3B OEO1, OEO6	180	15 (8%)	85/15
West Coast NI Deepwater	ORH7A	11	16 (145%)	75/25
Hoki & Middle Depth trawl fisheries:				
West Coast SI (FMA7)	HOK1 HAK7 LIN7 SWA1 JMA7 EMA7	1464	1102 (75%)	85/15
Cook Strait	HOK1 HAK1, HAK7 LIN2, LIN7	177	123 (69%)	75/25
Chatham Rise (FMA3/FMA4)	HOK1 HAK1, HAK4 LIN3, LIN4 SWA3, SWA4 JMA3 EMA3	1448	1574 (108%)	85/15
Sub-Antarctic (FMA5/FMA6)	HOK1 HAK1 LIN5, LIN6 SBW6B, SBW6I, SBW6R JMA3 EMA3	1349	2479 (183%)	85/15
West Coast NI (FMA8)	HOK1 LIN7 SWA1 JMA7 EMA7	347	755 (217%)	85/15
Deepwater bottom longline fisheries:				
Bottom longline	LIN PTO1	144	24 (16%)	75/25
Shellfish:				
Scampi	SCI (all)	362	170(46%)	65/35
Aquatic Environment:				
Sea lion interactions	SQU6T	1055	898 (85%)	80/20
	Total days:	6994	7253 (103%)	

⁴ At present, days covered is the only metric available, in future, more informative metrics will be reported.

2.2 Deepwater Fisheries Research

Research needs for deepwater fisheries are driven through the 10 Year Research Programme for Deepwater Fisheries (10YRP). This research programme focuses on obtaining comprehensive, consistent and robust information in a cost-effective manner. To accomplish this, the 10YRP specifies the routine research and data collection necessary to meet Management Objectives. The 10YRP 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 2012/13 financial year, which are detailed in Table 3, included six stock assessments, and trawl and acoustic surveys. All research projects contracted through the 10YRP 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 4: Research contracted for the 2012/13 financial year⁵ in the 10 Year Research Programme

Project code	Title	Time Frame
Trawl surveys		
HOK2010/04B	Estimation of hoki and middle depth fish abundance on the West Coast South Island using combined trawl and acoustic surveys	May 2012-June 2013
HOK2010/05	Estimation of hoki and middle depth fish abundance on the Chatham Rise using trawl surveys	Oct 2012-Sept 2013
MDT2010/02	Estimation of hoki and middle depth fish abundance on the Southern Plateau using trawl surveys	Oct 2012-Sept 2013
Acoustic surveys		
OEO2010/03	Estimation of the abundance of smooth oreo in OEO4 (Chatham Rise) using acoustic surveys	Sept 2012-Nov 2013
CDL2010/01	Biomass estimation of black cardinalfish (CDL2) using acoustic surveys	July 2011-Oct 2012
SBW2010/02	Biomass estimation of southern blue whiting using acoustic surveys (Bounty Platform)	July 2012-June 2012
SBW2010/03	Biomass estimation of southern blue whiting (Pukaki Rise)	March 2012-March 2013
Ageing projects		
MID2010/01	Routine age determination of hoki and middle depth species from commercial fisheries and trawl surveys	Nov 2012-Sept 2013
Stock Assessment		
DEE2010/02	Stock assessment of deepwater and middle depth fish stocks (BOE3A, OEO6, SCI1, SCI2, HOK1, HAK4, HAK7, LIN7 WC & CS)	Dec 2012-Sept 2013
DEE2010/02 SBW	Southern blue whiting SBW6B (Bounty Islands) and SBW6R (Pukaki rise) stock assessment	Nov 2012-June 2013
Stock characterisations		
DEE2010/07B	Characterisation and fishery monitoring of deepwater and middle depth species (BAR, GSH, RBT, RBY, SWA, SPD)	Aug 2012-June 2013
Scampi camera surveys		
SCI2010/02B	Estimating the abundance of scampi in SCI6A using photographic surveys	Jan 2012-Apr 2013
Aquatic environment		
DAE2010/01B	Taxonomic identification of benthic samples	July 2012-July 2013

⁵ Progress on projects is not available, reports should be made publically available at the conclusion of each project.

Project code	Title	Time Frame
DAE2010/02B	Bycatch monitoring and quantification of deepwater stocks (Ling long-line and squid fisheries)	Dec 2012- Sept 2013
DAE2010/04B	Monitoring the trawl footprint for deepwater fisheries	Jan 2012- May 2013
PRO2010/01	Estimating the nature and extent of incidental captures of seabirds, marine mammals and turtles in New Zealand commercial fisheries	Jan 2013- July 2013

Research reports

Final research reports from previously contracted work that were published in the 2012/13 year that relate to deepwater fisheries are shown in Table 4 below. Links to these documents are provided where possible, but all published reports can be found on the MPI NZ Fisheries InfoSite (www.fs.fish.govt.nz).

Table 5: Final research reports published during the 2012/13 financial year

Doc #	Title
Annual Documents	
2012 Nov. Plenary	Ministry for Primary Industries (2012): Fisheries Assessment Plenary, November 2012: Stock Assessments and Yield Estimates. 531p. Compiled by the Fisheries Science Group.
2012 May Plenary	Ministry for Primary Industries (2013). Fisheries Assessment Plenary, May 2013: Stock Assessments and Yield Estimates. 1357p. Compiled by the Fisheries Science Group.
2012 AEBA	Ministry for Primary Industries (2012) Aquatic Environment and Biodiversity Annual Review 2012. 387p. Compiled by the Fisheries Management Science Team.
Aquatic Environment and Biodiversity Reports (AEBRs)	
96	Rowden, A.A.; Berkenbuisch, K.; Brewin, P.E.; Dalen, J.; Neill, K.F.; Nelson, W.A.; Oliver, M.D.; Probert, P.K.; Schwarz, A.-M.; Sui, P.H.; Sutherland, D. (2012) A review of the marine soft-sediment assemblages of New Zealand. NZ Aquatic Environment and Biodiversity Report No. 96. 165 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=1392
97	Floerl, O.; Hewitt, J.; Bowden, D. (2012). Chatham-Challenger Ocean Survey 20/20 Post Voyage analyses: Objective 9 – Patterns in Species Composition. New Zealand Aquatic Environment and Biodiversity Report No. 97. 40 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=1430
98	Roe, W.D.; Meynier, L. (2012). Review of necropsy records for bycaught NZ sea lions (<i>Phocarctos hookeri</i>), 2000–2008. New Zealand Aquatic Environment and Biodiversity Report No. 98. 43 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=1465
100	Anderson, O.F. (2012). Fish and invertebrate bycatch and discards in New Zealand scampi fisheries from 1990–91 until 2009–10. New Zealand Aquatic Environment and Biodiversity Report No. 100. 65 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=1502
102	Francis, M.P.; Lyon, W.S. (2012). Review of research and monitoring studies on New Zealand sharks, skates, rays and chimaeras, 2008–2012. New Zealand Aquatic Environment and Biodiversity Report No. 102. 70 p. http://www.mpi.govt.nz/Default.aspx?TabId=126&id=1535
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2.3 Compliance

Successfully delivering on Management Objectives for deepwater fisheries is dependent upon high levels of compliance with the various sustainability and environmental regulations defined in legislation. The Ministry's Field Operations Group was responsible for providing the intervention services to achieve cost-effective compliance with all regulations.⁶ 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.

Overall, 100 inspections were completed covering 41 vessels. Many vessels were inspected more than once for different aspects of compliance. Outcomes of inspections are reported in Tables 6 and 7 below.

Table 6: Summary of performance indicators

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

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

Inspection detail	# of inspections	# of breaches	Compliance rate
Certificate of registry	58	0	100%
Fishing gear	42	0	100%
Fishing permit	70	0	100%
SLED	21	0	100%

⁶ Function is now under the Compliance Directorate in the Compliance and Response Branch of MPI.

It is important to note that SLED inspections are likely to include more than one SLED per inspection. No breaches were reported against Indicator 1.

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

Inspection detail	# of inspections	# of breaches	Compliance rate
Effort returns	33	0	100%
Landing documents	24	1	96%
Landing return book	29	1	97%

Two breaches were reported against Indicator 2. One involved a CLR that had not been completed correctly while the other related to an incorrect recordkeeping document being used. Both breaches were promptly rectified.

In addition to the monitoring of these performance indicators, a draft compliance risk profile of the southern blue whiting fisheries was compiled. It has yet to be released. A significant proportion of the analysis was based on work undertaken by Fishery Officers, Observers and other MPI staff during the 2012 southern blue whiting season. The profile will likely be released following analysis of additional information collected during the 2013 southern blue whiting season.

2.4 Cost Recovery Levies

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

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

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

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

Table 8 shows the total cost recovery levies for the 2012/13 financial year from stocks managed under the National Deepwater Plan.

Table 9: Cost recovery levies for deepwater stocks and all New Zealand fisheries for 2012/13 financial year

		Total levied (\$) for stocks managed in National Deepwater Plan	Total levied (\$) for all New Zealand fisheries
Compliance		4,416,085	10,022,687
Registry		2,002,202	4,617,571
Observers	MPI	2,994,797	3,540,305
	DOC	442,660	747,275
Research	MPI	11,619,947	14,978,288
	DOC	456,562	789,080
Total		21,867,217	33,932,251

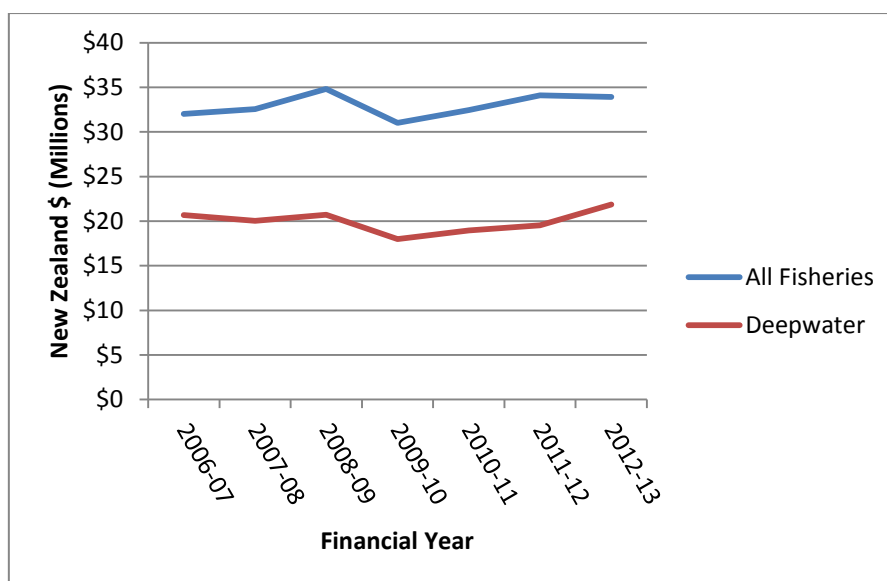


Figure 2: cost recovery levies 2006/07 to 2012/13

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

This part of the Annual Review Report reports on the overall impacts of deepwater fishing on the marine environment, and reports adherence to non-regulatory environmental mitigation measures for the 2012/13 fishing year. Species-specific environmental interactions are reported in Appendix I.

3.1 Environmental reporting

New Zealand's deepwater fisheries are known to interact with the marine environment including protected species, the benthic habitat, and other bycatch species. In order to achieve Management Objective 2.5, DWG and the Ministry work together to monitor adherence to non-regulatory management measures and environmental interactions. Non-regulatory measures include vessel-specific management plans for mitigating incidental seabird captures (VMPs), Marine Mammal Operational Procedures (MMOP), and notification requirements for certain numbers of seabird or mammal captures (trigger points).

Vessel operators are required by law to report all captures of protected species to the Ministry on Non-fish/Protected Species Catch Returns. For reasons of increased reliability however, analyses of protected species interactions and adherence to non-regulatory measures is based on information collected on fishing trips carrying a Ministry observer. 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 2012/13 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 and scampi vessels <28m during the 2012/13 fishing year

Observed trips on trawl vessels >28m, or scampi vessels <28m in 2012/13	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
191	152	120	31	1

3.2 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 2012/13 fishing year.⁷ Table 12 shows industry reported seabird captures from 2012/13 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.

⁷ This table uses raw data from MPI Observers; species identifications have not yet been verified and are subject to change after specimens are necropsied.

Table 11: Observed seabird captures for the 2012/13 fishing year from trawl vessels targeting Tier 1 deepwater species

Species	Observed interactions	
	Alive	Dead
Albatrosses (unidentified)	1	2
Buller's albatross ⁸	19	32
Cape petrels	8	1
Common diving petrel	5	5
Fairy prion	2	
Giant petrels (unidentified)	3	
Great albatrosses	2	1
Grey petrel	2	9
Petrel (unidentified)	26	8
Petrels, prions and shearwaters	19	4
Prions (unidentified)	5	
Procellaria petrels	2	
Salvin's albatross	13	22
Shearwaters	6	12
Smaller albatross	2	
Sooty shearwater	15	51
Southern royal albatross	1	
Storm petrels	5	
Westland petrel	6	1
White-capped albatross ⁹	41	59
White-chinned petrel	92	136
White-faced storm petrel	2	
Total	277	343

Table 12: Industry-reported seabird interactions from 2012/13 fishing year from trawl vessels targeting Tier 1 deepwater species¹⁰

	Alive	Dead
Large seabirds	72	209
Small seabirds	205	314
Total	277	523

Table 13: Observed seabird captures and modelled estimates of total captures* in all New Zealand trawl fisheries by vessels >28m¹¹

		Observed				Estimated	
	Tows	Tows observed	% of tows observed	Observed captures	Capture rate	Estimated total captures	95% confidence interval
2007/08	32,766	8,295	25.3	219	2.64	922	762-1,128
2008/09	29,978	7,406	24.7	373	5.04	1,140	974-1,351
2009/10	29,506	7,675	26.0	235	3.06	829	695-998
2010/11	27,393	6,211	22.7	319	5.14	1,254	1,030-1,559
2011/12	25,568	8,266	32.3	230	2.78	753	629-923

* Does not include estimates of cryptic mortality

⁸ Includes one capture initially reported as XPB (Buller's and Pacific albatross).

⁹ Includes captures initially reported as XSY (shy albatross).

¹⁰ From Non-fish and Protected Species Bycatch forms.

¹¹ From <https://data.dragonfly.co.nz>

Table 14: 2011/12 Observed seabird captures and modelled estimates of total captures for Tier 1 New Zealand deepwater and middle-depth fisheries

		Observed			Estimated	
	Tows	Tows observed	% of tows observed	Observed captures	Estimated total captures	95% confidence interval
Hoki	11,332	2,580	22.8	61	265	207-347
Hake	644	226	35.1	6	10	6-15
Ling (trawl)	946	159	16.8	10	24	15-40
Squid (trawl)	3,505	1,380	39.4	106	327	261-422
Southern blue whiting	951	669	70.3	4	6	4-9
Jack mackerel	2,031	1,548	76.2	5	10	5-20
Scampi	4,506	459	10.2	9	197	128-300
Orange roughy	1,588	437	27.5	0	6	1-14
Oreo	1,660	428	25.8	1	8	3-16
Total	27,163	7,886	29.0	202		

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

		Observed				Estimated	
	Hooks	Hooks observed	% of hooks observed	Observed captures	Capture rate	Estimated total Captures	95% confidence interval
2007/08	19,007,405	3,240,756	17.0	22	0.007	525	351-842
2008/09	17,582,914	3,706,550	21.1	9	0.002	385	257-584
2009/10	18,394,593	1,717,425	9.3	10	0.006	313	222-429
2010/11	18,302,912	1,453,540	7.9	27	0.019	528	379-726
2011/12	17,015,693	1,705,202	10.0	9	0.005	337	231-476

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

Vessel Management Plans

VMP-related issues identified on the 31 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 such as 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 during 2012/13

Type of issue	Number reported
Administrative	2
Seabird trigger not reported	2
Offal management	18
Sticker removal	1
Seabird scaring devices	8

Seabird bycatch trigger point notifications

All trawl vessels over 28 metres are required to notify DWG any time they capture more than a given number of seabirds within a defined time period. These are known as trigger point notifications. There were 26 trigger point activations for seabird captures in the 2012/13 fishing year. Trigger point specifics and activations are summarised in Table 17 below. Two trigger point notifications were also received by vessels smaller than 28 metres, 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 2012/13 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	7
Seabirds - small	5 or more		18

3.3 Marine Mammals

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 2012/13 fishing year.

Table 19 shows the model estimated total captures from trawl fisheries for the 2007/08 to 2011/12 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 deepwater fisheries in the 2012/13 fishing year¹²

Species	Observed captures		Industry reported captures	
	Alive	Dead	Alive	Dead
Common dolphin	2	17	2	22
Dolphins and toothed whales				2
Dusky dolphin		1		
New Zealand fur seal	20	92	35	183
New Zealand sea lion	5	20	5	20
Seals and sealions ¹³			1	
Pilot whale		4		5
Risso's dolphin		1		

¹² These are not cumulative, an observed capture will also have been reported by the vessel (i.e. the NZ sea lion observed captures are the same events as the industry reported NZ sea lion capture).

¹³ This is a generic description; captures reported under this code are not reported at the species level.

Table 19: Model estimated total captures of marine mammals for the 2007/08 to 2011/12 fishing years from trawl vessels >28m

	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	32,766	8,295	25	124	1.49	514	304-1,000	100
2008/09	29,978	7,406	25	56	0.76	327	173-642	100
2009/10	29,506	7,675	26	61	0.79	295	157-642	100
2010/11	27,393	6,211	23	57	0.92	234	134-453	100
2011/12	25,568	8,266	32	67	0.81	262	144-538	100
Common dolphin								
2007/08	32,766	8,295	25	20	0.24	42	24-70	13.6
2008/09	29,978	7,406	25	11	0.15	27	13-49	12.7
2009/10	29,506	7,675	26	4	0.05	26	6-60	11.0
2010/11	27,393	6,211	23	8	0.13	60	24-113	8.7
2011/12	25,568	8,266	32	5	0.06	7	5-14	10.5
New Zealand Sea Lion								
2007/08	32,766	8,295	25	11	0.13	26	17-38	100
2008/09	29,978	7,406	25	3	0.04	13	7-24	100
2009/10	29,506	7,675	26	15	0.20	41	27-59	100
2010/11	27,393	6,211	23	6	0.10	23	13-35	100
2011/12	25,568	8,266	32	1	0.01	8	3-14	100

Table 20: 2011/12 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	11,332	2,580	23	33	200	98-417
Hake	644	226	35	1	8	1-23
Ling (trawl)	946	159	17	1	17	3-58
Squid (trawl)	3,508	1,382	39	8	25	12-53
Southern blue whiting	951	669	70	25	61	25-237
Jack mackerel	2,031	1,548	76	5	8	5-20
Scampi	4,506	459	10	1	7	1-26
Deepwater (ORH/OEO/CDL)	3,628	896	25	0	2	0-10
Tier 2 mid-depth*	6,559	764	12	8	76	30-187
Total	34,105	8,683	25	82		

* Includes all effort targeting Tier 2 middle depths species.

Marine Mammal Operational Procedures

One observed trip during 2012/13 was identified as having MMOP-related issues requiring follow up from DWG (see Table 10). The issue related to the non-reporting of a dolphin trigger.

Marine mammal trigger point notifications

All trawl vessels over 28 metres are required to notify DWG any time they capture more than a given number of marine mammals within a defined time period. There were 37 trigger point activations for marine mammal captures in the 2012/13 fishing year. These are summarised in Table 21 below. In additions to the activations detailed in Table 21, there was also an activation reported for pilot whales (four dead pilot whales were caught in a single tow).

Table 21: Marine mammal trigger point activations for the 2012/13 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	12
Dolphins	1	n/a	10
Sea lions	1	n/a	15

All fur seal trigger activations were for more than two captures in a 24-hour period.

3.4 Elasmobranchs

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.

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

Reporting for sharks 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 metres, scampi fishing vessels, and bottom longline vessels over 28 metres. Information is also reported from observer records, this information is based on Tier 1 target fishing.

Table 23: Observed and industry reported captures (by number) of protected shark species from the core deepwater fishing fleet in the 2012/13 fishing year

	Observed Captures	Industry-reported
Basking shark	21	20
Spine-tailed devil ray	0	0
Smalltooth sandtiger shark	0	0
Manta ray	0	0
White pointer shark	0	0
Whale shark	0	0

Table 24: Reported in zone landings (tonnes) of three categories of elasmobranchs from the core deepwater fishing fleet in 2012/13

	Chimaeras	Rays & Skates	Sharks & Dogfish
Generic reporting code	2	23	582
QMS species	1,289	529	3,382
Other	127	26	555
Total	1,418	578	4,520

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 2012/13 as a percent of total reported elasmobranch landings/catches in the core deepwater fleet.

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

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 2012/13 fishing year by the core deepwater fleet

	Total landings (tonnes greenweight)	% 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	11.5	1.6%	6.3	54.8%
Mako shark	15.2	18.9%	9.3	61.2%
Porbeagle shark	48.9	58.7%	32.1	65.6%
School shark	156.3	4.9%	1.7	1.1%
Spiny dogfish	3,149.6	63.4%	1.3	<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 2012/13 and three years of catch history.

Species code	Common name	2009/10	2010/11	2011/12	2012/13
JAV	Javelinfish	4,981	4,000	3,298	4,071
RAT	Rattails	3,685	3,193	3,243	4,047
OSD	Other sharks and dogfish	583	580	656	546
NCB	Smooth red swimming crab	565	586	203	717
SDO	Silver dory	416	194	189	127
SSI	Silverside	196	144	164	105
RHY	Common roughy	146	92	153	119
BSH	Seal shark	243	143	145	198
SBO	Southern boarfish	33	22	109	1
CRB	Crab (Unspecified)	167	81	103	72
LCH	Long-nosed chimaera	130	95	99	113
SND	Shovel-nosed dogfish	149	127	97	135
FHD	Deepsea flathead	96	92	84	102
WSQ	Warty squid	105	79	81	96
BEL	Bellowsfish	102	162	81	51
DWD	Deepwater dogfish (unspecified)	234	98	78	35
STU	Slender tuna	53	108	74	262
SFI	Starfish	64	60	73	47
OPE	Orange perch	19	39	67	39
SLK	Slickhead	127	39	58	44
CDO	Capro dory	52	54	46	35
CAR	Carpet shark	27	68	43	32
POP	Porcupine fish	42	26	40	33
CON	Conger eel	54	63	37	66
RUD	Rudderfish	55	36	32	53
ETB	Baxter's lantern dogfish	44	47	30	41
MOD	Morids	140	19	27	28
ETL	Lucifer dogfish	26	17	25	32
SRH	Silver roughy	64	32	24	127
MDO	Mirror dory	13	9	20	47
SCG	Scaly gurnard	14	13	20	14
BBE	Banded bellowsfish	37	63	20	32
WIT	Witch	15	27	16	17
JFI	Jellyfish (Unspecified)	6	30	16	25
SUN	Sunfish	8	15	15	13
OCT	Octopus	4	12	15	8
DWE	Deepwater eel (Unspecified)	9	11	14	10
HCO	Hairy conger	72	71	14	48
BEN	Scabbardfish	34	23	14	18
GON	Sandfish	23	17	14	18

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 2012/13 fishing year from all target Tier 1 species

Phyla	Common name	Total amount recorded (kg wet weight)
Cnidaria	Corals (protected species)	424
	Corals (generic codes)	3,033
	Soft corals	1
	Anemones	77
	Sea pens	90
	Hydroids	159
Porifera	Sponges	38,758

Trawl footprint

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

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

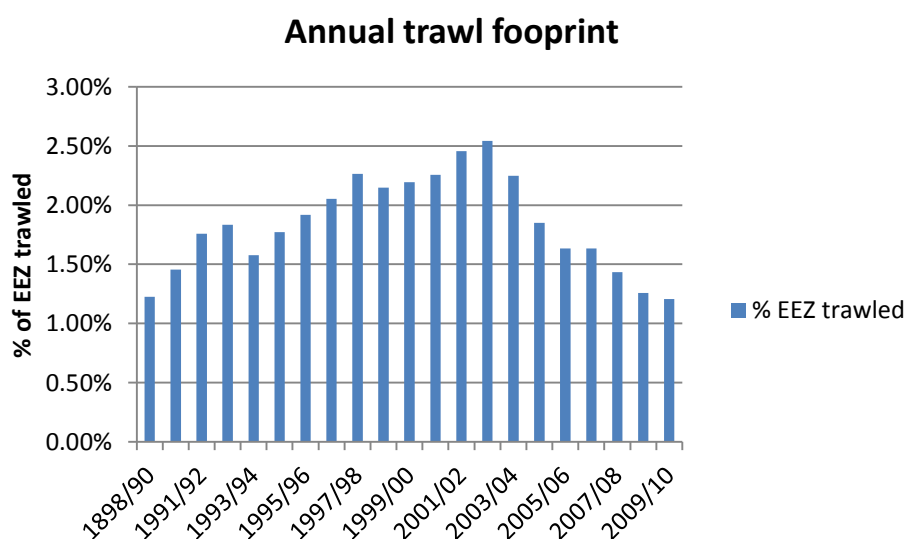


Figure 3: Estimated annual percentage of the EEZ seafloor contacted by trawling each year.

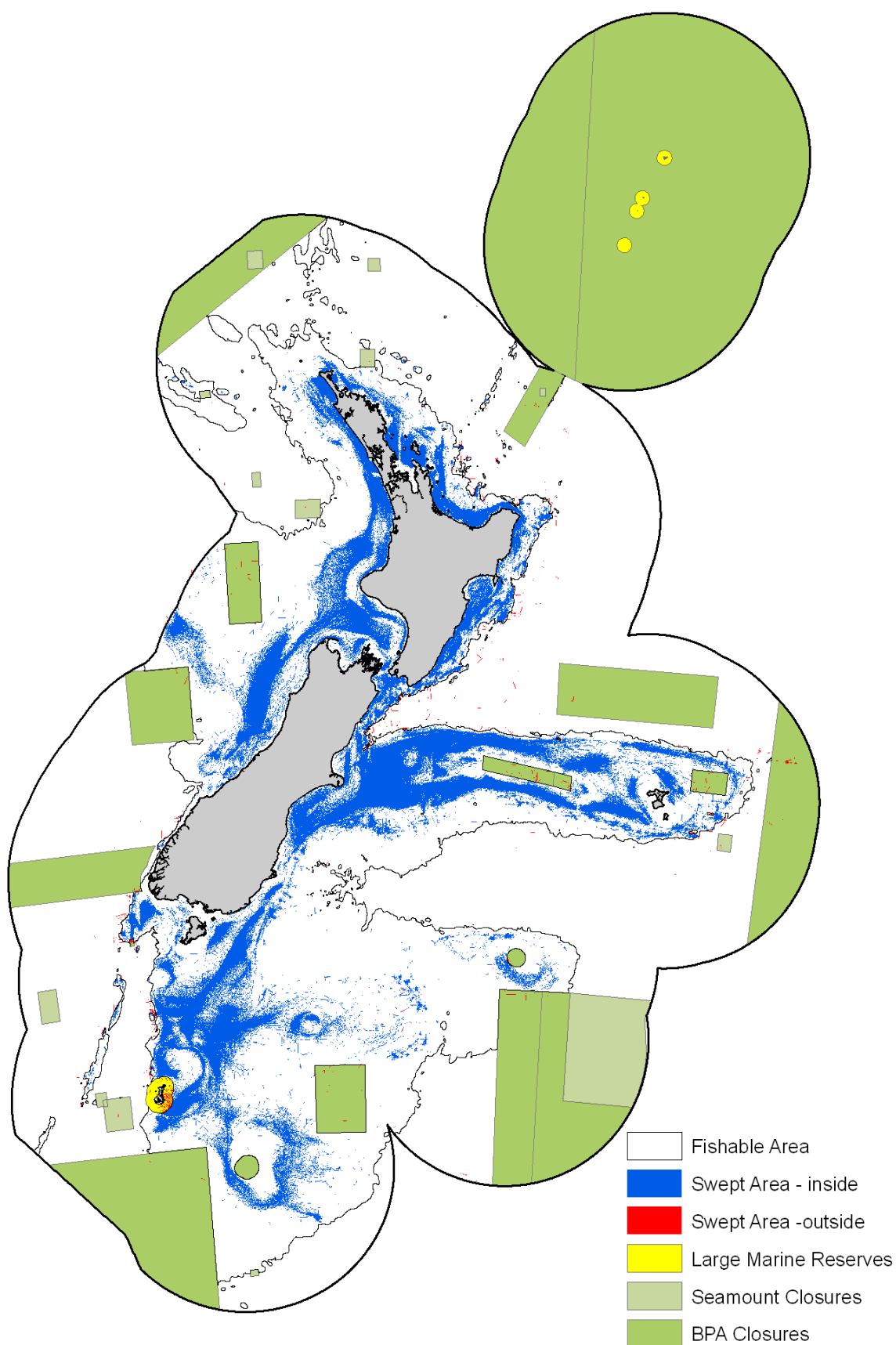


Figure 4: Trawl footprint for all deepwater species in relation to the fishable area for the period 1989/90 to 2009/10.

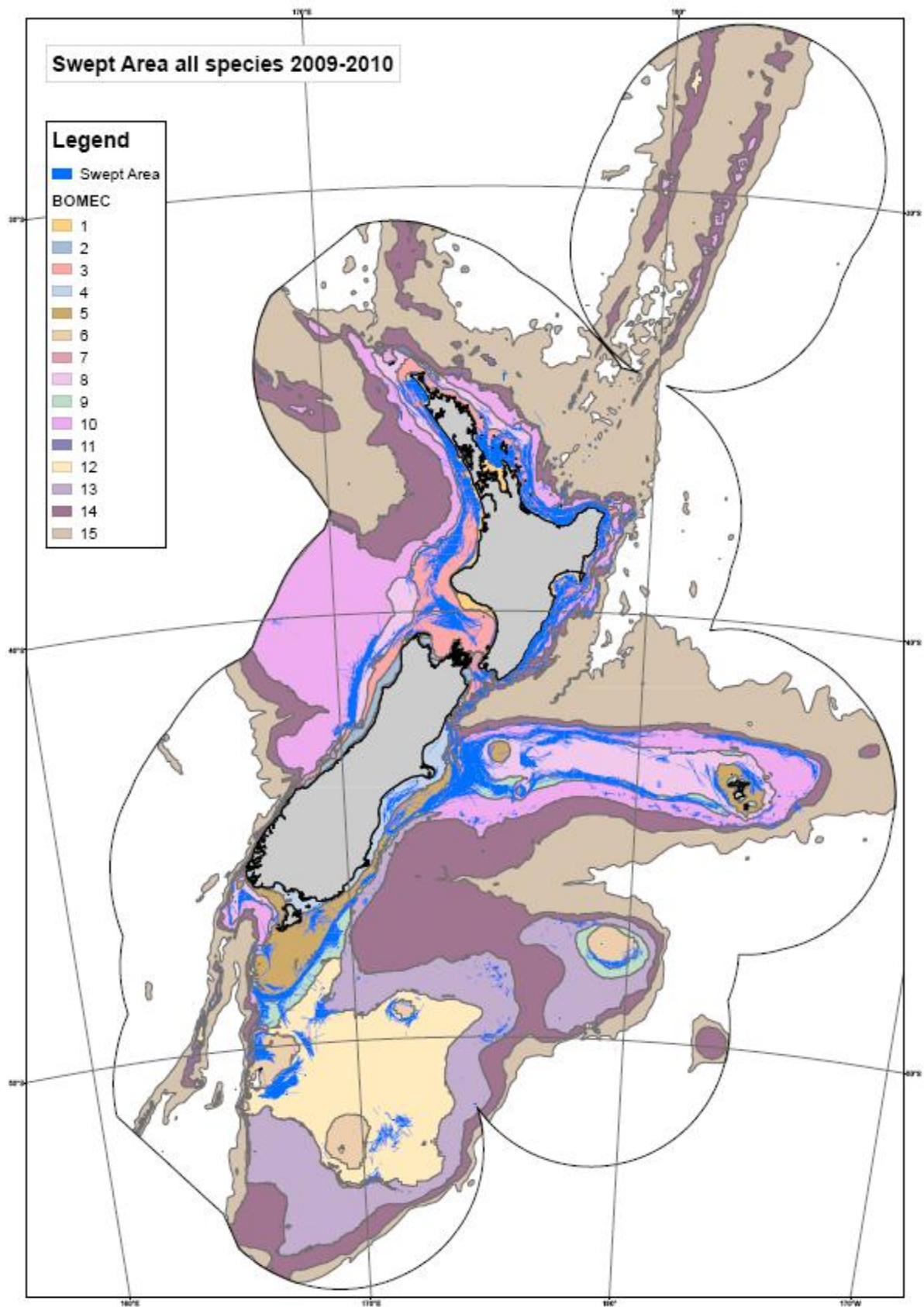


Figure 5: Trawl footprint for all deepwater species in relation to BOMECS areas for the 2009/10 fishing year.

Trawl footprint vs. Benthic Optimised Marine Environmental Classification (BOMECE)¹⁴

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.

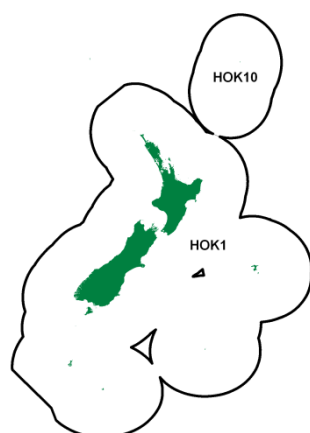
Table 29: The BOMECE classification and swept area for all species, 1989/90 to 2009/10.

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%

¹⁴ 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 NZ Deepwater fisheries 2012/13

HOK: Hoki (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
HOK1	131,568	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	2012/13 Actual		
HOK1	\$0.45 per kg	\$0.90 per kg	\$1.30 @ >102%	\$163		
Environmental indicators and observer coverage*						
Observer coverage		2011/12: 22.8% of tows observed		2012/13: 38.9% of tows observed		
Seabirds		2011/12: 61 observed		2012/13: 101 observed captures		
Marine mammals	NZ fur seal	2011/12: 33 observed		2012/13: 56 observed captures		
	NZ sea lion	2011/12: 0 observed		2012/13: 1 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 2012		\$195m				

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 2012/13 fishing year, owners of approximately 93% of the hoki quota had formally entered into the catch limit agreement requested by the Minister. The E:W catch limit regime is administered by FishServe and monitored by DWG.

Table 30 below provides details on the catch limits and catch amounts for the 2012/13 fishing year.

Table 30: Catch limits and actual catch estimates for 2012/13 fishing year.

Catch limits	2012/13 Planned	2012/13 Catch within agreement (from FishServe)	2012/13 Catch estimates for all fishers	Estimated catch scaled up to total landings
Eastern stock	60,000 tonnes	56,315 tonnes	58,677 tonnes	60,313
Western stock	70,000 tonnes	60,221 tonnes	69,327 tonnes	71,261

In addition to the planned catch limits, there was also an additional 1,119 tonnes of underfishing ACE for the eastern stock during 2013/13 and 2,785 tonnes for the western stock. Total catch in both stocks did not therefore exceed available ACE.

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 2012/13 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	20	17	471	772	7,849
Mernoo Bank	14	8	178	322	3,092
Puysegur	12	2	82	80	781
Cook Strait	1	3 ¹⁵	-	1	1

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

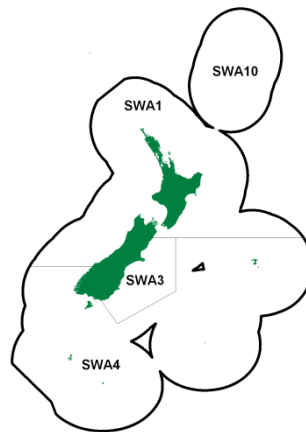
HMA	# of vessels that notified DWG every time before fishing in HMA	# of vessels that notified DWG on some occasions before fishing in HMA	# of vessels that never notified DWG before fishing in HMA
Canterbury Banks	11	7	2
Mernoo Bank	5	5	4
Puysegur	9	1	2
Cook Strait	-	-	1 ¹⁶

Of the 39 instances of a vessel failing to notify an entry to an HMA during the fishing year, 21 involved only a single tow. All instances were followed up with the vessel operator by DWG.

¹⁵ The three tows undertaken in the Cook Strait HMA were undertaken as part of a research project.

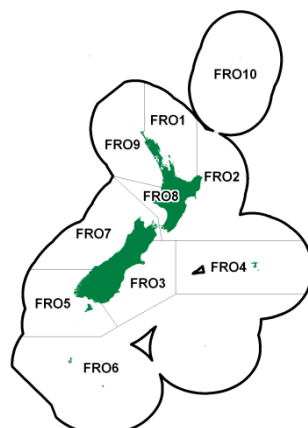
¹⁶ As above, the only fishing undertake in the Cook Strait HMA was done as part of a research project.

SWA: Silver warehou (Tier 2)



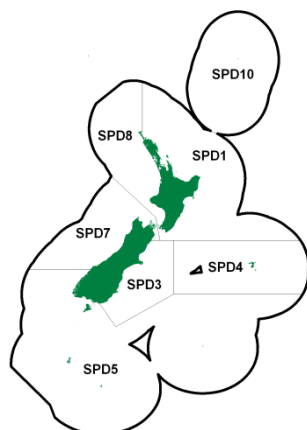
2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
SWA 1	748	3,003	3,000	2	1	0
SWA 3	3,788	N/A	3,280	N/A	N/A	N/A
SWA 4	4,128	N/A	4,090	N/A	N/A	N/A
Reference points and current status (as per Harvest Strategy 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	2012/13 Actual		
SWA 1	\$0.50 per kg	\$1.22 per kg	\$1.74 @ 110-130% \$3.00 @ >130%	\$18		
SWA 3				\$762,700		
SWA 4				\$487		
Economic indicators (calendar year)						
Quota value 2009			\$83m			
Export earnings 2012			\$22.2m			

FRO: Frostfish (Tier 2)



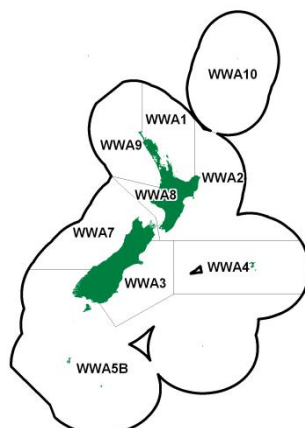
2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
FRO 3	32	176	176	0	0	N/A
FRO 4	2	28	28	0	0	N/A
FRO 5	4	135	135	0	0	N/A
FRO 6	<0.1	11	11	0	0	N/A
FRO 7	570	2,625	2,623	1	1	N/A
FRO 8	890	649	649	0	0	N/A
FRO 9	278	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	2012/13 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					0	
FRO 7					\$2	
FRO 8					\$38,024	
FRO 9					\$21,161	
Economic indicators (calendar year)						
Quota value 2009		\$2.8m				
Export earnings 2012		No export information specific to frostfish is currently available				

SPD: Spiny dogfish (Tier 2)



2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
SPD 4	442	1,666	1,626	10	10	20
SPD 5	1,548	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	2012/13 Actual		
SPD 4	\$0.05 per kg	\$0.10 per kg	N/a	\$585		
SPD 5				\$15		
Economic indicators (calendar year)						
Quota value 2009		\$6.1m				
Export earnings 2012		\$1.8m (includes all SPD stocks)				

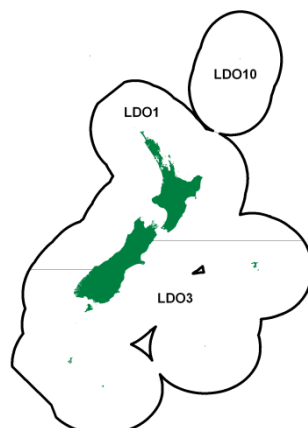
WWA: White warehou (Tier 2)



2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
WWA3	174	585	583	1	1	0
WWA4	117	332	330	1	1	0
WWA5B	1,037	2,621	2,617	2	2	0
WWA7	118	129	127	1	1	0
WWA8	<0.1	1	1	0	0	0
WWA9	0	0	0	0	0	0
Reference points and current status (as per Harvest Strategy Standard defaults)						
Target	40% B ₀	Unknown				
Soft Limit	20% B ₀	Unknown				
Hard Limit	10% B ₀	Unknown				
Deemed value rates and charges						
Stock	Interim		Annual	Differential	2012/13 Actual	
WWA3	\$0.52 per kg		\$1.03 per kg	\$2.00 @ >110%	0	
WWA4					\$66	
WWA5B					0	
WWA7					0	
WWA8	\$0.27 per kg		\$0.54 per kg	na	0	
WWA9					0	
Economic indicators (calendar year)						
Quota value 2009		\$16.8m				
Export earnings 2012		\$9.1m ¹⁷				

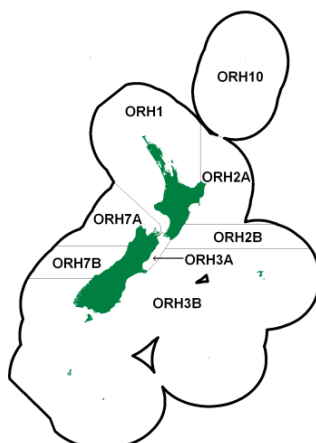
¹⁷ Information in export statistics for “Warehou, Other” assumed to be white warehou as there are separate entries for silver and blue warehou.

LDO: Lookdown dory (Tier 2)



2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
LDO1	185	168	168	0	0	0
LDO3	308	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	2012/13 Actual	
LDO1	\$0.21 per kg		\$0.42 per kg	na	\$4,725	
LDO3	\$0.21 per kg		\$0.42 per kg	na	0	
Economic indicators (calendar year)						
Quota value 2009		\$0.9m				
Export earnings 2012		Primarily sold domestically and does not feature in export statistics				

ORH: Orange roughy (Tier 1)



2012/13 Landings, Catch limits, and Allowances (tonnes)						
Stock	2012/13 Catch	TAC	TACC	Recreational	Customary	Other fishing related mortality
ORH 1	1,171	1,470	1,400	0	0	70
ORH 2A	727	919	875	0	0	44
ORH 2B	102	194	185	0	0	9
ORH 3A	296	436	415	0	0	21
ORH 3B	2,515	3,780	3,600	0	0	180
ORH 7A	772 ¹⁸	525	500	0	0	25
ORH 7B	0.3	1	1	0	0	0
Reference points and current status						
Target	30-40%B ₀ ¹⁹	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 ₂₀₁₃ : 25%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	

¹⁸ Includes 259 tonnes taken under special permit as part of a trawl survey.

¹⁹ Currently, the target has only been agreed for the East and South Chatham Rise.

		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 if in target range. Reduced if biomass between 30%B ₀ and 10%B ₀		
Deemed value rates and charges				
Stock	Interim	Annual	Differential	2012/13 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%	0
ORH 2B			\$7.00 @ 140-160%	0
ORH 3A			\$8.00 @ 160-180%	0
			\$9.00 @ 180-200%	
			\$10.00 @ > 200%	
ORH 3B	\$2.50 per kg	\$5.00 per kg	\$6.25 @ > 110%	0
ORH 7A	\$1.60 per kg	\$3.20 per kg	\$3.84 @ 120-140% \$4.48 @ 140-160% \$5.12 @ 160-180% \$5.76 @ 180-200% \$6.40 @ > 200%	0
ORH 7B	\$1.60 per kg	\$3.20 per kg	\$5.00 @ > 110%	0
Environmental indicators and observer coverage ²⁰				
Observer coverage*		2011/12: 27.5% tows observed		2012/13: 12% tows observed
Seabirds		2011/12: 1 observed;		2012/13: 0 observed capture
Marine mammals	NZ fur seal	2011/12: 0 observed;		2012/13: 0 observed captures
	NZ sea lion	2011/12: 0 observed;		2012/13: 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 2012		\$28.9m (may include some catch from outside the EEZ)		

Sub-area catch limits

Table 33: Sub-area catch limits and actual 2012/13 catch for orange roughy stocks.

Sub-area catch limits (in tonnes)			
Stock	Sub-area	Agreed catch limit	2012/13 Catch²¹
ORH 1 ²²	Area A	500 tonnes	546
	Area B	500 tonnes	498
	Area C	500 tonnes	0
	Area D	500 (incl. 30 tonnes bycatch limit in the Mercury-Colville Box)	127 (incl. 10 tonnes in MC Box)
ORH 2A	ORH 2A North	200	191
ORH 2A South, 2B and 3A	MEC	930 ²³	934
ORH 3B	NW Chatham Rise	750 ²⁴	109
	E and S Chatham	1,950	2,029

²⁰ Capture information is based on all fishing activity targeting both oreo and orange roughy.

²¹ From industry-reported catch records, monitored by MPI.

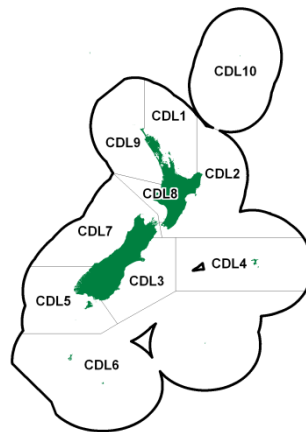
²² A 500 tonne catch limit applies to each sub-area despite the overall TACC being 1,400 tonnes. This means the catch limit cannot be reached in each sub-area.

²³ Industry agreed to shelve 300 tonnes of the 1,230 tonnes of MEC ACE during the 2012/13 year.

²⁴ Subject to an industry agreement not to target ORH in this area during the 2012/13 year.

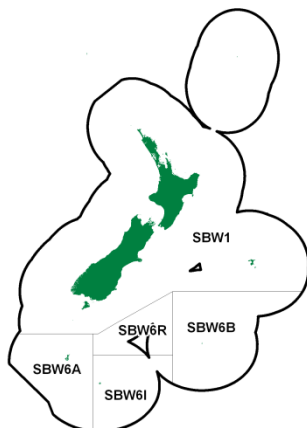
	Rise	250 research allowance	326
	Puysegur	150	42
	Sub-Antarctic	500	9

CDL: Black cardinalfish (Tier 2)



2012/13 Landings, Catch limits, and Allowances (in tonnes)						
Stock	2012/13 Catch	TAC	TACC	Recreational	Customary	Other fishing related mortality
CDL 1	35	1,320	1,200	0	0	120
CDL 2	470	460	440	0	0	20
CDL 3	40	196	196	0	0	N/A
CDL 4	10	66	66	0	0	N/A
CDL 5	14	22	22	0	0	N/A
CDL 6	1	1	1	0	0	N/A
CDL 7	2	39	39	0	0	N/A
CDL 8	0	0	0	0	0	N/A
CDL 9	4	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	2012/13 Actual	
CDL 1	\$0.15 per kg		\$0.30 per kg	na	0	
CDL 6					\$26	
CDL 7					0	
CDL 8					0	
CDL 9					\$1.50	
CDL 2	\$0.30 per kg		\$0.60 per kg	\$0.69 @> 120%	\$20,621	
CDL 5	\$0.26 per kg		\$0.52 per kg	na	0	
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 2012			\$1.5m			

SBW: Southern blue whiting (Tier 1)

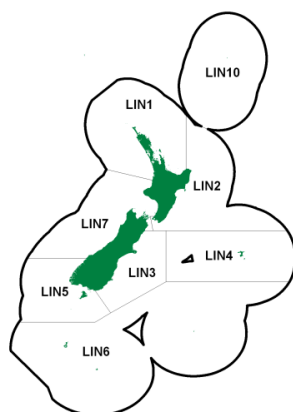


Landings, Catch limits and Allowances as of 1 April 2012 (tonnes)						
Stock	2012/13 Landings ²⁵	TAC	TACC	Recreational	Customary	Other fishing related mortality
SBW 1	8	8	8	0	0	N/A
SBW 6A	49	1,640	1,640	N/A	N/A	N/A
SBW 6B	6,827	7,000	6,860	0	0	140
SBW 6I	21,321	30,000	29,400	0	0	600
SBW 6R	1,702	5,500	5,500	N/A	N/A	N/A
Reference points and Current status (as per Harvest Strategy Standard defaults)						
Target	40% B _o	SBW 1	Unknown			
		SBW 6A	Unknown			
		SBW 6B	Unknown			
		SBW 6I	Unknown			
		SBW 6R				
Soft limit	20%B _o	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 _o	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	2012/13 Actual	
SBW1	\$0.45 per kg	\$0.90 per kg		\$1.30 @ >102%	\$2	
SBW 6A	\$0.41 per kg	\$0.46 per kg @ 100-102%		N/A	\$30	
SBW 6B		\$0.60 per kg @ 102-150%			0	
SBW 6I		\$0.92 per kg @ 150%+			0	
SBW 6R					0	

²⁵ Totals are for the 2012/13 April fishing year (1 April 2012 – 31 March 2013).

Environmental indicators and observer coverage			
Observer coverage		2011/12: 70.3% tows observed	2012/13 100% tows observed
Seabirds		2011/12: 4 observed captures;	2012/13: 22 observed captures
Marine mammals	NZ fur seals	2011/12: 25 observed captures;	2012/13: 27 observed captures
	NZ sea lion	2011/12: 0 observed captures;	2012/13: 21 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 2012		\$20.7m	

LIN: Ling (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)

Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
LIN 2	576	N/A	982	N/A	N/A	N/A
LIN 3	1,472	2,060	2,060	0	0	0
LIN 4	2,181	4,200	4,200	0	0	0
LIN 5	3,610	3,633	3,595	1	1	36
LIN 6	3,102	8,590	8,505	0	0	85
LIN 7	3,010	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 ₂₀₁₂ : 71% B ₀	Very Likely (>90%) to be at or above
		LIN CS	B ₂₀₁₀ : 54% B ₀	Likely (>60%) to be at or above
Soft limit	20%B ₀	LIN 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%+	2012/13 Actual
LIN 2					0
LIN 3					\$263
LIN 4					\$2,037
LIN 5	\$1.20 per kg	\$2.38 per kg	\$3.40 per kg	\$6.00 per kg	\$2,017
LIN 6					0
LIN 7					\$2,163,000

Environmental indicators and observer coverage			
Observer coverage		Trawl - 2012/13: 21% tows observed	Longline – 2012/13: 0.8% hooks observed
		Trawl - 2011/12: 16.8% tows observed	Longline – 2011/12: 10% hooks observed
Seabirds	Trawl	2011/12: 10 observed;	2012/13: 9 observed captures
	Longline	2011/12: 9 observed;	2012/13: 0 observed captures
Marine mammals	NZ fur seal	2011/12: 1 observed;	2012/13: 4 observed capture
	NZ sea lion	2011/12: 0 observed;	2012/13: 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 2012		\$44.8m	

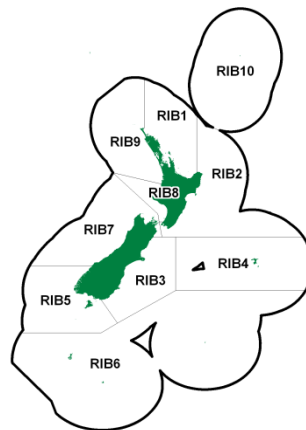
PTO: Patagonian toothfish (Tier 2)



2012/13 Landings, Catch limits and Allowances (tonnes)						
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality
PTO 1	27	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% +	2012/13 Actual
PTO 1	\$13.50 per kg		\$15.00 per kg		\$25.00 per kg	0
Economic indicators (calendar year)						
Quota value 2009		\$N/A				
Export earnings 2013		\$17.8m ²⁶				

²⁶ The majority of revenue was generated by Patagonian toothfish taken in other jurisdictions but landed in New Zealand.

RIB: Ribaldo (Tier 2)



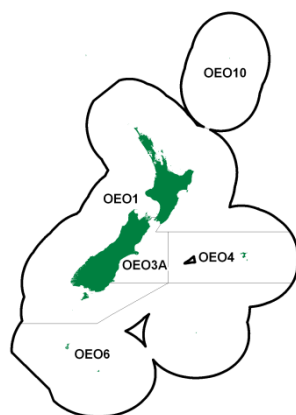
2012/13 Landings, Catch limits and Allowances (tonnes)									
Stock	2012/13 Landings	TAC		TACC	Recreational	Customary	Other fishing related mortality		
RIB 3	182	394		394	0	0	0		
RIB 4	234	357		357	0	0	0		
RIB 5	35	52		52	0	0	0		
RIB 6	66	231		231	0	0	0		
RIB 7	180	330		330	0	0	0		
RIB 8	2	1		1	0	0	0		
Reference points and Current status (as per Harvest Strategy Standard defaults)									
Target	40% B ₀	RIB 7 & 8		Unknown					
		RIB 3 & 4		Unknown					
		RIB 5 & 6		Unknown					
Soft Limit	20% B ₀	RIB1, 2, 7, 8, 9		Unknown					
		RIB 3 & 4		Unlikely to be below soft limit (<40%)					
		RIB 5 & 6		Unlikely to be below soft limit (<40%)					
Hard Limit	10% B ₀	RIB1, 2, 7, 8, 9		Unknown					
		RIB 3 & 4		Unlikely to be below hard limit (<40%)					
		RIB 5 & 6		Unlikely to be below hard limit (<40%)					
Deemed value rates and charges									
Stock	Interim	100-120%		120-140%	140-160%	160-180%	180-200%	200%+	2012/13 Actual
RIB 3	\$0.15	\$0.30		\$0.36	\$0.42	\$0.48	\$0.54	\$0.60	0
RIB 4									\$4
RIB 5									0
RIB 8									\$276
RIB 6	\$0.40	\$0.80		\$0.96	\$1.12	\$1.28	\$1.44	\$1.60	0
RIB 7	\$0.40	100-110% \$0.80	110-120% \$1.20	\$2.00					0
Economic indicators (calendar year)									
Quota value 2009		\$2.7m							
Export earnings 2012		No export information specific to ribaldo is currently available							

Hake (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)								
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality		
HAK 1	2,079	N/A	3,701	N/A	N/A	N/A		
HAK 4	177	1,818	1,800	0	0	18		
HAK 7	5,434	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%+	2012/13 Actual
HAK 1								0
HAK 4	\$0.80	\$1.60	\$1.92	\$2.24	2.56	2.88	3.20	\$203
HAK 7								0
Environmental indicators and observer coverage								
Observer coverage			2011/12: 35.1% tows observed				2012/13: 76.0% tows observed	
Seabirds			2011/12: 6 observed;				2012/13: 14 observed captures	
Marine mammals	NZ fur seal		2011/12: 1 observed;				2012/13: 7 observed capture	
	NZ sea lion		2011/12: 0 observed;				2012/13: 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 2012		\$14.7m						

Oreos (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)									
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality			
OEO 1	652	2,500	2,500	0	0	0			
OEO 3A	3,245	3,518	3,350	0	0	168			
OEO 4	6,944	7,000	7,000	0	0	0			
OEO 6	136	N/A	6,000	N/A	N/A	N/A			
Reference points and Current status (as per Harvest Strategy Standard defaults)									
Targ et	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%+	2012/13 Actual	
OEO 1								0	
OEO 4	\$0.39	\$0.78	\$0.936	\$1.092	\$1.248	\$1.404	\$1.56	0	
OEO 6								0	
OEO 3A	\$0.38	\$0.76	\$0.912	\$1.064	\$1.216	\$1.368	\$1.52	0	
Environmental indicators and observer coverage									
Observer coverage			2011/12: 25.8% tows observed				2012/13: 11.0% tows observed		

Seabirds		2011/12: 1 observed;	2012/13: 0 observed captures
Marine mammals	NZ fur seal	2011/12: 0 observed;	2012/13: 0 observed captures
	NZ sea lion	2011/12: 0 observed;	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 2012		\$18.9m	

Catch split

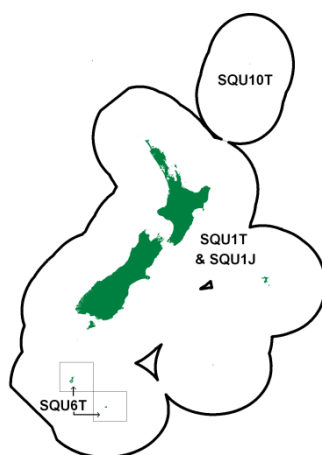
OEO 1

Area	Catch limit for 2012/13 (t)	Sum of catch reported to DWG or on TCEPRs/MHRs (t)
Southland (<i>smooth oreo only</i>)	400	195 (DWG)
Southland (<i>black oreo only</i>)	N/A	213 (DWG)
OEO1 excluding Southland (<i>all species</i>)	N/A	243 (TCEPR)
OEO1 (<i>all species</i>)	2,500	652 (MHR)

OEO3A

Species	Catch limit (t)	Sum of catch reported on CLRs (t)
Black oreo	1,700	1,598
Smooth oreo	1,650	1,632
<i>Totals</i>	<i>3,350</i>	<i>3,230</i>

Squid (Tier 1)



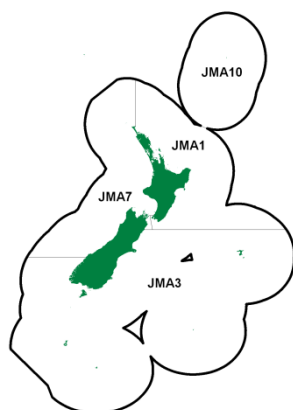
2012/13 Landings, Catch limits and Allowances (tonnes)								
Stock	2012/13 Landings	TAC	TACC	Recreational	Customary	Other fishing related mortality		
SQU 1J	741	N/A	50,212	N/A	N/A	N/A		
SQU 1T	13,951	44,741	44,741	0	0	0		
SQU 6T	9,944	N/A	32,369	N/A	N/A	N/A		
Reference points and Current status (as 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%+	2012/13 Actual
SQU 1J								0
SQU 1T	\$0.44	\$0.88	\$1.056	\$1.232	\$1.408	\$1.584	\$1.76	0
SQU 6T								0
Environmental indicators and observer coverage								
Observer coverage		2011/12: 39.4% tows observed				2012/13: 85.4% tows observed		
Seabirds		2011/12: 106 observed;				2012/13: 431 observed captures		
Marine mammals		NZ fur seals	2011/12: 8 observed;				2012/13: 6 observed captures	
		NZ sea lion	2011/12: 0 observed;				2012/13: 3 observed captures	
Benthic interactions (fishable area trawled)		2009/10: 4,194 km ² (0.30%)				1989/90 – 2009/10: 37,020 km ² (2.63%)		
Economic indicators (calendar years)								
Quota value 2009		\$116.5m						
Export earnings 2012		\$86.5m						

Southern squid trawl fishery (SQU6T) Operational Plan

FRML	Completed tows	Tows reported from TCEPR	% of tows observed	Observed sea lion captures	Estimated captures	% of FRML reached
68	1,015	1,027*	86%	3	10	15%

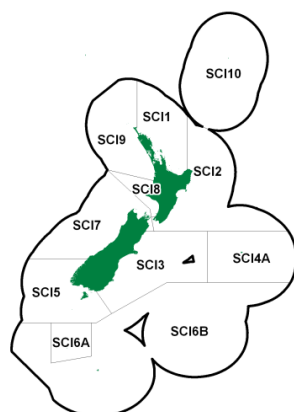
*Includes null returns and any tows that may have been aborted before any catches were made.

Jack Mackerel (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)								
Stock	2012/13 Landings		TAC	TACC		Recreational		Customary
JMA 3	3,829		NA	18,000		NA		NA
JMA 7	31,776		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%+	2012/13 Actual
JMA 3	\$0.08	\$0.09	\$0.108	\$0.126	\$0.144	\$0.162	\$0.18	\$31
JMA 7	\$0.08	\$0.15	\$0.18	\$0.21	\$0.24	\$0.27	\$0.30	\$73
Environmental indicators and observer coverage								
Observer coverage			2011/12: 76.3% tows observed				2012/13: 89.2% tows observed	
Seabirds			2011/12: 5 observed;				2012/13: 33 observed captures	
Marine mammals	NZ fur seal		2011/12: 5 observed;				2011/12: 3 observed captures	
	Common dolphin		2011/12: 5 observed;				2011/12: 16 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 2012		\$ 64.3m (for all stocks)						

SCI: Scampi (Tier 1)



2012/13 Landings, Catch limits and Allowances (tonnes)								
Stock	2012/13 Landings	TAC	TACC	Recreational		Customary	Other Mortality	
SCI 1	126	126	120	0		0	6	
SCI 2	96	105	100	0		0	5	
SCI 3	267	357	340	0		0	17	
SCI 4A	55	126	120	0		0	6	
SCI 6A	146	321	306	0		0	15	
SCI 7	7	79	75	0		0	4	
Reference Points and Current status (as per Harvest Strategy Standard defaults)								
Metric				Status				
Target	40% B ₀	SCI 1		B ₂₀₁₁ : Likely (> 60%) to be at or above				
		SCI 2		B ₂₀₁₂ : Very likely (> 90%) to be at or above				
		SCI 3 & 6A		Unknown				
Soft Limit	20% B ₀	SCI 1		Very Unlikely (<10%) to be below				
		SCI 2						
Hard Limit	10% B ₀	SCI 1 SCI 2		Very Unlikely (< 10%) to be below				
Deemed value rates and charges								
Stock	Interim	100-120%	120-140%	140-160%	160-180%	180-200%	200%+	2012/13 Actual
SCI 1	\$25.65	\$51.30	\$61.56	\$71.82	\$82.08	\$92.34	\$102.60	0
SCI 2								0
SCI 3								0
SCI 4A								0
SCI 6A								0
SCI 7								0
Environmental indicators and observer coverage								
Observer coverage		2011/12: 10.2% tows observed				2012/13: 6.5% tows observed		
Seabirds		2011/12: 9 observed;				2012/13: 10 observed captures		
Marine mammals	NZ fur seal	2011/12: 1 observed;				2012/13: 0 observed capture		
	NZ sea lion	2011/12: 0 observed;				2012/13: 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 2012			\$17.9m					

Appendix II: Results of 2012 Sustainability rounds

TAC reviews

Species	Stock	Pre-1 Oct 2011 TAC	Pre-1 Oct 2011 TACC	1 Oct 2011 TAC	1 Oct 2011 TACC
No stocks reviewed					
		Pre-1 April 2011 TAC	Pre-1 April 2011 TACC	1 April 2011 TAC	1 April 2011 TACC
No stocks reviewed					

Deemed value rate changes

Species	Stock	Deemed value rates prior to 1 Oct 2012 (\$/kg)			Deemed value rates post 1 October 2012(\$/kg)		
		Annual	Interim	Differential	Annual	Interim	Differential
Alfonsino	BYX1	\$1.51	\$1.44	Standard schedule	\$2.20	\$1.98	Standard schedule
	BYX2	\$2.00	\$1.00	Stock-specific schedule starting at 10% overcatch	\$2.20	\$1.98	Stock-specific schedule starting at 10% overcatch
	BYX3	\$1.50	\$0.75	Standard schedule	\$2.20	\$1.98	Standard schedule
	BYX3 (Chatham Island rate)	\$0.75	\$0.38		\$1.10	\$0.99	
	BYX7	\$1.76	\$0.88		\$2.20	\$1.98	
	BYX8	\$1.25	\$0.63		\$2.20	\$1.98	
	BYX10	\$1.66	\$0.83		\$2.20	\$1.98	
Ghost shark	GSH4	\$0.34	\$0.17	Standard schedule	\$0.40	\$0.36	Standard schedule
	GSH4 (Chatham Island rate)	\$0.15	\$0.08		\$0.20	\$0.18	
	GSH5	\$0.34	\$0.17		\$0.40	\$0.36	
	GSH6	\$0.15	\$0.08		\$0.40	\$0.36	

Stock-specific differential deemed value rates for BYX2 for 2012/13 fishing year

Catch in excess of ACE holdings	Percentage of the annual rate	Differential Rate
0–10 %	100%	\$ 2.20
> 10 %	120%	\$ 2.64
> 30 %	140%	\$ 3.08
> 50 %	160%	\$ 3.52
> 70%	180%	\$ 3.96
> 90%	200%	\$ 4.40

Appendix III: Landings of all Tier 3 species from core deepwater fleet 2008/09 to 2012/13 (in kgs)

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
JAV	Javelinfish	<i>Lepidorhynchus denticulatus</i>	4891635	4981178	3999681	3297768	4070825
RAT	Rattails	<i>Macrouridae</i> spp.	3744401	3685041	3192849	3243432	4046886
OSD	Other sharks and dogfish	Order Selachii	601624	582778	580440	656006	545641
NCB	Smooth red swimming crab	<i>Nectocarcinus bennetti</i>	353185	564711	586358	203438	717355
SDO	Silver dory	<i>Cyttus novaezealandiae</i>	565682	416054	194102	189183	127275
BSH	Seal shark	<i>Dalatias licha</i>	302551	242712	142558	145298	197890
CRB	Crab (unspecified)	N/A	378818	167195	81479	103281	72392
SSI	Silverside	<i>Argentina elongate</i>	209661	195743	144449	164095	104586
SND	Shovelnose dogfish	<i>Deania calcea</i>	266051	149001	126803	97137	134641
DWD	Deepwater dogfish	N/A	220288	233628	97601	78218	34666
RHY	Common roughy	<i>Paratrachichthys trailli</i>	118612	145921	91762	153240	118775
LCH	Long-nosed chimaera	<i>Harriotta raleighana</i>	106392	130480	95437	99080	113008
BEL	Bellowsfish	<i>Centriscoops</i> spp.	63330	102495	161999	80812	51324
WSQ	Warty squid	<i>Onykia</i> spp.	113592	105452	78926	81447	95682
FHD	Deepsea flathead	<i>Hoplichthys haswelli</i>	87372	96217	92243	84391	101772
SLK	Slickhead	<i>Alepocephalidae</i> spp.	132213	126536	39159	57635	43717
MOD	Morids	<i>Moridae</i> spp.	132610	139775	19442	27109	27868
STU	Slender tuna	<i>Allothunnus fallai</i>	56497	52554	108476	74076	262048
SFI	Starfish	N/A	64824	64000	60344	72810	46988
CON	Conger eel	Family Congridae	79528	53773	62687	37301	66009
HCO	Hairy conger	<i>Bassanago hirsutus</i>	53633	72009	70532	13815	47739
CDO	Capro dory	<i>Capromimus abbreviatus</i>	41787	52053	53762	45930	35445
RUD	Rudderfish	<i>Centrolophus niger</i>	60698	54541	35536	32094	53448
SBO	Southern boarfish	<i>Pseudopentaceros richardsoni</i>	16315	32762	21643	109319	897
BCD	Black cod	<i>Paranotothenia magellanica</i>	136558	9069	22795	10858	1781
BBE	Banded bellowsfish	<i>Centriscoops humerosus</i>	53364	36822	63224	19663	31890
CAR	Carpet shark	<i>Cephaloscyllium isabellum</i>	27423	27094	68184	42999	31879
OPE	Orange perch	<i>Lepidoperca aurantia</i>	32437	19161	39133	66665	39072
ETB	Baxter's lantern dogfish	<i>Etmopterus baxteri</i>	34464	43909	47157	30218	40531
POP	Porcupine fish	<i>Tragulichthys jaculiferus</i>	26716	42371	26232	40368	33259
BEN	Scabbardfish	<i>Benthodesmus</i> spp.	57553	34129	23328	13773	18,316
TOA	Toadfish	<i>Neophrynichthys</i> spp.	39705	33795	29866	23000	27894
SRH	Silver roughy	<i>Hoplostethus mediterraneus</i>	7130	63605	31531	23734	22203
BEE	Basketwork eel	<i>Diastobranchus capensis</i>	51518	36027	18231	11808	13939
MCA	Ridge scaled rattail	<i>Macrourus carinatus</i>	30422	38503	26273		
ETL	Lucifer dogfish	<i>Etmopterus lucifer</i>	17652	25718	17393	24735	32202

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
PIG	Pigfish	<i>Congiopodus leucopaecilus</i>	10261	8646	46389	13269	23132
WIT	Witch	<i>Arnoglossus scapha</i>	13364	15303	26942	16394	16,618
GON	Sandfish	<i>Gonorynchus</i> spp.	15167	23401	17213	13739	17,853
CSQ	Leafscale gulper shark	<i>Centrophorus squamosus</i>	22429	19780	13756	8968	29928
SCG	Scaly gurnard	<i>Lepidotrigla brachyoptera</i>	16701	13772	13297	19752	14060
HJO	Johnson's cod	<i>Halargyreus johnsonii</i>	25171	13997	14825	9168	21014
CBE	Crested bellowsfish	<i>Notopogon lilliei</i>	40050	4768	2865	11290	16424
NSD	Northern spiny dogfish	<i>Squalus griffin</i>	8631	16796	21962	9755	19759
JFI	Jellyfish (unspecified)	N/A	752	5742	29594	16390	25113
HSI	Jack-knife prawn	<i>Haliporoides sibogae</i>	8744	19267	12761	8888	1968
MDO	Mirror dory	<i>Zenopsis nebulosa</i>	7209	12658	9090	20207	47178
DWE	Deepwater eel (unspecified)	N/A	14404	9177	11281	14119	9926
ERA	Electric ray	<i>Torpedo fairchildi</i>	14174	10127	12225	12360	13935
DSK	Deepwater spiny skate	<i>Amblyraja hyperborean</i>	17363	10811	12685	7637	8047
THR	Thresher shark	<i>Alopias vulpinus</i>	8622	9017	15166	13593	16937
HAG	Hagfish	<i>Eptatretus cirratus</i>	14943	14014	13513	2469	5154
SUN	Sunfish	<i>Mola mola</i>	4376	8072	15147	15431	12913
LAN	Lanternfish	<i>Myctophidae</i> spp.	18463	11026	8491	2730	1322
OCT	Octopus	<i>Pinnoctopus cordiformis</i>	7889	3786	12480	14726	7747
BSK	Basking shark	<i>Cetorhinus maximus</i>	9800	19200	7000		
ANT	Anemones	N/A	5478	7959	11669	10590	11300
VCO	Violet cod	<i>Antimora rostrata</i>	10666	4300	3268	13475	4240
BOA	Sowfish	<i>Paristiopterus labiosus</i>	6023	16540	7597	68	41
DWO	Deepwater octopus	<i>Graneledone</i> spp.	6292	3823	13513	6200	5271
SBK	Spineback	<i>Notacanthus seipinis</i>	11258	6479	7592	3679	6491
PDG	Prickly dogfish	<i>Oxynotus bruniensis</i>	9251	5612	7249	4030	4196
SSH	Slender smooth-hound	<i>Gollum attenuates</i>	5277	5018	8792	6992	27499
DEA	Dealfish	<i>Trachipterus trachipterus</i>	9570	7524	2473	5110	5163
MIQ	Warty squid	<i>Onykia ingens</i>	7289	7142	4694	2810	95682
CHG	Purple chimaera	<i>Chimaera lignaria</i>	13455	1218	6356	688	13289
OPA	Opalfish	<i>Hemerocoetes</i> spp.	2641	7783	5494	3638	4819
BSL	Black slickhead	<i>Xenodermichthys</i> spp.	9892	6112	2	376	649
PAH	Opah	<i>Lampris immaculatus</i>	2572	3257	3390	6878	19262
EPR	Cardinal fish, robust	<i>Epigonus robustus</i>	4167	3869	5253	2356	1356
CHI	Chimaera spp.	<i>Chimaeras</i> pp.	2011	2033	10616	599	2171
URO	Sea urchin other (except SUR-Kina)	N/A	1105	2022	5568	4784	3570
SQX	Squid (unspecified)	N/A	6428	2530	2156	2054	4132
ALB	Albacore tuna	<i>Thunnus alalunga</i>	8215	251	2238	2451	10922

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
VSQ	Violet squid	<i>Histioteuthis</i> spp.	4245	3870	3351	1531	2403
RAY	Rays	N/A	4526	4122	725	3302	12095
NCA	Hairy red swimming crab	<i>Netocarcinus antarcticus</i>	11804	476	163	11	1
TSQ	Todarodes filippovae	<i>Todarodes filippovae</i>	3482	4377	2390	1978	1329
SNI	Snipefish	<i>Macroramphosus scolopax</i>	9090	1543	266	431	151
EPL	Cardinal fish, bigeye	<i>Epigonus lenimen</i>	2796	1538	4413	2114	6795
BER	Electric ray	<i>Typhlonarke</i> spp.	4638	1351	2757	1776	13935
APR	Cat shark	<i>Apristurus</i> spp.	8034	1449	241	570	1165
JGU	Japanese gurnard	<i>Pterygotrigla picta</i>	603	551	5226	3901	4130
RSQ	Ommastrephes bartrami	<i>Ommastrephes bartrami</i>	3179	2004	4317	755	120
WHX	Unicorn rattail	<i>Trachyrincus</i> sp.	2176	772	2754	3395	3905
PSK	Longnosed deepsea skate	<i>Bathyraja shuntovi</i>	3160	4795	360	575	762
YCO	Yellow cod	<i>Parapercis gilliesi</i>	747	2298	3070	2588	2541
PRA	Prawn (unspecified)	N/A	90	2741	3412	1885	132
SPZ	Spotted stargazer	<i>Genyagnus monopterygius</i>	4094	896	1612	1512	20
VOL	Volute	Family Volutidae	5255	125	587	1830	635
HYD	Hydrolagus spp.	<i>Hydrolagus</i> spp.	7767	14		11	
GSQ	Giant squid	<i>Architeuthis</i> sp.	1078	990	2233	3184	1566
OPI	Umbrella octopus	<i>Opisthoteuthis</i> spp.	484	1091	2579	3176	4370
COD	Cod (unspecified)	N/A	1942	3349	1481	207	55
HEX	Sixgill shark	<i>Hexanchus griseus</i>	1239	1423	2158	1916	4043
HYP	Pointynose blue ghost shark	<i>Hydrolagus trolli</i>		149	231	6351	74
PLS	Plunket's shark	<i>Centroscymnus plunketi</i>		1323	5071	169	3199
GRV	Macrourus spp.	<i>Macrourus</i> spp.				6516	
RDO	Rosy dory	<i>Cyttopsis rosea</i>	249	2944	2267	1033	4526
YBO	Yellow boarfish	<i>Pentaceros decacanthus</i>	509	1249	3077	1570	3631
BAT	Slickheads	<i>Rouleina</i> spp.		2295	3560	21	
UNI	Unidentified fish	N/A	729	801	2590	1669	6841
EGR	Eagle ray	<i>Myliobatis tenuicaudatus</i>	1705	1352	967	1629	1080
BRZ	Brown stargazer	<i>Xenocephalus armatus</i>	1176	1424	1003	1797	1464
PHO	Lighthouse fish	<i>Photichthys argenteus</i>	2351	991	621	979	926
UNX	All and any unidentified species	N/A	222	423	2295	1766	1524
OSK	Skate, other	Family Rajidae	1502	1607	929	605	10337
SCM	Roughskin dogfish	<i>Scymnodon macracanthus</i>	657	1810	1635	146	31
CYP	Longnose velvet dogfish	<i>Centroscymnus crepidater</i>	1262	2219	531	210	8198
WGR	Macrourus whitsoni	<i>Macrourus whitsoni</i>				4121	
SKJ	Skipjack tuna	<i>Katsuwonus pelamis</i>	3578	388	8	3	165
ICX	Icefishes	Family Channichthyidae				3636	

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
WRA	Whiptail ray	<i>Dasyatis thetidis</i>	1484	449	455	1114	1423
SBR	Southern bastard cod	<i>Pseudophycis barbata</i>	697	1135	896	642	1042
LSK	Long-tailed skate	<i>Arhynchobatis asperrimus</i>	154	1598	973	588	654
STR	Stingray (unspecified)	N/A	707	227	1010	778	227
HEP	Sharpnose sevengill shark	<i>Heptanchias perlo</i>	90	325	476	1762	966
SSC	Giant masking crab	<i>Leptomithrax australis</i>	2250		245		
CYO	Smooth skin dogfish	<i>Centroscyrnus owstoni</i>	178	210	1415	654	1475
MAN	Finless flounder	<i>Neoachirosetta milfordi</i>	750	644	484	454	2515
OFH	Oilfish	<i>Ruvettus pretiosus</i>	614	698	442	534	907
BRA	Short-tailed black ray	<i>Dasyatis brevicaudata</i>	2260				201
SPI	Spider crabs (unspecified)	N/A	371	308	1034	416	58
TAM	Tam O'Shanter urchins	N/A	61	514	369	971	2174
GRC	Grenadier cod	<i>Tripteryphycis gilchristi</i>	1776		3	87	31
SEV	Broadnose sevengill shark	<i>Notorynchus cepedianus</i>	243	473	487	656	1749
PLZ	Scaly stargazer	<i>Pleuroscopus pseudodorsalis</i>	141	517	540	560	28
NOT	Antarctic rock cods	<i>Paranotothenia</i> spp.	1524			186	6
TRA	Roughies	Family Trachichthyidae			1697		18
RPE	Red perch	Unspecified	1663			3	62
EEL	Eels, Marine (unspecified)	N/A	110	126	803	615	574
CSH	Cat shark	Other than <i>Apristurus</i> spp.	300	616	449	174	290
SCD	Smallscaled cod	<i>Paranotothenia microlepidota</i>	161	435	139	789	1756
SMC	Small-headed cod	<i>Lepidion microcephalus</i>	477	142	472	405	376
LEG	Giant lepidion	<i>Lepidion schmidtii</i> , <i>L. inosimae</i>	60	203	46	1184	20
BWH	Bronze whaler shark	<i>Carcharhinus brachyurus</i>	58	247	660	425	76
EUC	Eucla cod	<i>Euclichthys polynemus</i>	609	27	157	400	639
BTU	Butterfly tuna	<i>Gasterochisma melampus</i>	1192				
HTH	Sea cucumber (other than <i>Stichopus mollis</i>)	Holothuroidea (Class)	30	289	285	532	117
WHE	Whelks	N/A	290	177	388	259	302
BSP	Big-scale pomfret	<i>Taractichthys longipinnis</i>	111	88	258	555	1551
SLL	Slipper lobsters	<i>Scyllaridae</i> spp.	785	4	99	112	59
SOP	Pacific sleeper shark	<i>Somniosus pacificus</i>	1000				
ONG	Sponges	Porifera	887			6	98858 ²⁷
FMA	Fusitriton	<i>Fusitriton magellanicus</i>	378	153	270	70	247

²⁷ As reported on Non-fish and Protected Species Catch Returns

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
	magellanicus						
CYL	Portuguese dogfish	<i>Centroscymnus coelolepis</i>	301		555		59
MOB	Blunthead lightfish	<i>Margrethia obtusirostra</i>	143	82	60	546	645
CHP	Chimaera, purple	<i>Chimaera</i> sp.	215	97	374	95	627
LHO	Omega prawn	<i>Lipkius holthuisi</i>	522	128	42	10	127
BPE	Butterfly perch	<i>Caesioperca Lepidoptera</i>	227	142	183	150	35
MOR	Moray eel	<i>Muraenidae</i> spp.	171	63	382	63	18
BOT	Lefteye flounders	<i>Bothidae</i> spp.	47		407	200	16
WPS	White pointer shark	<i>Carcharodon carcharias</i>	650				
SNE	Snubnosed eel	<i>Simenchelys parasitica</i>	629		20		2
GUL	Gulper eel	<i>Eurypharynx pelecanoides</i>	40	120	365	62	16
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	65
CHX	Pink frogmouth	<i>Chaunax pictus</i>	105	365	15	36	62
AGR	Ribbonfish	<i>Agrostichthys parkeri</i>	176	98	131	112	242
MRL	Moray cods	<i>Muraenolepididae</i> sp.				512	
ROC	Rock cod	<i>Lotella rhacina</i>				485	
SDF	Spotted flounder	<i>Azygopus pinnifasciatus</i>	1		270	212	192
WHR	White rattail	<i>Trachyrincus longirostris</i>	349	50	80		16
API	Alert pigfish	<i>Alertichthys blacki</i>	84	99	155	108	185
CUB	Cubeheads	<i>Cubiceps</i> spp.	283	1		146	97
SDE	Seadevil	<i>Cryptopsaras couesi</i>	10	398			2
AER	Aeneator recens	<i>Aeneator recens</i>	400			5	
SAL	Salps	N/A		74	12	314	16337
DCS	Dawson's cat shark	<i>Halaelurus dawsoni</i>	335	61			161
LFB	Long-finned boarfish	<i>Zanclistius elevatus</i>		382	3	3	5
RAG	Ragfish	<i>Icichthys australis</i>	23	339	11	12	16
RMU	Red mullet	<i>Upeneichthys lineatus</i>	74	16	212	52	
OAR	Oarfish	<i>Regalecus glesne</i>	60	88	118	67	46
MNI	Krill, squat lobsters	<i>Munida</i> spp.	7	3	265		17
LEP	Escolar	<i>Lepidocybium flavobrunneum</i>	258			12	5
TRS	Cape scorpionfish	<i>Trachyscorpia capensis</i>	43	27	97	93	45
GPF	Girdled wrasse	<i>Notolabrus cinctus</i>	7	18	224		153
PSP	Scissortail	<i>Psenes pellucidus</i>		135		113	148
FTU	Frigate tuna	<i>Auxis thazard</i>	27		49	161	2
SSM	Smallscaled brown slickhead	<i>Alepocephalus antipodianus</i>		158		63	252
WSE	Wrasses	N/A	3	71	78	64	47
SYN	Cutthroat eels (except Basketwork eels)	N/A	128	87			
SEE	Silver conger	<i>Gnathopphis habenatus</i>	40	2	97	72	5

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
SCO	Swollenhead conger	<i>Bassanago bulbiceps</i>	17	14	1	178	15607
EBI	Pygmy shark	<i>Euprotomicrus bispinatus</i>				161	
PAG	Pagurid	N/A		1	153	6	45
EPD	Cardinal fish, white	<i>Epigonus denticulatus</i>		156			6
WLP	Wavy line perch	<i>Lepidoperca tasmanica</i>				150	150
NTU	Northern bluefin tuna	<i>Thunnus thynnus</i>	139				150
BPF	Banded wrasse	<i>Notolabrus fucicola</i>		1	124	14	
BSQ	Broad squid	<i>Sepioteuthis australis</i>	27	16	71	16	1
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	19
SLS	Slender sole	<i>Peltorhamphus tenuis</i>	53	65			
NOC	Notocanthus chemnitz	<i>Notocanthus chemnitz</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	400
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	55
TOD	Dark toadfish	<i>Neophrynichthys latus</i>	9	6		50	5
TIN	Tinselfish	<i>Xenolepidichthys dalgleishi</i>	7	5	45	6	
SRR	Amblyraja Georgiana	<i>Amblyraja georgiana</i>				57	
CAX	White brotula	<i>Cataetys</i> sp.		55			
KAN	Krefflichthys anderssoni	<i>Krefflichthys anderssoni</i>				45	
CFA	Banded rattail	<i>Coelorinchus rasciatus</i>				44	8
DSP	Deepsea pigfish	<i>Congiopodus coriaceus</i>			42	2	55
SPF	Scarlet wrasse	<i>Pseudolabrus miles</i>			40	2	31
INV	Invertebrate (unknown)	N/A	24			15	
FLO	Flounder (unspecified)	N/A			37		
CHA	Viper fish	<i>Chauliodus sloani</i>	31				
STG	Stargazer (unspecified)	N/A	21	8		1	27
CEN	Deepsea sharks	<i>Centroscymnus</i> spp.	30				
CTU	Cook's turban shell	<i>Cookia sulcata</i>				27	
DIS	Discfish	<i>Diretmus argenteus</i>	5	1	10	11	4
RRC	Red scorpion fish	<i>Scorpaena cardinalis</i> , <i>S. papillosus</i>	2	22		3	

Species code	Common name	Scientific name	2008/09	2009/10	2010/11	2011/12	2012/13
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	4
RCH	Widenosed chimaera	<i>Rhinochimaera pacifica</i>			17		17
AME	Sculpin	<i>Antipodocottus megalops</i>				17	
GSE	Snake mackerel	<i>Gempylus serpens</i>		16			138
TAS	Rough pomfret	<i>Taractes asper</i>			10	5	
ETM	Etmopterus spp.	<i>Etmopterus spp.</i>			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			
SAM	Quinnat salmon	<i>Omcorhynchus tshawytscha</i>		10			4
SHR	Sea hare	N/A		4	6		
GVO	Golden volute	<i>Provocator mirabilis</i>		6	2		2
ART	Brine shrimp	<i>Artemia salina</i>			6		
BRE	Codlet	<i>Bregmaceros macclellandi</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	
CAM	Sabre prawn	<i>Campylonotus rathbunae</i>	1				

Appendix IV: Cost recovery levies analysis

Table 30: Cost recovery levies (\$) for deepwater stocks 2012/13

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
BAR4	11,098	5,032	-	-	99	9,934	-	0	326	26,489
BAR5	24,642	11,172	2,051	0	2,068	22,047	-	344	962	62,895
BAR7	45,281	20,530	3,770	2,171	4,058	40,534	-	994	1,439	119,323
BYX1	5,557	2,520	-	-	50	688	-	0	74	8,889
BYX10	185	84	0	0	0	23	-	-	7	300
BYX2	29,322	13,294	6,687	46,428	262	3,694	-	0	49,959	50,699
BYX3	18,717	8,486	1,385	9,651	167	6,383	-	0	17,412	27,580
BYX7	1,323	600	0	0	12	600	-	0	16	2,114
BYX8	370	168	0	0	3	46	-	-	5	592
CDL1	11,400	5,169	0	0	102	1,441	-	0	209	18,320
CDL10	0	0	0	0	0	0	-	0	0	0
CDL2	4,180	1,895	953	6,618	37	1,492	-	0	14,185	1,129
CDL3	1,862	844	0	0	17	230	-	0	37	2,990
CDL4	627	284	0	0	6	284	-	0	18	1,013
CDL5	209	95	0	0	2	26	-	0	8	339
CDL6	9	4	0	0	0	1	-	0	0	15
CDL7	370	168	0	0	3	168	-	0	7	595
CDL9	38	17	0	0	0	5	-	0	1	61
CHC1	342	155	0	0	0	0	-	0	15	512
CHC10	0	0	0	0	0	0	-	0	0	0
CHC2	342	155	0	0	0	0	-	0	15	512

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
CHC3	137	62	0	0	0	0	-	0	6	205
CHC4	137	62	0	0	0	0	-	0	6	205
CHC5	137	62	0	0	0	0	-	0	6	205
CHC6	137	62	0	0	0	0	-	0	6	205
CHC7	137	62	0	0	0	0	-	0	6	205
CHC8	137	62	0	0	0	0	-	0	6	205
CHC9	137	62	0	0	0	0	-	0	6	205
EMA3	1,556	706	102	978	46	172	-	24	383	3,166
EMA7	13,366	6,060	858	8,220	391	1,480	-	357	2,774	27,369
FRO3	1,758	797	0	0	16	195	-	0	43	2,809
FRO4	103	47	0	0	1	11	-	0	7	169
FRO5	1,349	611	0	0	12	149	-	0	33	2,155
FRO6	110	50	0	0	1	12	-	0	3	176
FRO7	22,497	10,200	0	0	201	2,491	-	0	643	36,032
FRO8	6,484	2,940	0	0	58	718	-	0	159	10,358
FRO9	1,379	625	0	0	12	153	-	0	26	2,195
GSC1	34	16	0	0	0	0	-	0	2	51
GSC10	0	0	0	0	0	0	-	0	0	0
GSC3	479	217	0	0	0	0	-	0	21	717
GSC5	650	295	0	0	0	0	-	0	128	1,071
GSC6A	5,063	2,296	0	0	0	0	-	0	223	7,582
GSC6B	8,108	3,676	0	0	0	0	-	0	357	12,141
GSH4	872	395	0	42	26	30,564	-	0	71	31,969
GSH5	452	205	38	0	31	15,847	-	0	29	16,608
GSH6	421	191	0	0	4	14,753	-	0	15	15,384

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
GSP1	5,419	2,457	0	0	159	604	-	0	292	9,191
GSP5	2,139	970	0	0	19	238	-	0	94	3,461
GSP7	829	376	0	40	24	92	-	0	41	1,402
HAK1	49,534	22,458	3,948	34,393	1,451	23,053	-	254	18,862	116,294
HAK10	112	51	0	0	0	16	-	0	5	184
HAK4	20,867	9,461	754	7,702	611	65,919	-	211	10,423	94,789
HAK7	86,361	39,155	5,658	48,917	2,529	633,012	-	515	1,668	817,606
HOK1	987,981	447,939	142,138	1,246,194	92,134	5,473,260	-	4,908	164,106	8,241,277
HOK10	76	34	0	0	0	11	-	0	1	123
JMA3	74,646	33,844	4,871	46,895	2,186	26,644	-	1,024	19,002	169,765
JMA7	134,929	61,175	8,657	82,976	3,951	88,207	-	1,812	34,388	344,954
KIC1	512	155	0	0	0	0	-	0	15	512
KIC10	0	0	0	0	0	0	-	0	0	0
KIC2	342	155	0	0	0	0	-	0	15	512
KIC3	342	155	0	0	0	0	-	0	15	512
KIC4	342	155	0	0	0	0	-	0	15	512
KIC5	342	155	0	0	0	0	-	0	15	512
KIC6	342	155	0	0	0	0	-	0	15	512
KIC7	342	155	0	0	0	0	-	0	15	512
KIC8	342	155	0	0	0	0	-	0	15	512
KIC9	342	155	0	0	0	0	-	0	15	512
LDO1	2,533	1,149	0	0	23	280	-	0	97	4,082
LDO10	14	6	0	0	0	2	-	0	0	23
LDO3	8,565	3,883	0	0	77	948	-	0	378	13,850
LIN3	48,539	22,007	13,319	22,915	9,022	19,716	-	18,057	915	120,309

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
LIN4	101,337	45,945	19,370	47,841	19,222	27,266	-	41,405	2,082	224,471
LIN5	79,624	36,101	10,917	32,648	7,135	27,211	-	19,638	1,676	177,261
LIN6	225,247	102,125	12,130	92,358	6,596	48,081	-	155	7,749	495,893
LIN7	57,361	26,007	24,681	44,973	5,140	700,287	-	34	1,818	863,818
OEO1	21,206	9,615	1,542	11,916	621	3,032	-	319	3,774	44,063
OEO10	85	38	0	0	0	12	-	0	4	139
OEO3A	28,416	12,884	2,103	16,014	1,707	91,184	-	428	6,238	145,948
OEO4	59,377	26,921	4,395	33,461	3,566	1,536,403	-	895	13,032	1,650,834
OEO6	50,895	23,075	3,701	28,598	1,490	172,427	-	768	7,438	272,519
ORH1	32,983	14,954	3,209	22,281	966	4,763	-	628	28,479	50,516
ORH10	236	107	0	0	0	34	-	0	213	163
ORH2A	20,781	9,422	4,739	33,900	609	6,803	-	414	70,905	5,621
ORH2B	3,298	1,495	0	158	97	1,321	-	68	6,273	28
ORH3A	9,028	4,093	0	433	264	2,993	-	125	16,547	139
ORH3B	85,498	38,764	12,547	92,124	5,135	90,328	-	2,933	306,715	16,571
ORH7A	11,780	5,341	917	4,950	105	563,958	-	0	79	587,264
ORH7B	24	11	0	0	0	3	-	0	38	0
PRK1	797	361	0	0	7	89	-	0	13	1,267
PRK2	114	52	0	0	1	13	-	0	2	181
PRK3	33	15	0	0	0	4	-	0	1	52
PRK4A	33	15	0	0	0	4	-	0	1	52
PRK5	33	15	0	0	0	4	-	0	1	52
PRK6A	33	15	0	0	0	4	-	0	1	52
PRK6B	33	15	0	0	0	4	-	0	1	52
PRK7	33	15	0	0	0	4	-	0	1	52

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
PRK8	33	15	0	0	0	4	-	0	1	52
PRK9	33	15	0	0	0	4	-	0	1	52
PTO1	1,940	768	42	174	0	0	-	0	9	2,693
RBT1	70	32	0	0	1	226	-	0	3	332
RBT10	0	0	0	0	0	0	-	0	0	0
RBT3	8,050	3,650	0	0	72	26,090	-	0	355	38,217
RBT7	10,443	4,735	0	0	93	33,837	-	0	461	49,568
RBY1	3,619	1,641	0	0	32	404	-	0	133	5,830
RBY10	0	0	0	0	0	0	-	0	0	0
RBY2	4,693	2,128	0	0	42	520	-	0	182	7,565
RBY3	33	15	0	0	0	4	-	0	1	52
RBY4	195	88	0	0	2	22	-	0	1	308
RBY5	0	0	0	0	0	0	-	0	0	0
RBY6	0	0	0	0	0	0	-	0	0	0
RBY7	215	97	0	0	2	24	-	0	9	346
RBY8	65	29	0	0	1	7	-	0	27	75
RBY9	140	63	0	0	1	15	-	0	8	228
RIB3	3,676	1,667	0	0	33	407	-	0	3,282	2,501
RIB4	2,153	976	0	0	19	238	-	0	3,031	356
RIB5	368	167	0	0	3	41	-	0	439	139
RIB6	1,110	503	0	0	10	123	-	0	1,737	10
RIB7	2,426	1,100	0	0	22	269	-	0	2,757	1,059
RIB8	7	3	0	0	0	1	-	0	8	3
SBW1	42	19	0	0	0	6	-	0	2	70
SBW6A	6,492	2,943	0	311	390	928	-	317	353	11,735

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
SBW6B	36,207	16,416	1,054	11,117	1,060	91,352	-	2,410	7,022	166,792
SBW6I	141,318	64,072	4,114	43,392	4,139	49,451	-	4,447	729,280	1,040,810
SBW6R	29,029	13,161	845	8,913	850	90,540	-	1,063	2,660	147,186
SCI1	17,065	7,737	4,486	14,126	4,012	238,479	-	203	5,282	281,072
SCI10	0	0	0	0	0	0	-	0	0	0
SCI2	12,369	5,608	3,251	10,238	362	167,377	-	339	8,803	190,536
SCI3	44,541	20,194	11,709	34,733	1,769	19,537	-	579	14,965	118,640
SCI4A	15,766	7,148	4,144	13,050	947	6,915	-	203	5,282	43,088
SCI5	5,255	2,383	1,381	4,098	47	2,305	-	0	1,761	13,910
SCI6A	40,290	18,267	10,591	33,349	24,066	780,370	-	519	13,468	894,486
SCI6B	6,569	2,978	1,727	5,437	192	2,864	-	85	2,201	17,734
SCI7	9,854	4,468	2,590	7,684	88	4,313	-	0	3,301	26,072
SCI8	657	298	173	512	6	297	-	0	220	1,748
SCI9	4,598	2,085	1,209	3,586	41	2,008	-	0	1,540	12,162
SKI3	4,275	1,938	0	205	125	528	-	0	214	7,285
SKI7	3,591	1,628	0	172	105	443	-	0	197	6,137
SPD4	3,984	1,807	0	191	117	13,052	-	0	392	19,544
SPD5	14,995	6,799	0	719	439	52,116	-	439	445	75,073
SPE3	5,415	2,455	0	260	159	3,004	-	159	867	10,266
SPE4	4,668	2,117	0	224	137	582	-	0	197	7,924
SPE5	147	67	0	0	1	45	-	0	4	264
SPE6	56	25	0	0	0	7	-	0	2	90
SPE7	537	244	0	26	16	179	-	0	12	1,014
SQU10T	108	49	0	0	0	14	-	0	2	173
SQU1J	544,234	246,749	0	0	0	68,553	-	0	10,697	870,234

	Compliance	Registry	Observers		Research		Settlement Credit Applied	Under or (Over) Recovery		2012/13
	MPI	MPI	DoC	MPI	DoC	MPI	MPI	DoC	MPI	Total
SQU1T	484,933	219,863	31,642	304,649	30,297	69,342	-	18,052	8,106	1,171,480
SQU6T	350,842	159,068	64,186	428,569	209,567	50,168	-	22,632	5,276	1,299,631
SWA1	31,064	14,084	1,993	19,103	910	25,740	-	248	4,627	88,309
SWA10	79	36	0	0	0	65	-	0	4	184
SWA3	19,944	9,042	721	7,362	584	16,539	-	1,409	1,118	54,004
SWA4	37,688	17,087	1,362	13,911	1,655	31,253	-	227	7,159	95,768
WWA1	57	26	0	0	1	8	-	0	4	96
WWA10	0	0	0	0	0	0	-	0	0	0
WWA2	1,046	474	0	50	31	148	-	0	68	1,817
WWA3	9,836	4,459	0	471	288	1,383	-	0	392	16,829
WWA4	4,728	2,143	0	227	138	665	-	0	188	8,089
WWA5B	37,491	16,998	0	1,797	1,098	5,270	-	2	2,452	65,108
WWA7	1,819	825	0	87	53	256	-	0	121	3,162
WWA8	14	6	0	0	0	2	-	0	1	24
Grand Total	4,416,085	2,002,202	442,660	2,994,797	456,562	11,619,947	-	49,807	79,527	21,867,21

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

Stock	Total levies 2012/13 (\$)	2012/13 Landings (tonnes)	2012/13 Port price (\$/kg)	2012/13 Landed value (\$000's)	Levies as % landed value (12/13)
BAR4	26,489	706	0.39	273.1	9.7%
BAR5	62,895	7,931	0.35	2,753.9	2.3%
BAR7	119,323	6,596	0.43	2,813.8	4.2%
BYX1	8,889	22	1.95	42.0	21.1%
BYX10	300	-	1.95	-	-
BYX2	50,699	1,605	1.96	3,145.5	1.6%
BYX3	27,580	1,013	1.95	1,975.5	1.4%
BYX7	2,114	39	1.73	68.1	3.1%
BYX8	592	0	1.95	0.2	345.0%
CDL1	18,320	35	1.00	35.0	52.3%
CDL10	0	-	1.00	-	-
CDL2	1,129	470	1.00	470.2	0.2%
CDL3	2,990	40	1.00	39.6	7.6%
CDL4	1,013	10	1.00	9.6	10.5%
CDL5	339	14	1.00	14.3	2.4%
CDL6	15	1	1.00	1.1	1.3%
CDL7	595	2	1.00	1.6	36.8%
CDL9	61	4	1.00	3.6	1.7%
CHC1	512	-	3.60	-	-
CHC10	0	-	3.60	-	-
CHC2	512	0	3.60	0	1421.7%
CHC3	205	0	3.60	-	-
CHC4	205	0	3.60	-	-
CHC5	205	0	3.60	-	-
CHC6	205	0	3.60	-	-
CHC7	205	0	3.60	-	-
CHC8	205	0	3.60	-	-
CHC9	205	0	3.60	-	-
EMA3	3,166	100	0.42	42.0	7.5%
EMA7	27,369	2,401	0.42	1,008.3	2.7%
FRO3	2,809	32	1.05	33.2	8.5%
FRO4	169	2	0.39	0.6	27.0%
FRO5	2,155	4	1.05	4.4	48.8%
FRO6	176	0	1.05	0	697.3%
FRO7	36,032	570	0.90	514.4	7.0%
FRO8	10,358	890	1.05	936.3	1.1%
FRO9	2,195	278	1.05	292.2	0.8%
GSC1	51	0	3.60	0	708.1%
GSC10	0	-	3.60	-	-
GSC3	717	1	3.60	3.5	20.7

Stock	Total levies 2012/13 (\$)	2012/13 Landings (tonnes)	2012/13 Port price (\$/kg)	2012/13 Landed value (\$000's)	Levies as % landed value (12/13)
GSC5	1,071	54	3.60	192.9	0.6%
GSC6A	7,582	80	3.60	288.1	2.6%
GSC6B	12,141	5	3.60	18.4	65.8%
GSH4	31,969	210	0.25	52.2	61.3%
GSH5	16,608	111	0.44	48.6	34.2%
GSH6	15,384	70	0.47	32.5	47.3%
GSP1	9,191	510	0.50	252.8	3.6%
GSP5	3,461	163	0.50	80.9	4.3%
GSP7	1,402	25	0.50	12.2	11.5%
HAK1	116,294	2,079	1.41	2.9	4.0%
HAK10	184	-	1.18	-	-
HAK4	94,789	177	1.22	216.4	43.8%
HAK7	817,606	5,434	1.18	6,415.4	12.7%
HOK1	8,241,277	131,568	0.80	105,254.3	7.8%
HOK10	123	-	0.80	-	-
JMA3	169,765	3,829	0.44	1,671.7	10.2%
JMA7	344,954	31,776	0.44	13,871.1	2.5%
KIC1	512	-	3.60	-	-
KIC10	0	-	3.60	-	-
KIC2	512	4	3.60	13.5	3.8%
KIC3	512	0	3.60	0.5	113.7%
KIC4	512	0	3.60	0.1	789.8%
KIC5	512	0	3.60	0.4	132.9%
KIC6	512	0	3.60	0.5	100.8%
KIC7	512	-	3.60	-	-
KIC8	512	-	3.60	-	-
KIC9	512	0	3.60	<0.1	3554.2%
LDO1	4,082	185	1.59	293.7	1.4%
LDO10	23	-	1.50	-	-
LDO3	13,850	308	1.47	452.9	3.1%
LIN3	120,309	1,472	2.48	3,651.9	3.3%
LIN4	224,471	2,181	2.54	5,538.7	4.1%
LIN5	177,261	3,602	2.33	8,397.6	2.1%
LIN6	495,893	3,102	2.79	8,649.0	5.7%
LIN7	863,818	3,001	2.44	7,323.8	11.8%
OE01	44,063	652	0.89	582.4	7.6%
OE010	139	-	0.89	-	-
OE03A	145,948	3,245	0.89	2,897.7	5.0%
OE04	1,650,834	6,944	0.89	6,200.4	26.6%
OE06	272,519	136	0.89	121.8	223.8%
ORH1	50,516	1,171	2.48	2,904.4	1.7%

Stock	Total levies 2012/13 (\$)	2012/13 Landings (tonnes)	2012/13 Port price (\$/kg)	2012/13 Landed value (\$000's)	Levies as % landed value (12/13)
ORH10	163	-	2.48	-	-
ORH2A	5,621	727	2.50	1,817.4	0.3%
ORH2B	28	102	2.48	252.3	0.0%
ORH3A	139	296	2.29	677.0	0.0%
ORH3B	16,571	2,515	2.50	6,288.0	0.3%
ORH7A	587,264	513	2.48	1,272.1	46.2%
ORH7B	0	0	2.48	0.6	0.0%
PRK1	1,267	0	3.42	0.9	142.4%
PRK2	181	0	3.42	0.1	264.4%
PRK3	52	-	3.42	-	-
PRK4A	52	-	3.42	-	-
PRK5	52	-	3.42	-	-
PRK6A	52	-	3.42	-	-
PRK6B	52	-	3.42	-	-
PRK7	52	1	3.42	2.1	2.5%
PRK8	52	0	3.42	0.0	253.2%
PRK9	52	0	3.42	0.0	138.1%
PTO	2,693	27	3.63	97.5	2.8%
RBT1	332	2	0.39	0.6	51.4%
RBT10	0	-	0.39	-	-
RBT3	38,217	1,826	0.39	706.4	5.4%
RBT7	49,568	325	0.39	125.8	39.4%
RBY1	5,830	95	1.27	121.1	4.8%
RBY10	0	-	1.14	-	-
RBY2	7,565	331	1.14	377.5	2.0%
RBY3	52	2	1.14	2.2	2.4%
RBY4	308	21	1.14	24.2	1.3%
RBY7	346	2	0.68	1.4	24.9%
RBY8	75	0	1.14	0.1	69.9%
RBY9	228	1	0.77	0.5	47.1%
RIB3	2,501	182	0.98	178.6	1.4%
RIB4	356	234	0.63	148.7	0.2%
RIB5	139	35	0.74	26.4	0.5%
RIB6	10	66	0.51	33.2	0.0%
RIB7	1,059	180	0.77	139.5	0.8%
RIB8	3	2	0.77	1.5	0.2%
SBW1	70	8	0.56	4.2	1.7%
SBW6A	11,735	49	0.42	20.3	57.8%
SBW6B	166,792	6,827	0.56	3,792.7	4.4%
SBW6I	1,040,810	21,321	0.51	10,788.1	9.6%
SBW6R	147,186	1,702	0.56	945.6	15.6%

Stock	Total levies 2012/13 (\$)	2012/13 Landings (tonnes)	2012/13 Port price (\$/kg)	2012/13 Landed value (\$000's)	Levies as % landed value (12/13)
SCI1	281,072	126	14.97	1,888.3	14.9%
SCI10	0	-	13.83	-	-
SCI2	190,536	96	13.02	1,247.6	15.3%
SCI3	118,640	267	13.79	3,676.4	3.2%
SCI4A	43,088	55	13.83	760.0	5.7%
SCI5	13,910	0	13.83	0.1	10057.8%
SCI6A	894,486	146	13.86	2,017.6	44.3%
SCI6B	17,734	-	13.83	-	-
SCI7	26,072	7	13.83	93.5	27.9%
SCI8	1,748	-	13.83	-	-
SCI9	12,162	0	13.83	1.7	726.8%
SKI3	7,285	23	1.50	35.0	20.8%
SKI7	6,137	234	1.26	295.0	2.1%
SPD4	19,544	442	0.26	113.9	17.2%
SPD5	75,073	1,548	0.43	660.4	11.4%
SPE3	10,266	495	0.57	282.3	3.6%
SPE4	7,924	492	0.54	265.8	3.0%
SPE5	264	27	0.43	11.6	2.3%
SPE6	90	1	0.65	0.9	10.1%
SPE7	1,014	89	0.69	61.6	1.6%
SQU10T	173	-	1.14	-	-
SQU1J	870,234	741	1.14	845.6	102.9%
SQU1T	1,171,480	13,951	1.14	15,917.3	7.4%
SQU6T	1,299,631	9,944	1.14	11,345.7	11.5%
SWA1	88,309	748	1.09	815.2	10.8%
SWA10	184	-	0.83	-	-
SWA3	54,004	3,788	0.64	2,424.1	2.2%
SWA4	95,768	4,128	0.97	4,003.8	2.4%
WWA1	96	0	1.51	0.1	135.4%
WWA10	0	-	1.51	-	-
WWA2	1,817	6	1.51	9.0	20.1%
WWA3	16,829	174	1.78	308.1	5.5%
WWA4	8,089	117	1.51	176.0	4.6%
WWA5B	65,108	1,037	1.51	1,564.1	4.2%
WWA7	3,162	118	1.51	178.3	1.8%
WWA8	24	0	1.51	0.0	99.5%