



Annual Operational Plan for Deepwater Fisheries for 2015/16



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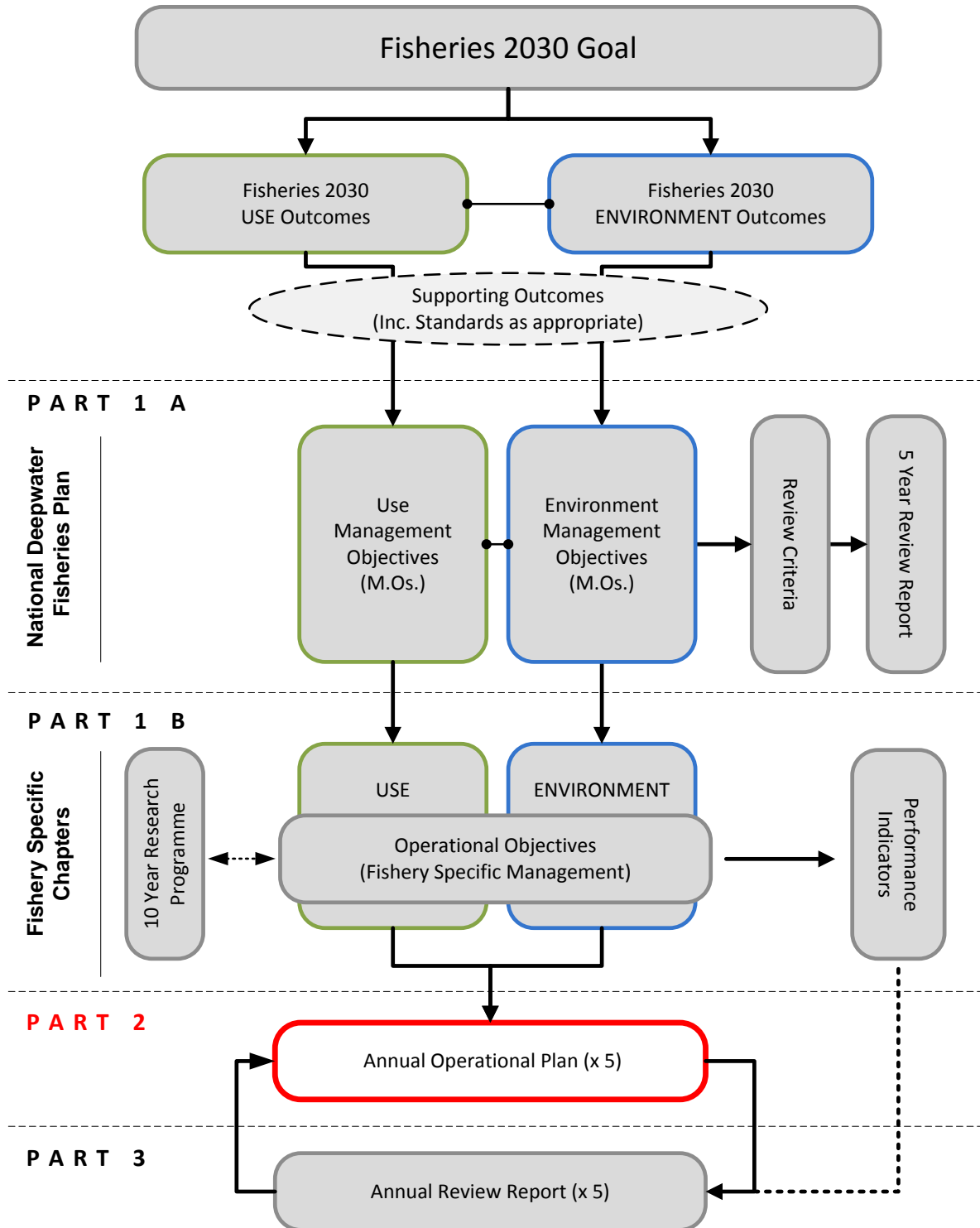
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National Deepwater Plan Structure



Summary of the National Deepwater Plan (as specified in Fisheries 2030)

New Zealanders maximising benefits from the use of fisheries within environmental limits

Outcomes (as specified in Fisheries 2030)

Use Outcome: Fisheries resources are used in a manner that provides greatest overall economic social and cultural benefit.

Environment Outcome: The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for current and future use.

Management Objectives (Part 1 A)

Use Outcome	MO 1.1	Enable economically viable deepwater and middle-depth fisheries in New Zealand over the long-term
	MO 1.2	Ensure there is consistency and certainty of management measures and processes in the deepwater and middle depths fisheries
	MO 1.3	Ensure the deepwater and middle-depths fisheries resources are managed so as to provide for the reasonably foreseeable needs of future generations
	MO 1.4	Ensure effective management of deepwater and middle-depth fisheries is achieved through the availability of appropriate, accurate and robust information
	MO 1.5	Ensure the management of New Zealand's deepwater and middle-depth fisheries are recognised as being consistent with or exceeding national and international best practice
	MO 1.6	Ensure New Zealand's deepwater and middle-depth fisheries are transparently managed
	MO 1.7	Ensure the management of New Zealand's deepwater and middle-depth fisheries meets the Crown's obligations to Maori
Environment Outcome	MO 2.1	Ensure deepwater and middle-depth fish stocks and key bycatch fish stocks are managed to an agreed harvest strategy
	MO 2.2	Maintain the genetic diversity of deepwater and middle-depth target and bycatch species
	MO 2.3	Protect habitats of particular significance for fisheries management
	MO 2.4	Identify and avoid or minimise adverse effects of deepwater and middle-depth fisheries on incidental bycatch species
	MO 2.5	Manage deepwater and middle-depth fisheries to avoid or minimise adverse effects on the long-term viability of endangered, threatened and protected species
	MO 2.6	Manage deepwater and middle-depth fisheries to avoid or minimise adverse effects on biological diversity
	MO 2.7	Identify and avoid or minimise adverse effects of deepwater and middle-depths fishing activity on the benthic habitat

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Introduction

Overview

New Zealand's Deepwater and Middle-depth fisheries (deepwater fisheries) predominantly occur in offshore waters beyond the 12 nautical mile (nm) limit of the territorial sea. Deepwater fishing activity occurs out to the 200 nm limit of New Zealand's exclusive economic zone (EEZ). The deepwater fisheries provided at least NZ \$530 million in export earnings during the 2014 calendar year.¹

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

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

Table 1: Categorisation of deepwater fishstocks

	Stocks ²	
Tier 1	Hake: all Hoki : all Jack mackerel: JMA3, JMA7 Ling: LIN3 - LIN7 Orange roughy: all	Oreos: all Scampi: all Southern blue whiting: all Squid: all
Tier 2	Alfonsino: all Barracouta: BAR4, BAR5, BAR7 Black cardinalfish: all Deepwater crabs (CHC/GSC/KIC): all English mackerel: EMA3, EMA7 Frostfish: FRO3-FRO9 Gemfish: SKI3, SKI7 Ghost shark, dark: GSH4-GSH6 Ghost shark, pale: all Lookdown dory: all	Patagonian toothfish: all Prawn killer: all Redbait: all Ribaldo: RIB3-RIB8 Rubyfish: all Sea perch: SPE3-SPE7 Silver warehou: all Spiny dogfish: SPD4, SPD5 White warehou: all
Tier 3	Non-QMS species	

¹ Export value based on information from the Seafood New Zealand website <http://www.seafoodnewzealand.org.nz/our-industry/export-information/>. For some species (e.g. jack mackerel and barracouta) the value includes all stocks, including those managed an Inshore Fisheries Plan. Export value is not available for some deepwater species as species-specific information is not supplied by Statistics New Zealand.

² For some species, management of some stocks falls under the National Deepwater Plan and the remainder are managed under the National Inshore Finfish Plan. For more details se <http://www.fish.govt.nz/NR/rdonlyres/F5D35B51-C733-467F-ABAF-7C54D3C17B0E/0/SpeciesStocksbyTeamwithCodes.pdf>.

NATIONAL DEEPWATER PLAN

FIVE YEAR CYCLE :

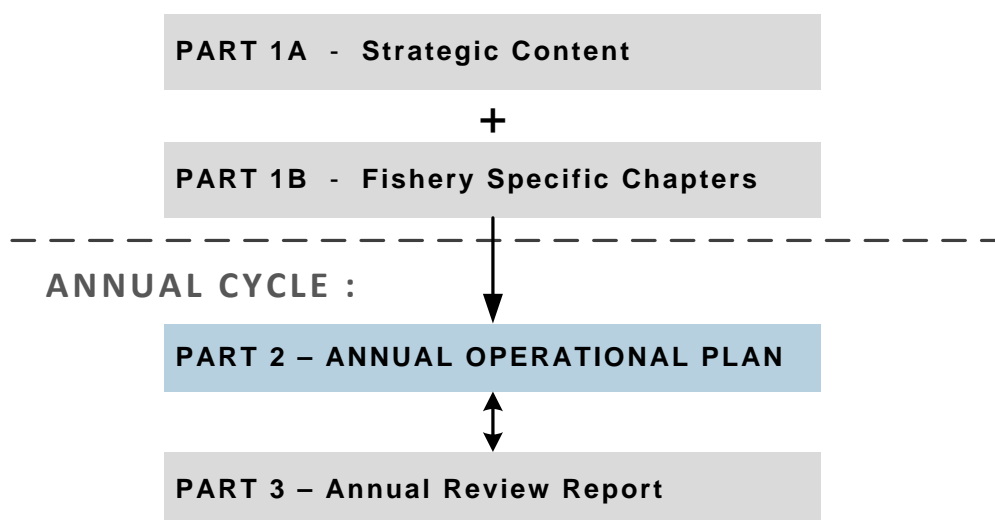


Figure 1: The National Deepwater Plan structure highlighting the five year cycle of PART 1A and 1B, and the annual cycle of the operational plan and review report. This document relates to Part 2 highlighted in blue.

From 1 July 2010 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 the three parts shown in Figure 1.

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 then Minister of Fisheries under Section 11A of the Fisheries Act 1996.³ This means that it must be considered each time the Minister makes decisions or recommendations concerning regulation or control of fishing or any sustainability measures relating to the stocks managed through this Plan.

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. To date, fishery-specific chapters have been completed for the hoki, orange roughy, oreo, hake, ling, jack mackerel and southern blue whiting fisheries.⁴

³ The Ministry for Primary Industries became responsible for fisheries as of 30 April 2012

⁴ All documents referred to on this page and the following page are available at <http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm>

The fishery-specific chapters describe Operational Objectives for each of the Tier 1 target fishery and the key Tier 2 bycatch species. These chapters also describe any harvest strategies that have been agreed for the relevant species at the time the chapters were written.

Part 2 of the National Deepwater Plan consists of an Annual Operational Plan (AOP) which provides the Management Actions scheduled for delivery during the financial year, and the Management Services needed for delivery of those Management Actions. An Appendix to the AOP includes up-to-date management overviews for deepwater fisheries.

The AOP is primarily an internal planning and prioritisation document so will not be approved by the Minister for Primary Industries under section 11A. However, advice will be provided to the Minister regarding any statutory interventions required to regulate deepwater fisheries. The contents and structure of this AOP are described in the following section.

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

The 2015/16 Deepwater AOP

This AOP details the Deepwater Fisheries Management Actions and Services that will be implemented during the 2015/16 financial year. Completion of these Management Actions will contribute to meeting the Management Objectives, outcomes and goals described in Part 1 of the National Deepwater Plan.

Research to be conducted during 2015/16 on each of the fisheries included in the National Deepwater Plan is detailed in the AOP. Appendix 2 to the AOP provides information on the current management approach and the stock status of deepwater fisheries.

AOP Structure:

The 2015/16 AOP includes the following sections, described in more detail below:

- Part 2A: Management Actions for 2015/16
- Part 2B: Management Services required for 2015/16

Part 2A: Management Actions for 2015/2016

Part 2A details the Management Actions that have been scheduled for completion during the 2015/16 financial year. Completion of all these Actions will contribute to delivery of the Deepwater Management Objectives specified in Part 1A and the fishery-specific Operational Objectives specified in Part 1B of the National Deepwater Plan.

The Management Actions in Part 2A are provided in order of priority, indicated by the number on the left hand side of Table 2.

Table 2 contains 16 Management Actions, one less than the 17 contained in the 2014/15 AOP. Fifteen of the 16 Management Actions for 2015/16 are essentially the same as those contained in the 2014/15 AOP. Difference arise for those Management Actions that represent multi-year processes where the key actions change from year to year.

Two Management Actions from the 2014/15 AOP have been combined into one from the 2015/16 version (harvest strategies for Tier 1 species and developing management approaches for low information stocks).

The continuity in Management Actions between years reflects the stability in the core roles of the Deepwater FM Team.

Table 3 outlines projects and work areas that the Deepwater FM Team will contribute towards but not lead. These projects are led by other teams, either within the Fisheries Management Directorate, or by teams in other MPI Branches.

Part 2B: Management Services required during the 2015/2016 financial year

Part 2B details the Fisheries Management Services that will be required to deliver on Management Actions described in Part 2A of this AOP.

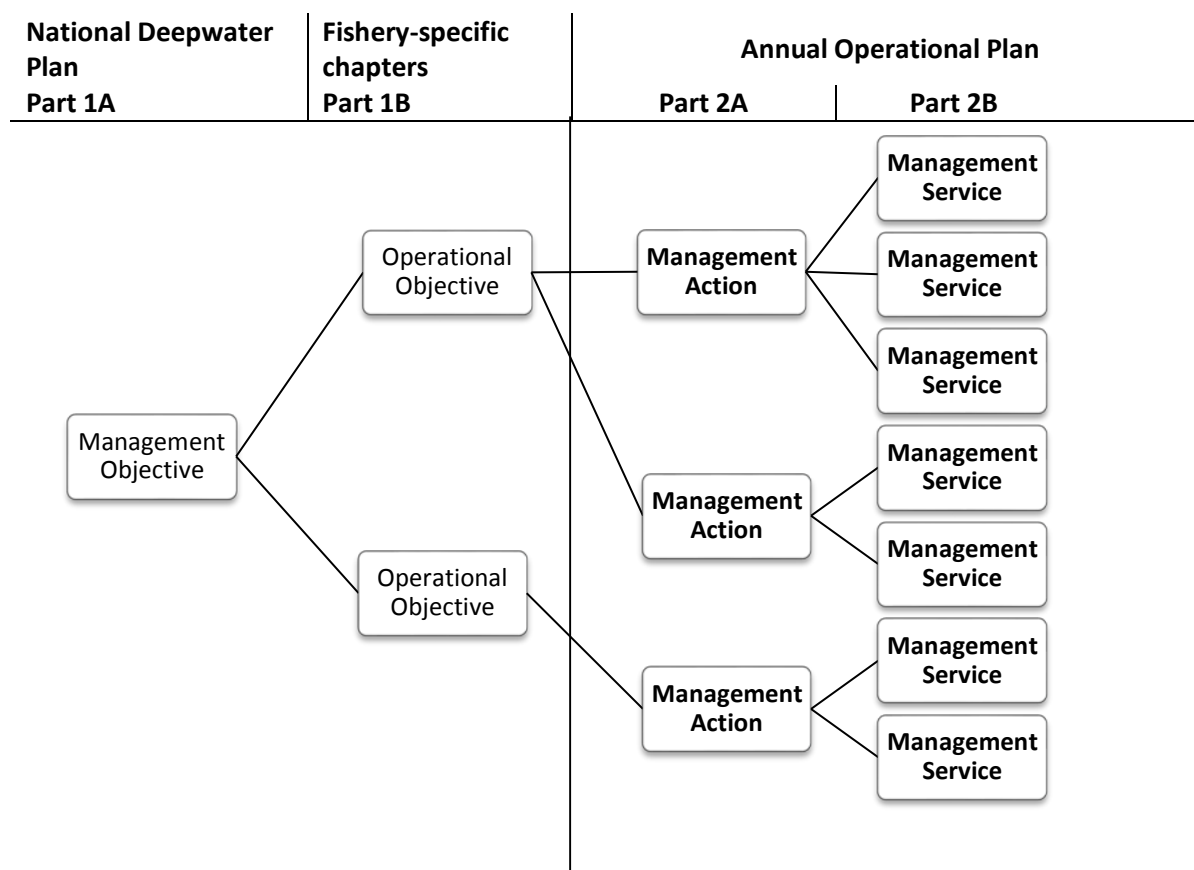
This section also outlines projects and work areas that the Fisheries Management Deepwater team will work with and engage with other teams, both within the Fisheries Management Directorate and across MPI.

New Zealand's deepwater fisheries are managed in partnership with the DWG. Some Services are therefore delivered in partnership with the DWG, or MPI will provide support to enable DWG to deliver some Services. Detail of the Fisheries Services and service support in Part 2B is split according to the

key parts of MPI, or the relevant external organisations that the Deepwater FM team will work with to deliver the specified services: R&A⁵, Wider Ministry, and external organisations.

Delivery of the 2015/16 AOP will be assessed through the ARR that is completed at the end of the fishing year in December 2016.

Figure 2: Flowchart of progression from Management Objective to Management Services specified in this Annual Operational Plan



⁵ The Fisheries Management Directorate is part of the Regulation and Assurance Branch (R&A).

Part 2A: Deepwater Fisheries Management Actions for delivery during the 2015/16 financial year

Table 2: Management Actions to be delivered by Deepwater Fisheries Management during the 2015/16 financial year

1	Fisheries Sustainability Controls: Review catch limits and management settings as required		
	<p>Deepwater sustainability decisions consist primarily of reviews to catch limits (TAC & TACC) and deemed value settings across the fish stocks managed within the National Deepwater Fisheries Plan. These are completed in two rounds, one for stocks managed with a 1 October fishing year and another for stocks with a 1 April fishing year.</p> <p>Additionally, conversion factors are subject to ongoing monitoring by comparing observer data to the gazetted conversion factors. If a conversion factor for a certain species and product state is reviewed, the proposal will be consulted on. Changes to conversion factors are not ministerial decisions and the process does not have to run to the same timeframes as the sustainability rounds.</p> <ul style="list-style-type: none"> • October 2015: OEO4 (smooth oreo), HOK1. Conversion factor for dressed kingfish. • April 2016: to be confirmed • Advanced engagement for October 2016: JMA3 <p>Action relates to Management Objectives 1.1, 1.3, 2.1, 2.2, 2.4, 2.5, and 2.6</p>		
2	Fisheries Planning: Review National Deepwater Plan and continue its implementation		
	<p>The National Deepwater Plan had a five year horizon and will be reviewed during 2015/16. Work will progress during 2015/16 to identify strategic priorities across the Fisheries Management Directorate and will then inform setting of updated management objectives for deepwater fisheries.</p> <p>Implementation of the National Deepwater Plan for the 2015/16 financial year will include the core activities listed below.</p> <table border="1"> <tr> <td data-bbox="260 1249 831 1429"> Core: <ul style="list-style-type: none"> • Review and implement National Deepwater Plan (Part 1A) • Annual Operational Plan for 2016/17 • Annual Review Report for 2014/15 </td><td data-bbox="831 1249 1394 1429"> Key Actions 15/16: <ul style="list-style-type: none"> • Review management objectives within the National Deepwater Plan in context of strategic priorities </td></tr> </table> <p>Action relates to all Management Objectives</p>	Core: <ul style="list-style-type: none"> • Review and implement National Deepwater Plan (Part 1A) • Annual Operational Plan for 2016/17 • Annual Review Report for 2014/15 	Key Actions 15/16: <ul style="list-style-type: none"> • Review management objectives within the National Deepwater Plan in context of strategic priorities
Core: <ul style="list-style-type: none"> • Review and implement National Deepwater Plan (Part 1A) • Annual Operational Plan for 2016/17 • Annual Review Report for 2014/15 	Key Actions 15/16: <ul style="list-style-type: none"> • Review management objectives within the National Deepwater Plan in context of strategic priorities 		
3	Ministerial Services: Ensure timely completion of all Ministerial correspondence and communication requests assigned to the Deepwater FM team		
	<p>This management action is a core Government function and will be given priority attention throughout the year to ensure that all response timeframes are met.</p> <p>This Management Action refers to MPI's 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 stakeholders and the public and respond to all OIA requests and Government correspondence regarding deepwater fisheries issues <p>Action relates to all Management Objectives</p>		
4	Protected Species Frameworks – Work collaboratively with the Department of Conservation on the Threat Management Plan (TMP) process for the New Zealand Sea Lion		

	<p>The New Zealand sea lion is classified as Nationally Critical due to an ongoing population decline at key breeding sites on the Auckland Islands. A range of threats are thought to be preventing recovery of the population and the development of a TMP aims to assess all threats and prioritise management actions that will aim to halt the population decline.⁶</p> <p>Key Actions for 15/16:</p> <ul style="list-style-type: none"> • Work with DOC and stakeholders to agree management objectives for the NZSL Population, Research and Monitoring, and Engagement goals within the TMP • Hold, in collaboration with the Department of Conservation the second risk assessment Expert Panel Workshop • Develop management options for the NZSL TMP using the outcomes of the risk assessment, and conduct formal consultation before providing advice to Ministers <p>Action relates to Management Objectives 1.6, 2.5, and 2.6</p>
5	<p>National Plan Frameworks – NPOA Sharks: Implement components of the National Plan of Action for Sharks (NPOA Sharks) relevant to deepwater fisheries</p> <p>The NPOA Sharks sets out six goals and accompanying five year objectives to support the management of sharks. A qualitative risk assessment of all shark species was completed in December 2014, which will inform prioritisation of management actions and research until the completion of a quantitative risk assessment (scheduled for the end of 2016). This Management Action is focused on achieving objectives of the NPOA-Sharks, and addressing at-risk species identified in the risk assessment.⁷</p> <p>Key Actions for 15/16:</p> <ul style="list-style-type: none"> • Monitor implementation of regulatory framework to eliminate shark finning in New Zealand • Support and contribute to review of management categories for shark species and implement any recommendations for QMS introduction or protection as required • Implement NPOA-Sharks Implementation Plan across the fisheries management directorate and in conjunction with DOC and MFAT • Support progression and delivery of the quantitative risk assessment and subsequent prioritisation • Continue to work with stakeholders to avoid captures of protected shark species in deepwater fisheries and maximise survival of captured protected shark species • Engage as required on the CMS MOU-Sharks (Memorandum of Understanding on the Conservation of Migratory Sharks)⁸ <p>Action relates to Management Objectives 1.6, 2.4, 2.5, and 2.6</p>
6	<p>Protected Species Frameworks - NPOA Seabirds: Work to achieve the five year practical, biological, research and development, and international objectives within deepwater fisheries</p> <p>The NPOA Seabirds was approved in 2013 and sets out the long term and five year objectives relating to managing fisheries interactions with seabirds.</p> <p>The NPOA is underpinned by a Level 2 Risk Assessment which has identified the seabird species considered to be most at risk of being adversely affected by commercial fishing in New Zealand. The risk assessment also identifies which fisheries pose the most risk to seabird species.⁹</p> <p>This Management Action outlines the priority NPOA seabird work areas for deepwater fisheries in 2015/16 guided by the Level 2 Risk Assessment outputs. Further detail on the objectives of the NPOA and how the deepwater work will support the achievement of those objectives may be found in Part 2B.</p>

⁶ Information on the sea lion TMP is available at <http://www.doc.govt.nz/nature/native-animals/marine-mammals/seals/new-zealand-sea-lion/docs-work/new-zealand-sea-lion-threat-management-plan/>

⁷ The NPOA Sharks is available at <http://www.fish.govt.nz/en-nz/Environmental/Sharks/default.htm>

⁸ The CMS Sharks website is available at <http://www.cms.int/sharks/en>

⁹ The NPOA Seabirds, together with the Level 2 Risk Assessment can be accessed at <http://www.fish.govt.nz/en-nz/Environmental/Seabirds/default.htm>

Further management actions related to monitoring adherence to non-regulatory management measures (principally Vessel Management Plans) that aim to reduce the risk of seabird interactions with the deepwater fleet are addressed through Management Action 11.

Key Actions for 15/16:

- Work across the Fisheries Management Directorate, and with key stakeholders, to develop appropriate seabird performance measures
- Report annual performance in relation to the agreed measures, to inform ongoing progress towards meeting the objectives in the NPOA-Seabirds
- Continue to implement and refine best practice mitigation across the deepwater fleet, (with a focus on ling bottom longline) to minimise interactions with seabirds and support achievement of the practical objectives from the NPOA-Seabirds
- Assist with the development and implementation of species- and fisheries-specific action plans for seabird species considered to be at 'very high' or 'high' risk from fishing to support achievement of the biological risk objective from the NPOA-Seabirds
- Continue to work with DWG to develop information and additional mitigation specific to 'very high' and 'high' risk seabird species to support achievement of the biological risk and research and development objectives from the NPOA-Seabirds
- More information on the services associated with delivery of this management action are provided on pages 20-22 of this AOP

Action linked to Management Objective 2.5

7 Deepwater Research Planning: Finalise and agree research commitments for the 2016/17 fishing year and beyond

Contracts under the initial five year phase of the 10 Year Research Programme concluded at the end of the 2014/15 financial year. Research needs to support deepwater fisheries management for the next five years were reviewed during 2014/15 and general agreement was reached regarding priorities within the programme for the five year period to 2019/20.¹⁰

Until MPI has further clarity regarding progress and outcomes of the overarching fisheries management strategy review (Fisheries 2030) and the First Principles Review of the cost recovery process, the deepwater research programme will be contracted on an annual basis, based generally on the five year plan that was agreed in 2014/15.

Key Actions for 15/16:

- Finalise and agree the deepwater fisheries research programme, including any proposals for industry-led research, for delivery during the 2016/17 financial year before 31 December 2015.
- More information on the services associated with delivery of this action are provided on pages 26-27.

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

8 Engagement: Ensure sufficient and appropriate engagement with tangata whenua and stakeholders

Stakeholder engagement will continue to form an integrated part of progressing all specific fisheries management projects and will form part of each project's work programme. These projects may utilise the existing engagement forums that MPI convenes throughout the year to inform on the fisheries planning process and business as usual management developments.

Engagement with all stakeholders will continue, aiming to ensure deepwater fisheries management information is available and accessible for all stakeholders and that sufficient opportunities are provided to allow for input and participation in the Deepwater Fisheries Planning process and the ongoing management of New Zealand's deepwater fisheries.

¹⁰ The 10 Year Research Programme can be accessed at <http://www.fish.govt.nz/en-nz/Deepwater/Fisheries+Research.htm>

Core:

- Ensure sufficient and appropriate engagement with tangata whenua; address issues as necessary through further integration of Iwi Fisheries Plans (IFPs) and Forum Fisheries Plans (FFPs) into the Deepwater Fisheries Planning process
- Engage on environmental issues relating to management of deepwater fisheries through the Fisheries Plan Group. This incorporates both planning and review.
- Maintain an open and transparent management environment by ensuring that all management information is available and easily accessible on MPI's website for stakeholders and tangata whenua consideration

Action linked to Management Objectives 1.6 and 1.7

9 Deepwater Monitoring: Plan and monitor Deepwater Observer Coverage / sampling requirements for 2016/17 and 2015/16 financial years respectively

Observer coverage of deepwater fisheries is planned by financial year for each fishery. The biological sampling requirements for 2015/16 to support implementation of deepwater stock assessments have been defined, and observer coverage for the 2015/16 financial year has been planned based on those requirements. In addition, the newly reinstated process of requesting quarterly fishing plans from companies will be continued to enable more efficient and effective observer deployments in key fisheries.

Core:

- Develop observer coverage plan for 2016/17 financial year
- Monitor biological sampling throughout 2015/16 to ensure sampling targets will be met
- Ensure the cost recovery process is consistent with the relevant coverage plan

Key Actions for 15/16:

- Ensure all observer briefing documents for all Tier 1 species are up to date and that appropriate sampling is undertaken in accordance with biological targets through the year
- Work to identify what and how samples for Tier 2 species should be taken by observers
- Develop coverage and sampling targets for each of the next five years to align with projects scheduled in the deepwater fisheries research programme in 2015/16 and 2016/17

Action linked to Management Objectives 1.1, 1.3, 1.4, 1.5, and 2.5

10 Registry Services: Continue implementation of the FCV Amendment Act, the FCV registration process and risk-based observer coverage for foreign charter vessels (FCVs)

The Deepwater FM team provides input to all advice papers relating to MPI's consent to the registration of FCVs operating in deepwater fisheries under section 103 of the Fisheries Act 1996.

The Fisheries (Foreign Charter Vessels and Other Matters) Amendment Act 2014,¹¹ amended the registration process for FCVs as well as expanding the range of observer functions. MPI coordinates the cross agency work programme for the implementation of requirements of the FCV Amendment Act and will assist the Registry Analyst and the Observer Programme with any changes to their respective processes and functions.

Core:

- Input to the FCV registration and risk profiling process in conjunction with MPI Compliance

Key Actions for 15/16:

- Work with the Ministry of Business, Innovation and Employment and Maritime NZ to implement operational changes to observer functions and coordinate information input to risk profiling and registration process
- Assist MPI observer programme to implement the required operational changes to the observers'

¹¹ This Amendment Act can be accessed at <http://www.legislation.co.nz/act/public/2014/0060/latest/DLM4794406.html>

		training and information collection process in relation to the expanded range of functions
	Action linked to Management Objective 1.6	
11	Deepwater Monitoring – Monitor adherence of the deepwater fleet to the range of measures in place to monitor and manage the effects of fishing activity on protected species and sharks	
	<p>A range of management measures, including some non-regulatory initiatives by DWG, are employed to monitor environmental interactions in deepwater fisheries and to reduce the risk of ongoing adverse effects on protected species populations. Measures are described in the following Operational Procedures or Plans:¹²</p> <ol style="list-style-type: none"> Marine Mammal Operational Procedure (DWG initiative) Vessel Management Plans – Seabirds (DWG initiative) Shark Operational Procedure (DWG initiative) Operational Plan to manage the fisheries related mortality of New Zealand sea lions in the southern squid fishery at the Auckland Islands (SQU6T – MPI and DWG initiative) Operational Plan to manage fisheries related mortality of New Zealand Sea Lions in the southern blue whiting fishery at Campbell Island (SBW6I – MPI and DWG initiative) 	
	<p>Core:</p> <ul style="list-style-type: none"> Monitor the deepwater fleet through representative coverage by MPI Observers in key deepwater fisheries Monitor protected species interactions across all trips via observer debriefs and in-trip trigger point reporting Vessel adherence with management measures is audited by on board observers Report levels of adherence to these OPs to stakeholders through the ARR. Continue to support the education and awareness programme run by the DWG Environmental Liaison Officer (ELO) Continue to minimise the use of generic shark reporting codes through observer training and circulation of the updated shark ID guide 	<p>Key Actions for 15/16:</p> <ul style="list-style-type: none"> Work with DWG to update materials and methods used to educate crew on the operational procedures and plans Work with DWG to improve and update the audit sheet MPI uses to audit vessel performance against their Vessel Management Plan Support the expansion of the education and awareness programme run by the DWG ELO to include the deepwater bottom long-line fleet. Develop resources for the new observer training programme
	Action relates to Management Objectives 2.4, 2.5 and 1.6	
12	Deepwater Monitoring – Monitor adherence to all non-regulatory measures in place to manage Tier 1 deepwater fishstocks at a sub-QMA scale.	
	<p>In conjunction with industry, MPI has implemented a series of non-regulatory sub-area catch limits in the hoki, orange roughy, and oreo fisheries. In addition, hoki management areas (HMAs) have been created to reduce fishing mortality on juvenile hoki in important nursery areas.</p>	
	<p>Core:</p> <ul style="list-style-type: none"> Continue auditing fleet adherence to sub-QMA catch limits and HMA requirements Report level of adherence to these measures to stakeholders through the ARR Where advice is provided on any TAC amendment for stocks which are managed via sub-QMA catch limits, the Minister will request that industry adhere to the updated catch limits 	

¹² DWG operational documents for 2014/15 can be accessed at <http://deepwatergroup.org/deepwater-group-operational-procedures-2014-15/>

	Action linked to Management Objectives 1.1, 1.3 and 2.1		
13	Deepwater Monitoring – benthic invertebrates: Monitor and measure the nature and extent of benthic interactions from deepwater fishing activity <p>The approach to mitigating the effects of fishing on deepwater benthic communities through closure of large areas of the EEZ to bottom trawling. The level of interactions between deepwater vessels and benthic invertebrates in open areas is monitored via observer coverage. The trawl footprint is also monitored each year and the most recent information available is reported in the ARR.¹³</p> <p>Core:</p> <ul style="list-style-type: none"> • Monitor the trawl footprint of Tier 1 species • Report the benthic footprint of deepwater fishing and volume of benthic species captured in the ARR and consider management action if required <p>Action linked to Management Objective 2.7</p>		
14	Fisheries Management Controls – Regulatory amendments <p>Progressing regulatory amendments consists of drafting the documents required for the different components of the regulatory process. These include the PIRA (preliminary impact and risk assessment), consultation document, RIS (regulatory impact statement) and decision document.</p> <p>The Deepwater FM team will progress two regulatory amendments during 2015/16. One involves the removal of the current charge for observer authorised discards from vessels (set out in the Fisheries (Commercial Fishing) Regulations 2001).</p> <p>The other relates to amending the Fisheries (Cost Recovery) Rules 2001 to implement the provisions of the Fisheries (Foreign Charter Vessels and Other Matters) Amendment Act 2014. This will enable costs to be recovered for the expanded range of observer purposes.</p> <p>Key Actions 15/16:</p> <ul style="list-style-type: none"> • Progress regulatory amendments to the Fisheries (Cost Recovery) Rules 2001 and Fisheries (Commercial Fishing) Regulations 2001 <p>Action linked to Management Objectives 1.1 and 1.2</p>		
15	Fisheries Management/Sustainability Controls: Support existing approaches to in market initiatives for New Zealand's deepwater seafood <p>The primary component of this management action comprises working with DWG to service the requirements of the Marine Stewardship Council assessment and certification process. MPI supports industry to achieve and maintain certification of key deepwater fisheries, and progress performance of all deepwater fisheries towards meeting the MSC Standard.¹⁴</p> <table border="1"> <tr> <td> <p>Core:</p> <ul style="list-style-type: none"> • Provide information and support to assist with audits of certified fisheries (LIN, HOK, SBW, HAK) • Provide information necessary to assist with the assessments of fisheries within the certification process (ORH, OEO, SQU) </td><td> <p>Key Actions for 15/16:</p> <ul style="list-style-type: none"> • Provide input as required on consultations relevant to the MSC certification standards or process • Provide input and support to DWG as required to address the conditions of certification, including increasing observer coverage, developing mitigation procedures and completing additional analyses in relation to seabird interactions in the </td></tr> </table>	<p>Core:</p> <ul style="list-style-type: none"> • Provide information and support to assist with audits of certified fisheries (LIN, HOK, SBW, HAK) • Provide information necessary to assist with the assessments of fisheries within the certification process (ORH, OEO, SQU) 	<p>Key Actions for 15/16:</p> <ul style="list-style-type: none"> • Provide input as required on consultations relevant to the MSC certification standards or process • Provide input and support to DWG as required to address the conditions of certification, including increasing observer coverage, developing mitigation procedures and completing additional analyses in relation to seabird interactions in the
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¹³ The most recent trawl footprint report is available at <http://fs.fish.govt.nz/Page.aspx?pk=113&dk=23483>

¹⁴ Information on the status of New Zealand's deepwater fisheries in the MSC programme can be found on DWG's website at <http://deepwatergroup.org/certification/>

		<ul style="list-style-type: none"> ling longline fisheries Support DWG in development of FIPs (Fisheries Improvement Plans) for JMA7 and scampi stocks
	Action linked to Management Objectives 1.1 and 1.5	
16	Fisheries Sustainability Controls: Develop and implement specific harvest strategies for Tier 1 species and management approaches for low information stocks, 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. Often in developing a harvest strategy, a management strategy evaluation will be undertaken which assesses a range of different management strategies, including those which incorporate economic aspects of the fishery.</p> <p>Management of Tier 2 species is often limited by the information available to inform decision making. The appropriate management approach for each stock will be informed from the recent series of fisheries characterisations and could include developing CPUE trends or an agreed index of abundance from a trawl survey.</p>	
	<p>Actions for 15/16:</p> <ul style="list-style-type: none"> Continue to assess the relevance of the default Harvest Strategy for deepwater species¹⁵ Where necessary, develop and implement alternative harvest strategies and management approaches for deepwater species – focussing on developing an appropriate management approach for the squid fishery Management strategy evaluation for hoki is scheduled to be contracted in 2015/16. Identify most appropriate management approaches, including data collection and ongoing monitoring tools based on recently completed characterisations for Tier 2 Species. Work with science team to update working group reports and stock status information Work with DWG to minimise unwanted bycatch (for example kingfish in the jack mackerel fishery and giant spider crab in the squid fishery) 	
	Action linked to Management Objective 1.1, 1.2, 2.1	

¹⁵ The Harvest Strategy is available at <http://www.fish.govt.nz/NR/rdonlyres/6EC9A6A7-6FC4-4273-86B7-57A51CB55348/0/harveststrategyfinalpdf.pdf>

Management Actions delivered in conjunction with other teams within FM and MPI

Table 3: Management Actions that are led by other teams within the FM Directorate and within MPI, but that the Deepwater Team will contribute towards delivery

A	Research Monitoring and Evaluation 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) LEAD: Fisheries Management SCIENCE (Stock Assessment and Aquatic Environment)
	The Deepwater team intends to continue being closely involved in the monitoring and evaluation of all research projects that relate to deepwater fisheries.
	Key tasks: <ul style="list-style-type: none"> • Assist Fisheries Science to deliver outputs all 15/16 research projects as listed in Tables 7-10 • Assist Fisheries Science to ensure that all science research used to support management of deepwater fisheries is assessed against the Research Standard¹⁶
	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
B	Observer Coverage Delivery The MPI Observer Programme is responsible for delivering on the observer coverage targets set out in the final 2015/16 coverage plan and ensure that the required biological sampling targets are met. LEAD: Fisheries Management OBSERVER PROGRAMME
	Observer coverage plans for all fisheries are prepared annually as are biological sampling targets and other observer tasking. The Deepwater FM team will work closely with the Observer Programme to ensure the necessary targets are achieved.
	Key tasks: <ul style="list-style-type: none"> • Assist the Observer Programme to deliver the 2015/16 coverage plan by continuing to engage with industry to regularly provide 3-monthly fishing plans to the Observer Programme, to facilitate placement of observers and delivery of the required levels of coverage • Ensure the Observer Programme is aware of, and that observers are adequately briefed on, the biological sampling targets for 2015/15 and any new requirements for the Programme • Provide training to new recruits as part of the intake process • Request frequent reporting and updates of coverage levels against targets through the 2015/16 year
	Action linked to Management Objectives 1.1, 1.3, 1.4, 1.5, and 2.5
C	Cost Recovery Process Assist the Business and Financial Advice team with the cost recovery processes for 2015/16 and 2016/17 LEAD: Corporate Services BUSINESS AND FINANCIAL ADVICE
	MPI undertakes an annual cost recovery process to recover costs associated with fisheries compliance, registry, research and observer coverage. There are two stages to the process: the first involves undertaking a port price survey while the second consists of calculating the levies for each stock.
	Key tasks: <ul style="list-style-type: none"> • Ensure the Deepwater FM team has input into the port price survey process administered by the Finance team • Ensure the cost recovery levy process recovers costs consistent with Deepwater observer and research plans
	Action linked to Management Objectives: various
	Compliance risk profiling and monitoring work

¹⁶ The Research Standard can be accessed at <http://www.fish.govt.nz/en-nz/Deepwater/Key+Documents.htm>

D	LEAD: Compliance directorate (Operations branch)		
	<p>Risk profiling by the Ministry's Compliance Directorate for 2015/16 will focus on the ORH fisheries. Profiling has previously been undertaken for HOK and SBW and some follow-up work will be undertaken on these fisheries during 2015/16.</p> <p>Compliance 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>		
	<table border="1"> <tr> <td data-bbox="240 465 820 1032"> Actions for 15/16: <ul style="list-style-type: none"> Engage throughout the ORH profiling Develop more informative benchmarks and indicators for deepwater fisheries Work with wider Ministry and industry to implement any recommendations from previous risk profiling projects Continue to monitor measures implemented as a result of previous risk profiling Ensure the Deepwater Compliance Group meets at least twice per year Develop a pilot programme to collect information on adherence to processed state definitions for three species/states (dressed orange roughy, headed, gutted and tailed hoki, and dressed jack mackerel) </td><td data-bbox="820 465 1394 1032"> Business as Usual: <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 Deepwater Compliance Group and to stakeholders through the ARR </td></tr> </table> <p>Action linked to Management Objective 1.5</p>	Actions for 15/16: <ul style="list-style-type: none"> Engage throughout the ORH profiling Develop more informative benchmarks and indicators for deepwater fisheries Work with wider Ministry and industry to implement any recommendations from previous risk profiling projects Continue to monitor measures implemented as a result of previous risk profiling Ensure the Deepwater Compliance Group meets at least twice per year Develop a pilot programme to collect information on adherence to processed state definitions for three species/states (dressed orange roughy, headed, gutted and tailed hoki, and dressed jack mackerel) 	Business as Usual: <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 Deepwater Compliance Group and to stakeholders through the ARR
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E	Input to work within wider MPI branches as required Assist relevant branches within the Ministry with review of policy developments and any necessary fisheries management information Lead: project dependent (see below)		
	<p>Actions for 15/16:</p> <p>The Ministry's Policy and Trade branch as well as other directorates with Regulation and Assurance, may from time to time need information, feedback, and review of working documents that relate to New Zealand fisheries. Contributions based on Directorate priorities may include:</p> <ul style="list-style-type: none"> Fisheries 2030 review (Lead: Fisheries & Aquaculture Policy) MPA policy development (Lead: Fisheries & Aquaculture Policy) EEZ Act – requirement to respond to statutory timeframes to inform marine consent decisions for EPA (Lead: Fisheries & Aquaculture Policy) Implementing Craft Risk Management Standard (Lead: Biosecurity and Environment) Developing biofoul management options for vessels under DOC regional coastal plan for Sub-Antarctic Islands (Lead: Biosecurity, Science & Risk Assessment) Monitor Health, Safety, and Environment Cross Ministry Steering Group work programme (Lead: Environmental Protection Authority, Ministry for the Environment) New Assurances work (Lead: International Policy) SmartMark project (Lead: Strategy, Systems & Science) In market initiatives for New Zealand seafood (Lead: Policy and Trade) <p>Action linked to Management Objectives: various</p>		

Management Actions initiated by Industry

Table 4. Management actions delivered by the Deepwater Team that are initiated by the fishing industry

A	When required, work with industry to :
	<p>Possible Actions for 15/16:</p> <ul style="list-style-type: none">• Respond to any industry requests for changes to stock boundaries• Respond to applications for vessel specific conversion factors• Development of new fisheries

Part 2B: Service requirements to support deepwater fisheries management during the 2015/16 financial year

This section is divided into three parts, in recognition that the Deepwater FM team will work and engage effectively with other teams across the Fisheries Management Directorate, across MPI and with key external organisations (the Deepwater Group Ltd and the Department of Conservation).

I. Regulation & Assurance (R&A)

Table 5: Business Groups, and teams within the Ministry's R&A Branch through which fisheries management services will be delivered

R&A Directorates	Team
1. Fisheries Management	Deepwater
	Inshore
	Highly Migratory Species (HMS)
	Fisheries Stock Assessment (Science)
	Aquatic Environment (Science)
	Spatial Allocations
2. Branch Planning, Systems and Support	Observer Services
3. Spatial, Forestry and Land Management	Support Officers
4. Biosecurity Science, Food Science and Risk Assessment	Spatial Analysis Services
5. Plants, Food and Environment	Animals and Aquatic
	Biosecurity and Environment Group

1. Fisheries Management

MPI's Fisheries Management Directorate is responsible for the operational management of New Zealand's fisheries. Fisheries are managed within legislative requirements to provide for utilisation while ensuring sustainability.

A. Deepwater Team

As detailed above, the Deepwater team will lead on all identified management actions listed in Table 2 and contribute to delivery of all actions specified in Table 3.

B. Inshore and Offshore (Highly Migratory Species - HMS) teams

The Deepwater team will work across the Fisheries Management Directorate to deliver on key projects during 2015/16. These projects are listed below, followed by further detail on specific fisheries services that relate to key projects.

Key projects in 2015/16:

- Implementation of the NPOA Seabirds
- Implementation of the NPOA Sharks
- Twice annual reviews of sustainability controls and management settings
- Coordination of regulatory amendments
- Developing management approaches for low information stocks

Further context for the implementation of the NPOA Seabirds by Deepwater Fisheries Management

The National Plan of Action – 2013 to reduce the incidental catch of seabirds in New Zealand Fisheries (NPOA) includes five-year objectives under high level subsidiary objectives which address four key areas:

- i) a **practical objective** focused on continuous improvement to reduce and where practicable, eliminate the incidental mortality of seabirds;
- ii) a **biological risk objective** focused on ensuring seabird populations remain at or attain a favourable conservation status;
- iii) a **research and development objective** focused on researching mitigation and observation methods, and seabird biology, demography and ecology; and
- iv) an **international objective** focused on the implementation of best practice mitigation in other fishing fleets that overlap with New Zealand breeding seabirds.

The NPOA employs a risk assessment framework in which a quantitative Level 2 Risk Assessment (the risk assessment) is used to identify seabird species considered to be at most risk from New Zealand fisheries. These higher risk species can then be prioritised for management action.

The risk assessment compares annual potential fatalities (APFs) (linked to observed captures, estimated seabird distributions, and multipliers for factors like cryptic (unobservable) mortalities) to potential biological removals (PBR - the maximum number of seabirds, not including natural mortalities, that may be removed from a stock while allowing that stock to reach or maintain its optimum sustainable population).

A seabird species is considered to be at very high risk from fishing if the ratio of the estimated mean annual potential fatalities to the mean potential biological removals is higher than 1. A species is considered to be at high risk from fishing if the ratio of APFs to the PBR is above 0.3. Deepwater fisheries contribute more than 10% of the risk to four 'very high' and three 'high' risk seabird species, detailed below.

Risk Rating: Very high risk

1. Salvin's albatross

Deepwater fisheries contribute a total of 45% of the annual potential fatalities of Salvin's albatross (1,575 out of a total 3,520 – compared to the potential biological removal of 1,010), with most of the contribution from middle depth, hoki, and scampi trawl, and small vessel ling bottom longline fisheries. The main uncertainty in the modelled risk for Salvin's is the number of captures in inshore trawl fisheries, the cryptic mortality multiplier, and the estimate of adult survival.

2. Southern Buller's albatross

Deepwater fisheries contribute a total of 61% of the annual potential fatalities of Southern Buller's albatross (751 out of a total of 1,236 – compared to the potential biological removal of 447), with most of the contribution from hoki and squid trawl fisheries. A Level 3 risk assessment is under way for Southern Buller's which should provide more detailed information on sources of uncertainty and the dynamics of the population and risk from fishing. There is also a DOC research project planned for 2015/16 reviewing taxonomy of the Northern Buller's albatross. This project should contribute to possible issues associated with accurate identification of Southern/Northern Buller's albatrosses.

3. Flesh-footed shearwater

Deepwater fisheries contribute a total of 17% of the annual potential fatalities of flesh-footed shearwater (127 out of a total of 726 – compared to the potential biological removal of 521), with most of the deepwater contribution from the scampi trawl fishery.

4. New Zealand white-capped albatross

Deepwater fisheries contribute a total of 45% of the annual potential fatalities of white-capped albatross (1,990 out of a total of 4,407 – compared to the potential biological removal of 4,040), with most of the deepwater contribution from the middle depth and squid trawl fisheries.

Risk Rating: High risk

1. Chatham Island albatross

Deepwater fisheries contribute a total of 83% of the annual potential fatalities of Chatham Island albatross (107 out of a total of 129 – compared to the potential biological removal of 139), with most of the deepwater contribution from the small vessel ling bottom longline fishery.

2. Westland petrel

Deepwater fisheries contribute a total of 28% of the annual potential fatalities of Westland petrel (23 out of a total of 83 – compared to the potential biological removal of 158), with most of the deepwater contribution from the hoki trawl fishery.

3. Campbell black-browed albatross

Deepwater fisheries contribute a total of 23% of the annual potential fatalities of Campbell black-browed albatross (49 out of a total APF of 210 – compared to a PBR of 677), with most of the deepwater contribution coming from the trawl fisheries.

Deepwater Management approach

In deepwater fisheries, the approach to managing seabird interactions is based on mandatory use of seabird scaring devices¹⁷ together with the implementation of best practice seabird mitigation measures through vessel-specific Vessel Management Plans (VMPs).¹⁸ This is combined with a crew training programme delivered annually, ongoing exploration of new mitigation methods, and MPI observers monitoring vessel adherence to VMPs. Throughout the 2015/16 year, actions in deepwater fisheries to support the NPOA will be focused on continuing to improve and implement the vessel management plan (VMP) process, including the expansion of operating procedures (generic fleetwide approach regarding best practice, including regulations) and training sessions to crew on bottom longline vessels. These aspects should contribute to a continual reduction in the capture rate of seabirds from fishing activity, contributing to both the practical and biological objectives of the NPOA.

The biological objective of the NPOA is to reduce the level of mortality of New Zealand seabirds so that species currently categorised as being at very high or high risk from fishing move to a lower category of risk. Alongside the development and distribution of species and area specific information sheets for fisheries, the Level 2 risk assessment model will be used to determine what reduction in captures would be required for each of the ‘very high’ and ‘high’ risk seabird species to move to a lower risk category. In the interim, industry-led fishery and seabird-species training courses and educational material will be disseminated to fishers focused on those particular seabird species.

Table 6 below sets out the specific services planned for deepwater fisheries management and the objectives they contribute to. It is worth noting that many of the services will contribute to the achievement of more than one objective.

¹⁷ Regulations require trawlers over 28m overall length to deploy a seabird scaring device and bottom longliners to deploy streamer (tori) lines. For links to these regulations see http://www.fish.govt.nz/en/nz/Environmental/Seabirds/Current+Management.htm#wbc_purpose=bas%23MainContentAnchor%23MainContentAnchor.

¹⁸ Information on VMPs is available on the DWG website <http://deepwatergroup.org/wp-content/uploads/2014/10/VMP-Operational-Procedures-2014-15.pdf>

Table 6. Services planned for Deepwater Fisheries Management during 2015/16 in relation to implementing the NPOA Seabirds

Five- Year Objectives :	Planned Deepwater services for 2015/16
Practical objectives	<ul style="list-style-type: none">• Work with the Deepwater Environmental Liaison Officer to continually improve the VMP process and apply it, or something similar, across the wider deepwater fleet including to the ling bottom longline fleet• Continue to monitor adherence to VMPs, as well as review VMPs and education programmes to ensure all measures are as effective as possible. Aiming for the following:<ul style="list-style-type: none">○ 100% of observed trips have audited VMP○ 95% of observers debriefed by FM Deepwater team○ 90% of trips have no issues requiring follow-up• Work across the FM Directorate and with key stakeholders to (develop and) report on appropriate seabird performance measures including capture rate reduction targets• Increase observer coverage to monitor seabird interactions in the ling bottom longline fishery to reduce uncertainty in the risk assessment and continue to monitor seabird interactions• Implement actions from the Black Petrel and Flesh-footed Shearwater Action Plan in the scampi fishery including:<ul style="list-style-type: none">○ Ongoing auditing and monitoring of adherence to VMPs○ Monitoring of effectiveness of current mitigation measures detailed in VMPs• Assist with the development and implementation of species- and fisheries-specific action plans for seabird species considered to be at very high or high risk from fishing as follows:<ul style="list-style-type: none">○ Salvin's, N. & S. Buller's, and white-capped albatross plan draft available by November 2015○ Chatham Island, Campbell black-browed albatross and Westland petrel plan draft available June 2016• Increase awareness among vessel operators of times and areas where the risk of seabird interactions is increased.
<ul style="list-style-type: none">a) All New Zealand commercial fishing vessels are shown to be implementing current best practice mitigation measures relevant to their area and fisheryb) Recreational and customary non-commercial fishers understand the risks their fishing activities pose to seabirds, relevant organisations support and promote the use of best practice mitigation measures and it is the cultural norm in New Zealand to use such measures, andc) Capture rates are reducing in all New Zealand fisheries in accordance with reduction targets in the relevant planning documents for those fisheries	
Biological risk objective	
<ul style="list-style-type: none">a) The level of mortality of New Zealand seabirds in New Zealand commercial fisheries is reduced so that species currently categorised as at very high or high risk from fishing move to a lower category of risk	
Research and development objectives	
<ul style="list-style-type: none">a) Where existing mitigation measures are impractical or of limited effectiveness in reducing the mortality of New Zealand seabirds, new or improved mitigation measures have been sought and where identified are under development for all priority fisheries or fishing methodsb) New observation and monitoring methods, especially in relation to poorly observed fisheries, are researched, developed and implemented; and	<ul style="list-style-type: none">• Contract research project to characterise seabird captures in the deepwater fleet to identify any factors contributing to captures that may be mitigated• Investigate and implement any additional practicable and effective measures to minimise the risk of net captures based on outcomes of research• Continue to engage in DOC and MPI research planning and review processes

c) Programmes of research to improve understanding of, and ability to mitigate, seabird incidental mortality for at risk species are underway and key projects for very high risk species have been completed	
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Additional context on the implementation of the NPOA Sharks

The NPOA Sharks sets out six goals and accompanying 5-year objectives to support the management of sharks. A qualitative risk assessment of all shark species was completed in December 2014, which will inform prioritisation of management actions and research until the completion of a quantitative risk assessment.

Actions across the Fisheries Management Directorate are primarily focused on reviewing appropriate management categories and protection status based on the outcomes of the risk assessment, contracting research to continue filling information gaps about higher risk species, continued monitoring of the implementation of the shark finning ban, and working with fishers to ensure best practice handling and mitigation measures are employed where appropriate.

C. Science teams (Stock Assessment & Aquatic Environment)

The Science teams within the Fisheries Management Directorate provide expert advice and are responsible for evaluating and delivering science research that meets the Science and Research Information Standard for fisheries.

For more information on the Research Standard's ranking system visit MPI's fisheries [website](#)

The key projects and core services that the Deepwater team will work on with the Fisheries Management – Science teams during 2015/16 will be:

- Delivery of deepwater research services and incorporation where necessary into management actions and services – research projects scheduled for delivery during the 2015/16 financial year are provided in Tables 7 – 10 below
- Planning and prioritisation of the 2016/17 deepwater fisheries research programme including industry-led surveys, to be agreed before 31 December 2015. Research scheduled for 2016/17 is presented in Table 11 below as a starting point for discussion.
- Development and implementation of protected species frameworks, including the NPOA Seabirds, the NPOA Sharks and the New Zealand Sea Lion Threat Management Plan
- Research Evaluation via the Science Working Group processes
- Provision of science advice and review to ensure all science information used in management advice meets or exceeds the requirements of the Science Research and Information Standard
- Observer Sampling requirements
- Management approaches for tier 2 deepwater species
- Marine Stewardship Council Assessments and Certification Requirements

Research services scheduled for 2015/16 financial year

Tables 7 and 8 below outline the deepwater fisheries research projects that are scheduled for delivery during the 2015/16 financial year. These projects are generally fully cost recovered.

Tables 9 and 10 below outline the Aquatic Environment and Biodiversity research programmes that are managed by the Aquatic Environment Science Team. Research on the aquatic environment is both

crown funded and cost recovered from the fishing industry through levies. Biodiversity research is solely crown funded and addresses more strategic, national-level marine environmental issues.

Table 7: Research services scheduled for 2015/16 financial year

Project code	Title
Trawl surveys	
HOK2010-05	Chatham Rise hoki and middle depths abundance
Acoustic surveys	
DEE2015-06	Cook Strait spawning hoki survey
DEE2015-07	Estimation of SBW target strength
Acoustic survey design	
ORH2015-01	MEC acoustic survey design
DEE2015-02	BOE AND SSO3A acoustic survey design
Shore-based factory sampling	
DEE2015-01	Cook Strait and West Coast South Island catch at age sampling
Ageing projects	
MID2010-01	Routine age determination of hoki and middle depth species from commercial fisheries and trawl surveys
Stock Assessment	
DEE2010-02	<ul style="list-style-type: none"> • HOK1 • SBW6I • SCI1, SCI2 • JMA7 ¹⁹
DEE2014-03	Stock assessment of squid
DEE2015-05	Stock assessment of BOE3A
BAR2015-01	Update of CPUE and characterisation for BAR5
Management strategy evaluations	
DEE2015-02	Management strategy evaluation - survey and age sampling frequency (hoki, hake and ling)
DEE2015-04	ORH1 low information stock study (feature-based assessment)
Scampi surveys	
SCI2010-02	Estimating the abundance of scampi in SCI6A using photographic/trawl surveys
Aquatic environment	
DAE2010-01	Taxonomic identification of benthic samples
DAE2010-02	Bycatch monitoring and quantification of deepwater stocks (ORH and OEO)
DAE2015-01	Risk assessment response – seabirds (assessment of factors contributing to net captures)
DAE2015-02	Monitoring the trawl footprint for deepwater fisheries

¹⁹ A JMA7 stock assessment was scheduled for 2013/14 but the project never commenced. The statement of work for this project will be amended and a CPUE analysis is likely to be undertaken during 2015/16. Depending on the outcome of this, a separate stock assessment project may be tendered.

Project code	Title
DAE2015-03	Risk assessment response – sea lion TMP (assessment of impact of diet change on survival of pups)

Table 8: 2015/16 research projects from Table 7 listed by each of the nine Tier 1 deepwater species

Type	Stock(s)	Project Code
Hoki		
Stock Assessment	HOK1	DEE2010-02
Trawl survey (Chatham Rise)	HOK1	HOK2010-05
Catch Sampling (Cook Strait)	HOK1	DEE2015-01
Acoustic survey (Cook Strait)	HOK1	DEE2015-06
Mgmt strategy evaluation	HOK1	DEE2015-02
Orange Roughy		
Low information stock study	ORH1	DEE2015-04
Review of Survey Design	MEC (2A South, 2B, 3A)	ORH2015-01
Bycatch estimation	All	DAE2010-02
Southern Blue Whiting		
Stock Assessment	SBW6l	DEE2010-02
Target strength estimation	SBW6l	DEE2015-07
Ling		
Trawl Survey (Chatham Rise)	LIN3 & LIN4	HOK2010-05
Mgmt strategy evaluation	LIN3-6	DEE2015-02
Scampi		
Stock Assessment	SCI1 and SCI2	DEE2010-02
Photo & Trawl Survey	SCI6A	SCI2010-02
Oreo		
Stock Assessment	BOE3A	DEE2015-05
Acoustic survey design	BOE3A and SSO3A	DEE2015-02
Bycatch estimation	All	DAE2010-02
Hake		
Trawl Survey (Chatham Rise)	HAK4 & HAK1	HOK2010-05
Mgmt strategy evaluation	HAK1 & HAK4	DEE2015-02
Squid		
Stock Assessment	SQU6T & SQU 1T	DEE2014-03
Jack Mackerel		
CPUE	JMA7	DEE2010/02

Table 9: Ongoing Aquatic Environment research projects that may inform future deepwater fisheries management settings

Project code	Title
PRO2015-01	Improving estimates of cryptic mortality for use in seabird risk assessments
PRO2015-03	Improving information on out-of-zone bycatch of New Zealand seabirds
ENV2015-01	Updating tools for at-sea fish identification
ENV2015-03	Addressing key information gaps identified by the shark qualitative risk assessment
ENV2015-04	Estimation of incidental captures, fish bycatch and discards using electronic monitoring
PRO2014-06	Update of level-2 seabird risk assessment
ENV2014-01	NPOA-Sharks: comprehensive risk assessment (<i>options for implementation being considered as at March 2015</i>)
PRO2014-02	Risk assessment modelling for fishing-related mortality of sea lions in support of the Threat Management Plan
PRO2014-05	Reducing uncertainty in biological components of the risk assessments for at-risk seabird species

Project code	Title
PRO2014-01	Improving information on the distribution of seabirds and marine mammals (<i>options for implementation being considered as at March 2015</i>)
PRO2013-01	Estimating the nature and extent of incidental captures of seabirds, marine mammals and turtles in New Zealand commercial fisheries
ENV2014-09	Spatial decision support tools for multi-use and cumulative effects
BEN2014-01	Risk assessment for benthic habitats, biodiversity, and production
BEN2014-02	Monitoring recovery of benthic fauna on the Graveyard complex
ENV2014-02	NPOA-Sharks: age and growth of selected at-risk species

Table 10: Ongoing biodiversity research that relates to the deepwater fisheries

Project code	Title
ZBD2015-02	Biogenic habitat and fish association
ZBD2015-03	Linking primary and secondary productivity
ZBD2015-04	Organic carbon recycling in deepwater
ZBD2016-01	Bryozoa taxonomy
ZBD2014-09	Climate change risks and opportunities
ZBD2008/11	Predicting and measuring the effects of ocean acidification on plankton biodiversity and productivity (<i>five year programme linked to MBIE research</i>)
ZBD2012/03	Benthic Survey Central Chatham Rise (Ocean Survey 20/20)
ZBD2013-05	Ocean acidification experimental work
ZBD2014-01	BPA biodiversity
ZBD2014-03	Sub-lethal effects of environment change on fish populations
ZBD2014-04	Isoscapes for trophic studies

Services to support delivery of Management Action #7 - Deepwater Fisheries Research in 2016/17 financial year

Management Action #7 indicated that MPI would be taking an annual approach to contracting the deepwater fisheries research programme, while two key internal projects were progressed. The projects within the annual programme would align with the five year deepwater research plan that MPI developed during 2014/15.

To finalise the 2016/17 research programme, MPI requires agreement to be reached by the end of the 2015 calendar year (i.e. 31 December 2015) on those projects that will be prioritised for delivery in 2016/17. Table 11 below lists the projects that were included in the five year research plan that MPI developed during 2014/15. This suite of projects will require additional prioritisation and agreement, which will be progressed through a research planning forum that will be convened during the first half of 2015/16 financial year.

These projects will generally be fully cost recovered.

Table 11: Research services proposed for 2016/17 financial year

Title
Trawl surveys
Sub-Antarctic multi-species trawl survey
West Coast South Island multi-species trawl survey

Title
Mernoo Bank Scampi (SCI3) trawl and photographic survey
Acoustic surveys
Mid-East Coast orange roughy stock (ORH MEC) aggregation-based acoustic survey
Campbell Rise southern blue whiting (SBW6I) wide area acoustic survey
Bounty Platform southern blue whiting (SBW6B) aggregation-based acoustic survey
Shed sampling
Cook Strait and West Coast South Island catch at age sampling
Ageing
Routine age determination of hoki and middle depth species from commercial fisheries and trawl surveys: <ul style="list-style-type: none"> • Hoki (Chatham Rise, Sub-Antarctic, Cook Strait, WCSI) • Hake (Sub-Antarctic) • Ling (LIN5/6, Cook Strait, LIN7) • Southern blue whiting (SBW6I, SBW6B) Additional ageing to inform the fisheries characterisations that are scheduled for the following year (2017/18): <ul style="list-style-type: none"> • Lookdown dory • Ribaldo • Low info species (TBC)
Stock Assessments
<ul style="list-style-type: none"> • Hake (HAK4, HAK7) • Ling (LIN CS, LIN7) • Southern blue whiting (SBW6B) • Scampi (6A) • JMA7 (tentative) • Squid (SQU1T and SQU6T) • One low information stock – to be confirmed
Fishery characterisations
<ul style="list-style-type: none"> • Silver warehou (all stocks) • Sea perch (SPE3-7) • Giant spider crab (all stocks) • Pale ghost shark (all stocks)
Management strategy evaluations
<ul style="list-style-type: none"> • Hake • Ling • Scampi • One low information species – to be confirmed
Aquatic environment
Taxonomic identification of benthic samples
Bycatch monitoring and quantification of deepwater stocks (SQU and SCI)
Risk assessment response - sharks
Trawl footprint – development of web-based analysis tool
Risk assessment response – sea lion TMP
Benthic research

D. Observer Programme

MPI Observers are deployed on commercial fishing vessels to carry out biological sampling, monitor environmental interactions, and observe and record compliance with regulatory and non-regulatory management measures.

The key projects and core services that the deepwater FM team will work on with the Observer Programme during 2015/16 will be:

- Briefing (where required) and debriefing (all trips) observers allocated to deepwater trips
- Planning the annual observer coverage requirements for the deepwater fisheries – the 2015/16 Deepwater Observer Coverage Plan is set out below
- Updating biological sampling targets and observer tasking (the biological sampling requirements for deepwater fisheries are set out in Table 13 below)
- Developing a pilot programme to monitor adherence to processed state definitions for three species/states (dressed orange roughy, headed, gutted and tailed hoki, and dressed jack mackerel)
- Monitoring progress towards sampling targets during the year

2015/16 Deepwater Observer Coverage Plan

Biological sampling and environmental monitoring is driven by the 10YP and carried out by the MPI 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

Due to recommendations from the Inquiry into the Use and Operation of Foreign Charter Vessels (FCVs), the Ministry has committed to full observer coverage on all FCVs as of 1 October 2012. This has consequently affected the distribution of observer coverage since the 2012/13 financial year. Despite this change the Ministry, along with DOC, is working to ensure that fisheries management needs are met despite the requirement for full observer coverage on FCVs.

The principles and methods used to compile the Deepwater Observer Coverage Plan and Sampling Requirements, shown in Tables 12 and 13, is included below the tables.

Table 12: Deepwater fisheries observer plan for 2015/16

Fishery complex	Target stocks covered	Estimated FCV days (non-discretionary)	Domestic days (discretionary)	Total days planned	MPI/DOC cost recovery %
North Island Deepwater	ORH 1, ORH2A, ORH 2B, ORH 3A BYX2 CDL2	0	100	100	90/10
Chatham Rise Deepwater	ORH3B OEO3A, OEO4 BYX3	0	270	270	90/10
Sub-Antarctic Deepwater	ORH3B OEO1, OEO6	0	60	60	90/10
West Coast Deepwater	ORH7A	0	55	55	90/10
Hoki and Middle Depth trawl fisheries:					
West Coast North Island	JMA7 EMA7 BAR7	1,290	0	1,290	85/15
West Coast SI (FMA7)	HOK1 HAK7 LIN7 SWA1	1,290	150	1,440	85/15
WCSI HOK (Inside the line)	HOK1	0	50	50	85/15
Cook Strait	HOK1	0	50	50	85/15
Chatham Rise Middle depths (FMA3/FMA4)	HOK1 HAK1, HAK4 LIN3, LIN4 SWA3, SWA4 JMA3 BAR1, BAR4	630	340	970	85/15

Fishery complex	Target stocks covered	Estimated FCV days (non-discretionary)	Domestic days (discretionary)	Total days planned	MPI/DOC cost recovery %
Sub-Antarctic Middle depths (excl. SQU/SBW) (FMA5/FMA6)	HOK1 SWA4 WWA5B BAR5 JMA3	680	250	930	85/15
Southern blue whiting	SBW All	320	40	360	80/20
Squid	SQU1T SQU6T	1,360	0	1,360	80/20
Squid jig:					
Squid jig	SQU1J	130	0	130	100/0
Deepwater bottom longline fisheries:					
Bottom longline	LIN3, LIN4, LIN5, LIN6	0	175	175	85/10
Shellfish:					
Scampi	SCI (all)	0	155	155	80/20
Total		5,700	1,695	7,395	

Table 13. Biological sampling requirements for deepwater fisheries for 2015/16

Species		FMA/stock	LF target	Otolith target	Area	Target sp.	Months	Obs plan 'Fishery complex'
Hoki		Sub-Antarctic	400	2000	Sub-Antarctic		Year-round (except July-Aug)	Sub-Ant Mid-depths
		Chatham Rise	400	2000	Chatham Rise		Year-round (except Jul-Aug)	Chatham Rise Mid-depths
		WCSI	400	2000	WCSI		June-August	WCSI Mid-depths
		Cook Strait	200	2000	Cook Strait		July-September	Cook Strait HOK
Orange roughy		ORH 1	50/area		ORH 1			ORH 1
		ORH 2A North	50	300	ORH 2A North			ORH MEC & ECNI
		ORH MEC	50/area	Survey only	ORH MEC			ORH MEC & ECNI
		ORH NW Rise	100	300	Northwest Rise			Chatham Rise DW
		ORH E&S Rise	100	300	East & South Rise			Chatham Rise DW
		ORH 7A + WB	100	300	ORH 7A			ORH 7A
		ORH sub-Antarctic	100		Sub-Ant ORH			Sub-Ant DW
Southern blue whiting		SBW 6I	100	1200	Campbell Island		September – October	Sub-Ant Mid-depths
		SBW 6B	50	1200	Bounties		August-September	Sub-Ant Mid-depths
		SBW 6R/6A	50	800	Pukaki/Aucklands		September	Sub-Ant Mid-depths
Hake		HAK 1	200	1,100 (500/sex)	Sub-Ant		October-February	Sub-Ant Mid depths
		HAK 4	200	1,100 (500/sex)	Mernoo Bank/CR		September-February	Chatham Rise Mid-depths
		HAK 7	200	1,100 (500/sex)	WCSI		June – September	WCSI Mid-depths
Ling		Cook Strait	100	900 (400/sex)	Cook Strait		June-September	Cook Strait HOK
	LIN 3 & 4	Line	50	1,100 (500/sex)	Chatham Rise		June-October	Bottom longline
		Trawl	100	900 (400/sex)	Chatham Rise		October-May	Chatham Rise Mid-depths
	LIN 5 & 6	Line	50	1,100 (500/sex)	Puysegur,		October-December (spawning)	Bottom longline
		Trawl	100	1,100 (500/sex)	Sub-Ant		September-April	Sub-Ant Mid-depths
	LIN 7		200	1,100 (500/sex)	SA 34, 35		June-October	WCSI Mid-depths
Oreos	Black	BOE 3A	200	300	ECSI		October-March	Chatham Rise DW
		BOE 4	100	-	Chatham Rise		October-March	Chatham Rise DW
	Smooth	SSO 3A	100	-	ECSI		October-March	Chatham Rise DW
		SSO 4	200	300	Chatham Rise		October-March	Chatham Rise DW
		SSO 6	Bounty	50	Bounties			Sub-Ant DW
			Pukaki	50	Pukaki			

Species		FMA/stock	LF target	Otolith target	Area	Target sp.	Months	Obs plan ‘Fishery complex’
Jack mackerel	<i>T. declivis</i>	JMD 3	50	900 (400/sex)	ECSI		January-April	Chatham Rise Mid-depths
		JMD 7	400	900 (400/sex)	WCNI		October-July	WCNI
	<i>T. murphyi</i>	JMM 3	100	700 (300/sex)	ECSI/Southland		January-April	Chatham Rise” / Sub-Ant Mid-depths
		JMM 7	100	700 (300/sex)	WCNI		October-July	WCNI
	<i>T. novaezelandiae</i>	JMN 3	30	0			January-April	
		JMN 7	400	900 (400/sex)	WCNI		October-July	WCNI
Squid		SQU 1T	400	N/A	Sub-Ant		January-June	Sub-Ant Mid-depths
		SQU 6T	400		Sub-Ant		January-June	Sub-Ant Mid-depths
Scampi		SCI 1	50	N/A	Auckland/Bay of Plenty		All year	Scampi
		SCI 2	50		Hawkes Bay/Wairarapa		September-April	Scampi
		SCI 3/4A	50		Chatham Rise		All year	Scampi
		SCI 6A	50		Auckland Island		February-November	Scampi
Tier 2 species								
Silver warehou		SWA 1 (WCSI)	200	1,200	WCSI	HOK/SWA	June-September	WCSI Mid-depths
		SWA 3 (ECSI)	200	1,200	SA 020, 022	HOK/SWA	October-December	Chatham Rise Mid-depths
		SWA 4 (CR)	200	1,200	SA 052, 409, 410	HOK/SWA	September-February	Chatham Rise Mid-depths
		SWA 4 (Southland)	200	1,200	SA 026-028	SQU/SWA	December-May	Sub-Ant Mid-depths
Sea perch		SPE 7	80	900 (400/sex)	WCSI	HOK		WCSI Mid-depths

Tier 2 species that have no specific sampling requirements for the 2015/16 year have been removed from the table.

Principles and methods used to determine the observer coverage plan for 2015/16

Biological sampling requirements (numbers of LF samples and otoliths) were determined based on the 10 Year Research Programme for all Tier 1 and Tier 2 middle depth and deepwater species. These species and fishstocks were then grouped by area to determine the ‘fishery complexes’ to be used for observer coverage planning.

Catch effort information from 2013/14 was then analysed to derive an estimate of effort (number of target tows) for the Tier 1 species in each area.

The number of observed 2013/14 Tier 1 target tows in each area was then extracted and compared to the catch effort information. Additionally, information on the number of LF samples and otoliths taken by observers for each area and Tier 1 species in 2013/14 was extracted from the observer database.

Using the sea day tracking sheet (which is what the observer programme uses to track and report coverage during a year) together with information from the observer database, fisher-reported catch effort data, and the observer trip register, the number of observer days achieved for each area during 2013/14 was calculated. This data was used to inform the estimates of the number of samples collected per day by observers, and compared to the effort information to determine how many tows were observed by each observer day.

Following calculation of the estimated days required to achieve the 2015/16 sampling requirements, catch information was used to determine the proportion of the Tier 1 species for each fishery complex that was taken by domestic vessels vs. that taken by FCVs. The sampling target days were then split into the number that would be required for domestic vessels and the number for FCVs in order to sample in a representative manner.

In some cases, it was determined that more samples could potentially be taken per day than have been, and the estimates used to calculate days are based on updated sampling protocols that will be provided to observers prior to the 2015/16 financial year.

It was also noted that many fisheries also have requirements or an interim target of a proportion of effort that should be observed. This is most relevant for fisheries involved in the MSC (Marine Stewardship Council) Certification programme. The MSC has a minimum observer coverage level requirement of 20%, but MPI and Deepwater Group Ltd (DWG) have agreed that 30% is a more appropriate target that allows for robust enumeration of protected species interactions and provides a high level of confidence in fishers’ at-sea compliance with regulations. For each fishery complex, the 2013/14 effort and the estimated number of observed tows/observer day were used to calculate the number of days that would likely be required to meet the coverage target.

Therefore, for each fishery complex, two ‘target’ number of days were produced, the first based on biological sampling requirements and the second based on coverage levels. These two numbers were compared, and the higher of the two used to calculate the planned days. For those fishery complexes where the higher number was that required to collect adequate biological samples, the number of FCV days delivered in that area was used as the base (always higher than the number of FCV days required for sampling) and the number of days that would be required on domestic vessels was then added to that to get the total number of days planned. This number is shown in the “Days to meet sampling target” column in the table below.

After the initial calculations were made, the Deepwater FM team was informed that demands on the observer programme meant they would be unable to deliver all days in the initial estimate. This required prioritising the total days planned. Reductions were made for some of the fishery complexes where only domestic vessels operate; the reason being that coverage on domestic vessels is discretionary while coverage on FCVs is non-discretionary. The actual number of days planned for 2015/16 is shown in the “2015/16 planned days” column.

Note that if the requirement that all FCVs must take at least one observer was lifted, the coverage levels would decrease to roughly the estimated days required to meet either the sampling or coverage target.

Table 14. Summary of information used to complete Table 13

Fishery complex	Days to meet sampling target	2015/16 planned days	Rationale
Deepwater trawl fisheries:			
North Island Deepwater	148	100	Based on an estimate of 3 LF samples taken each day by observers and the sampling requirements to support assessments of these fisheries, it is estimated that 140 days are required. This is based on 50 samples in each of 6 areas (4 ORH1, MEC, 2A North, and BYX).
Chatham Rise Deepwater	270	270	It has been agreed that MSC certified fisheries should have a target of 30% of tows observed each fishing year. Based on the number of tows in this area in 2013/14, and an estimate that an observer can observe 2.2 tows/day on average, 255 days are required. Note that it is estimated that 200 days are required to meet sampling requirements.
Sub-Antarctic Deepwater	74	60	Based on sampling requirements to collect 100 LF samples in ORH fisheries, and 50 LF samples in each OEO fishery, and an estimate of 3 LF samples taken per day, it is estimated that 70 days are required.
West Coast Deepwater	55	55	Sampling requirements for this fishery are 100 LF samples. Based on an estimate that 2 LF samples may be taken each observer day, it is estimated that 50 days are required.
Hoki & Middle Depth trawl fisheries:			
West Coast North Island	1,330	1,290	Sampling requirements for this fishery include 400 LF samples for each of the two main JMA species. Observers sample once per day, but each sample is likely to contain both species, it is estimated that 400 days are needed. This fishery is mostly fished by FCVs, although roughly 10% of the catch has been taken by domestic vessel in recent years. Based on an estimate of 1,290 days delivered on FCVs in 2013/14 and a need to sample 40 days from domestic vessels, the target for the fishery is 1330 days.
West Coast SI (FMA7)	1,500	1,440	Sampling requirements in this fishery include LF samples as follows: 400 HOK; 200 HAK; 200 LIN. Sampled at 2 LFs per observer day would require 400 days to collect the required samples. In 2013/14 the catch of the three Tier 1 species was taken 52% by domestic vessels and 48% by FCVs. An estimated 1290 days were delivered on FCVs and 208 days are estimated as required to collect samples on board domestic vessels to represent their catch indicating 1500 days are required.
Chatham Rise Middle depths (FMA3/FMA4)	1,035	970	Sampling requirements in this fishery include LF samples as follows: 400 HOK; 200 HAK; 100 LIN; 200 SWA. Sampled at 2 LFs per observer day would require 450 days. Domestic vessels were estimated to take 90% of the catch of the Tier 1 species from this area, therefore, 405 days are needed to represent the domestic catch. An estimated 630 FCV days were delivered in 2013/14. That plus the 405 domestic days provides a total of 1035 days.
Sub-Antarctic Middle depths (ex. SQU/SBW)	960	930	Sampling requirements in this fishery include LF samples as follows: 400 HOK; 200 HAK; 100 LIN. Sampled at 2 LFs per day would require 350 days. Domestic vessels were estimated to take 80% of the catch of the Tier 1 species in this area, therefore, 280

Fishery complex	Days to meet sampling target	2015/16 planned days	Rationale
(FMA5/FMA6)			days would be required to represent the domestic catch. An estimated 680 FCV days were delivered in 2013/14, with the addition of the domestic days, a total of 960 is planned.
Southern blue whiting	400	360	Sampling requirements in this fishery include LF samples as follows: 100 6I; 50 6B; 50 6R/6A. Sampled at two per days indicates 100 days are required to meet sampling targets. 40% of the catch of Tier 1 species was caught by domestic vessels in 2013/14 estimating that 80 days are needed on domestic vessels. 320 FCV days were delivered in 2013/14 indicating that a total of 400 days is appropriate.
Squid	1,360	1,360	This planned coverage is based on the current level of effort in the fishery and the proportion of FCVs that operate in the fishery. No additional days are considered necessary to meet sampling or coverage requirements.
Cook Strait	90	50	The planned coverage is based on meeting sampling targets. Note that observer sampling in Cook Strait will be supported by on-shore shed-sampling to ensure adequate biological samples are available to inform the stock assessment.
WCSI HOK Inside the line	70	50	This planned coverage is based on days required to have an observer onboard a vessel in this area throughout the hoki season (May – August) to provide information on the length and age of fish inside the line.
Squid jig fishery			
Squid jig	130	130	This planned coverage is based on the current level of effort in the fishery.
Deepwater bottom longline fisheries:			
Bottom longline	250	175	This observer coverage will mainly target small (<28m) ling longliners, to provide information on protected species interactions in support of the MSC Certification of ling stocks. It is estimated that to achieve a coverage level of 20%, would require 360 days, however across the FM Directorate, this is not considered a high priority and is unlikely to achieve 360 days.
Shellfish:			
Scampi	200	155	Sampling requirements in this fishery include 50 LF samples in each of the four main scampi fisheries (SCI 1, SCI 2, SCI 3/4A, and SCI 6A). Sampled at a rate of two per day, equates to a requirement for 100 days spread evenly across the fisheries. A target rate of 20% observer coverage would require an estimated 450 days. 200 days is planned based on meeting sampling requirements and aiming for 10% of effort observed for the 2015-16 fishing year.

E. Spatial Allocations

There are two Spatial Allocations teams within the Fisheries Management Directorate. One team's functions comprise data management, including commercial and observer-derived data. The other team's functions include:

- analysis and advice on applications made regarding the use and management of marine space
- processing applications for special permits

The core services that the Deepwater FM team will require from, or work with the Spatial Allocations teams on, include:

- requests for data
- assessment of applications for special permits

2. Branch Planning, Systems & Support Directorate

The Branch Administration and Registry Services Unit provides administrative and budgetary support for the entire Regulation and Assurance Branch. The Unit also helps communicate with the Ministerial Team and the Office of the Director General.

3. Spatial, Forestry and Land Management Directorate

The Spatial Analysis Services unit operates within the Spatial, Forestry and Land Management Directorate. The unit's function is to provide spatial visualisation, integration, automation, modelling and analysis across MPI. The Deepwater FM team will require GIS analysis services from the unit on an ad hoc basis.

Deepwater FM will also work with Spatial Analysis Services during 2015/16 on future GIS needs.

4. Other Regulation and Assurance Directorates

Other Directorates that the Deepwater FM team may engage with during 2015/16 include:

- Biosecurity Science, Food Science and Risk Assessment Directorate
This team has a specialised role in providing the science and risk assessment advice that is essential to robust development of food safety and biosecurity import, domestic and export standards.
- Plants, Food and Environment Directorate
One of the three groups within this Directorate is the Biosecurity and Environment Group. During 2015/15, the Deepwater FM team may work with this group on the craft risk management plan for biofouling that applies to vessels arriving in New Zealand.

II. Linkages with the wider Ministry:

Table 15: Directorates and business groups outside R&A from which some fisheries management services will be required

Branch	Directorate
1. Sector Partnerships and Programmes	Maori Partnership & Programmes
2. Corporate Services	Finance, Property and Procurement, Business Technology & Information Services
3. Operations	Compliance
4. Policy and Trade	International Policy Sector Policy
5. Office of the Director General	Ministerials & Business Support Group Communications & Channels Legal Services

1. Sector Partnerships & Programmes Branch

A. Maori Partnerships & Programmes

One responsibility of Maori Partnerships & Programmes Directorate is to liaise with iwi throughout the development of Iwi Fisheries Plans and Forum Fisheries Plans to ensure that Maori interests in fisheries management are addressed.

The key projects that the Deepwater FM team will work with this Directorate to progress will be:

- Review of all consultation and decision documents produced by the Deepwater FM team as part of each sustainability round
- Ensure sufficient and appropriate engagement with tangata whenua through the Iwi and Forum Fisheries Plans

2. Corporate Services Branch

A. Finance, Property and Procurement Directorate

The Finance, Property and Procurement Directorate is responsible for asset management, centralised purchasing, facilities and contracts management.

The key projects that the Deepwater FM team will work with this Directorate to progress will be:

- Annual fisheries and conservation services levy cost recovery process
- Budget administrative support

B. Business Technology & Information Services Directorate

The Business Technology & Information Services Directorate is responsible for the information systems of the Ministry, ensuring effective collection of information, and the development of technology solutions. This includes Ministry software development and the Records and Geo-spatial Data Management function. The Information Services team is also responsible for day-to-day IT support for the Deepwater Team and the Ministry as a whole.

Given the fundamental services that this Directorate provides to the Deepwater Team, all Management Actions are dependent on the functionality of one or more teams within the Business Technology & Information Services Directorate.

3. Operations Branch

A. Compliance Directorate

The Compliance Directorate, within the Operations Branch, is responsible for providing the intervention services to achieve cost-effective compliance. It provides advice to fisheries managers on the most efficient and effective combination of intervention services to manage risks and achieve objectives. Compliance works with R&A through the Fisheries Management Directorate.

Successfully delivering on the Management Objectives for deepwater fisheries is dependent upon high levels of compliance with various sustainability and environmental management measures, be they regulatory or non-regulatory. In deepwater fisheries areas of compliance concern relate to misreporting in terms of areas fished (known as “trucking”), species fished (falsifying returns and misidentification), and quantities taken (unreported discarding or slippage in systems used to record catch).

The Ministry’s compliance activities are based on education, monitoring, surveillance, audit, analysis, and enforcement through investigation and prosecution of offences. Since 2009, the Ministry has revised its compliance model, shifting the focus from enforcement of legal breaches to a Voluntary, Assisted, Directed, Enforced (VADE) model of compliance. While the enforcement and prosecution tools remain available (and continue to be used where appropriate) effort is also focussed on achieving compliance through a programme of educating and assisting the commercial sector to comply. For more information on how the VADE model is operating in deepwater fisheries please see section 5 of Part 1B of the National Deepwater Plan.

The specific compliance services required to support the successful delivery of 2015/16 management objectives are listed below. These service requirements are in addition to the general monitoring and surveillance activities undertaken by the Compliance Directorate, which includes the risk profiling and monitoring work set out in Table 3.

- Reviewing consultation and decision documents for the 1 April and 1 October sustainability rounds
- Providing compliance advice to the FM Directorate to help inform risk ratings for registration purposes
- Working with the Deepwater FM team and the Observer Programme to implement a monitoring regime on the SQU6T fishery including ongoing SLED inspections
- Help monitor proper recording of seabird and marine mammal interactions and adherence to regulatory measures in deepwater fisheries
- Work with FM Deepwater to ensure compliance reports for deepwater fisheries are available for any MSC audits
- Work with FM Deepwater to develop meaningful compliance metrics [put some examples e.g. CF testing and one other
- Continue to operate VADE compliance model

The key projects that the Deepwater FM team will work with this Directorate to progress will be:

- The 2015/16 compliance profiling focus will be the in-zone orange roughy fisheries. Services required from Compliance to successfully deliver this objective are listed in Table 16.
- Additionally, follow-up work on the hoki and southern blue whiting fisheries will be undertaken during 2015/16. These fisheries have been the subject of previous risk profiles. Monitoring of some aspects of these fisheries will be undertaken in order to compare current performance to where it was at the conclusion of the risk profiling. Services required from Compliance to successfully deliver this objective are also listed in Table 15.
- Compilation and review of advice provided to the Director General regarding his consent to the registration of foreign owned or operated vessels under section 103 of the Fisheries Act 1996
- Development of a pilot programme to monitor adherence with processed state definitions. Following the southern blue whiting risk profile, where one of the main priorities was monitoring adherence with the dressed processed state definition, the Deepwater FM team and Compliance will

undertake work on three species/state combinations. The three species/states are dressed orange roughy, headed, gutted and tailed hoki, and dressed jack mackerel.

- Initial planning for a review of the regulatory settings associated with the ban on shark finning in order to inform the two-year review of their implementation and effectiveness.

Table 16. Services required from Compliance Directorate in relation to compliance profiling and follow-up work during 2015/16

Service description	Compliance region	Timeframe
Coordinate information gathering, liaise with regional offices regarding vessel inspections and other information gathering, and collate reports	Maritime Coordination (Petone)	2015/16
If required, in port inspections for HOK including destructive testing	Nelson, Lyttelton, Bluff, Timaru, Dunedin	Winter HOK spawn fishery (June-September)
If required, In port inspections for SBW including destructive testing	Nelson, Lyttelton, Bluff, Timaru, Dunedin	August-October
Liaise with observer programme regarding risk profiling work and processed state adherence monitoring	Maritime Coordination (Petone)	Ongoing
In port inspections for ORH including destructive testing (if required) ²⁰	Could include Auckland, Onehunga, Tauranga, Gisborne, Napier, Wellington, Nelson, Timaru	Ongoing but initial focus in June/July 2015
Planning for two-year review of implementation and effectiveness of shark finning ban regulations.	Petone compliance	Early 2016

4. Policy and Trade Branch

The Policy and Trade Branch is responsible for providing advice on a wide range of legislation administered by the Ministry. It provides forward-looking analysis on policy development and strategic issues. Although multiple directorates within the Policy Branch may be called upon for feedback or review, there are two main directorates that will interact with the Deepwater Team at more frequent intervals. These Directorates include:

- A. International Policy Directorate
- B. Sector Policy Directorate

²⁰ This will be undertaken in conjunction with industry's own destructive testing requirements to minimise wastage

A. International Policy Directorate

The Deepwater Team requires input from the International Policy Directorate on international engagement, trade, and market access. Furthermore, this Directorate ensures the quality of MPI's international engagement on international fisheries issues.

B. Sector Policy Directorate

The Sector Policy Directorate is responsible for working with stakeholders and other Government agencies to develop and implement policy, including the various legislative and regulatory frameworks that support the development of New Zealand's primary industries. It is responsible for monitoring, reviewing and amending policy that relates to the primary sector.

The Economic Information and Analysis team within the Sector Policy Directorate also has the capacity to respond to requests for information on, for example, export statistics.

5. Office of the Director-General Branch

The Office of the Director General's responsibilities include Legal Services, monitoring the performance of the Ministry, external communications such as press releases, and all Ministerial communications. The three directorates within this Branch that will support the Deepwater Team in achieving the 2015/16 objectives are:

- A. Ministerials and Business Support Group
- B. Communications and Channels Directorate
- C. Legal Services Directorate

A. Ministerials and Business Support Group

The Ministerial and Business Support Group is the point of contact between the Ministry and the Minister's Office. This Group is responsible for ensuring governance groups within the Ministry function effectively and ensure that the Ministerial process is managed effectively.

B. Communications and Channels Directorate

The Communications and Channels Directorate is responsible for providing strategic communications advice, to ensure that MPI communicates with internal and external stakeholders in an effective and efficient manner. This Directorate is also responsible for overseeing and developing the Ministry's communications channels (e.g. websites).

C. Legal Services Directorate

The Ministry's Legal Services Directorate provides expert knowledge and legal opinion on the interpretation of relevant fisheries legislation to support policy development and management interventions.

The key projects that the Deepwater FM team will work with this Directorate to progress will be:

- Review of all advice papers drafted as part of the review of sustainability controls
- Review of all responses to requests under the Official Information Act, where it is proposed that information is withheld.
- Review of any contractual arrangements that MPI proposes to enter, for example to secure research services
- Legal input and review for any legislative or regulatory changes that are progressed by the Deepwater FM team during the 15/16 year.

III. External organisations

1. Deepwater Group Ltd. (DWG)

The Deepwater Group Ltd (DWG) is a non-profit company that represents owners of deepwater fishing quota. The DWG works in partnership with MPI to help ensure New Zealand gains the optimum economic yield from New Zealand's deepwater fisheries resources while ensuring fish stocks are managed sustainably and environmental effects are managed appropriately.²¹

A primary function of the DWG is to represent the interests of quota owners and provide a communication channel between the Ministry and the deepwater fishing industry to facilitate full engagement on the management of deepwater fisheries.

In 2006 the then Ministry of Fisheries signed a Memorandum of Understanding (MOU) with the Deepwater Group Ltd. This MOU was subsequently updated in 2008 and most recently in 2010.²² The MOU establishes a structured partnership that enables the Ministry and DWG to work together managing New Zealand's deepwater fisheries collectively. Because of this collaborative arrangement, the Deepwater AOP also specifies how the DWG will contribute to the delivery of Management Actions and, in turn, the Management Objectives within the National Deepwater Fisheries Plan.

The key projects that the Deepwater FM team will work with DWG to progress during 2015/16 will be:

- Prioritising fish stocks for annual sustainability reviews and coordinating industry input
- Administering sub-QMA catch limit management in conjunction with FishServe and required reporting to MPI
- Supporting the deepwater industry to achieve and maintain third party certification
- Assisting with delivery of the observer coverage plan for 2015/16
- Planning research and observer services for delivery in 2016/17 and beyond
- Management and monitoring of interactions with protected species and sharks
- Planning and operation of the DWG/MPI Compliance Group and helping enable the compliance profiling work of the Operations Group

2. Department of Conservation (DOC)

The key projects that the Deepwater FM team will work with DOC to progress during 2015/16 will be:

- Development and implementation of protected species frameworks, including the NPOA Seabirds, NPOA Sharks and TMP for NZ sea lions
- Planning research and observer services for delivery in 2016/17

The Department of Conservation (DOC) carries out research each year focused on protected species interactions with fisheries in New Zealand waters. Some of the research DOC plans to carry out in 2015/16 will be relevant to the deepwater Management Actions, and should be taken into account for future management decisions and research planning activities.

For more detail on the projects in Table 17, please see the Marine Conservation Services Annual Plan for 2015/16 on the DOC website (<http://www.doc.govt.nz/our-work/conservation-services-programme/>).

²¹ DWG's website can be accessed at <http://deepwatergroup.org/>

²² The 2010 MOU can be accessed at http://www.fish.govt.nz/NR/rdonlyres/2E71D225-5866-4C47-8C72-96FBC7F4B66E/0/MOU2010_signed.pdf

Table 17: 2015/16 DOC research projects that relate to deepwater fisheries

Project code	Title
INT2015-01	Observing commercial fisheries
Seabirds	
INT2013-02	Identification of seabirds captured in New Zealand fisheries
INT2015-04	Black petrel and flesh-footed shearwater foraging behaviour around fishing vessels
POP2015-01	Black petrel: Aotea/Great Barrier Island & Hauturu/Little Barrier Island population project
POP2015-02	Flesh-footed shearwater: Various locations population project
POP2015-03	Seabird population research: Auckland Islands 2015-16
POP2015-04	Northern Buller's albatross: review taxonomy
Marine Mammals	
POP2015-05	New Zealand Sea Lion – Auckland Islands population project
Mitigation	
MIT2014-01	Protected species bycatch newsletter
MIT2015-01	Seabird bycatch reduction (small vessel longline fisheries)
MIT2015-02	Small vessel seabird mitigation project
Protected Fish and other Species	
INT2015-02	Identification of marine mammals, turtles and protected fish captured in New Zealand fisheries
INT2015-03	Identification and storage of cold-water coral bycatch specimens
POP2015-06	Marine reptiles – review of interactions and populations
POP2015-07	Supporting genetic analysis of protected fish species