



Ministry of
Fisheries
Te Tautiaki i nga tini a Tangaroa

National Fisheries Plan for Deepwater and Middle-depth Fisheries



New Zealand Government



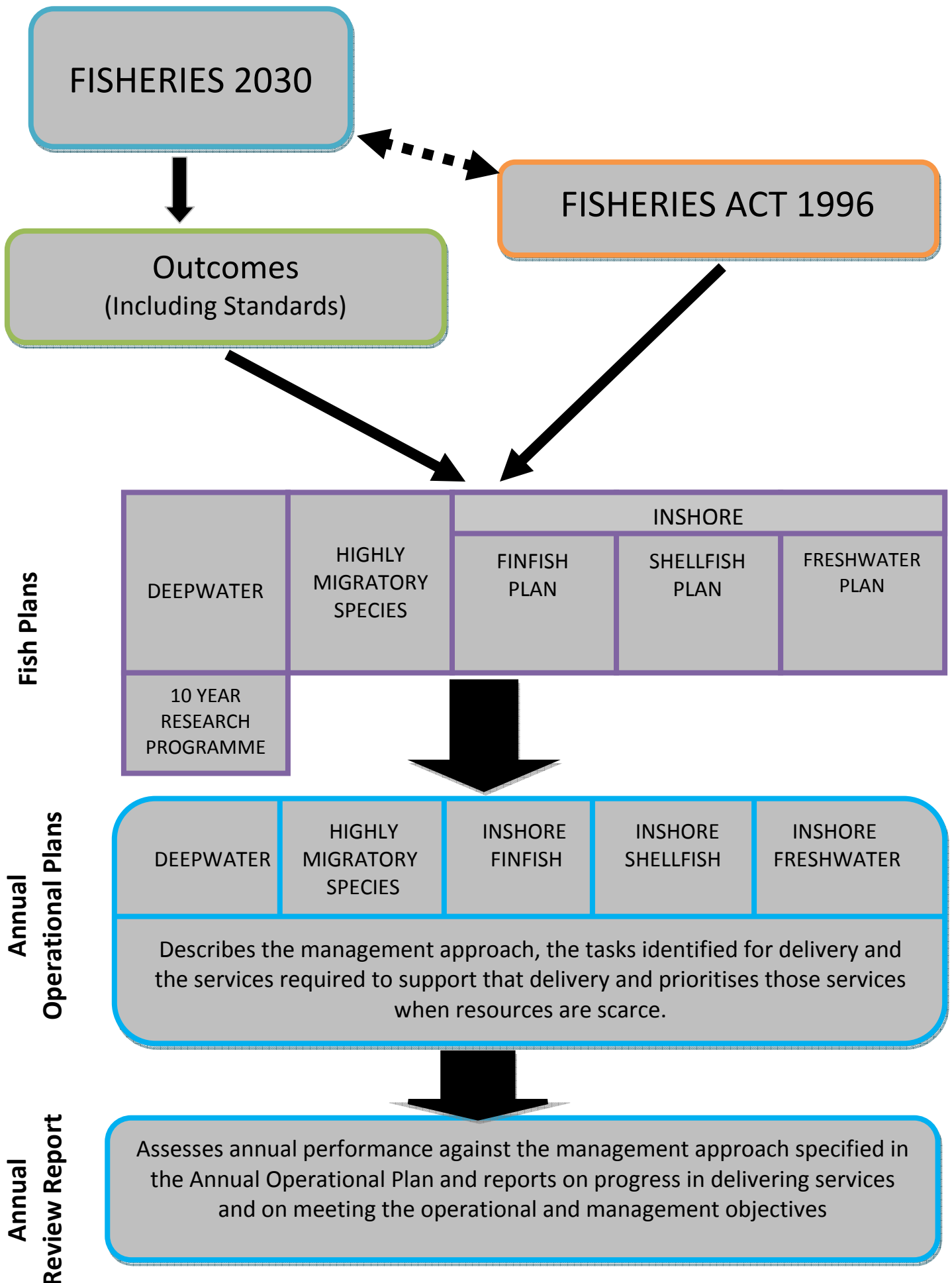
Ministry of
Fisheries
Te Tautiaki i nga tini a Tangaroa

National Fisheries Plan for Deepwater and Middle-depth Fisheries

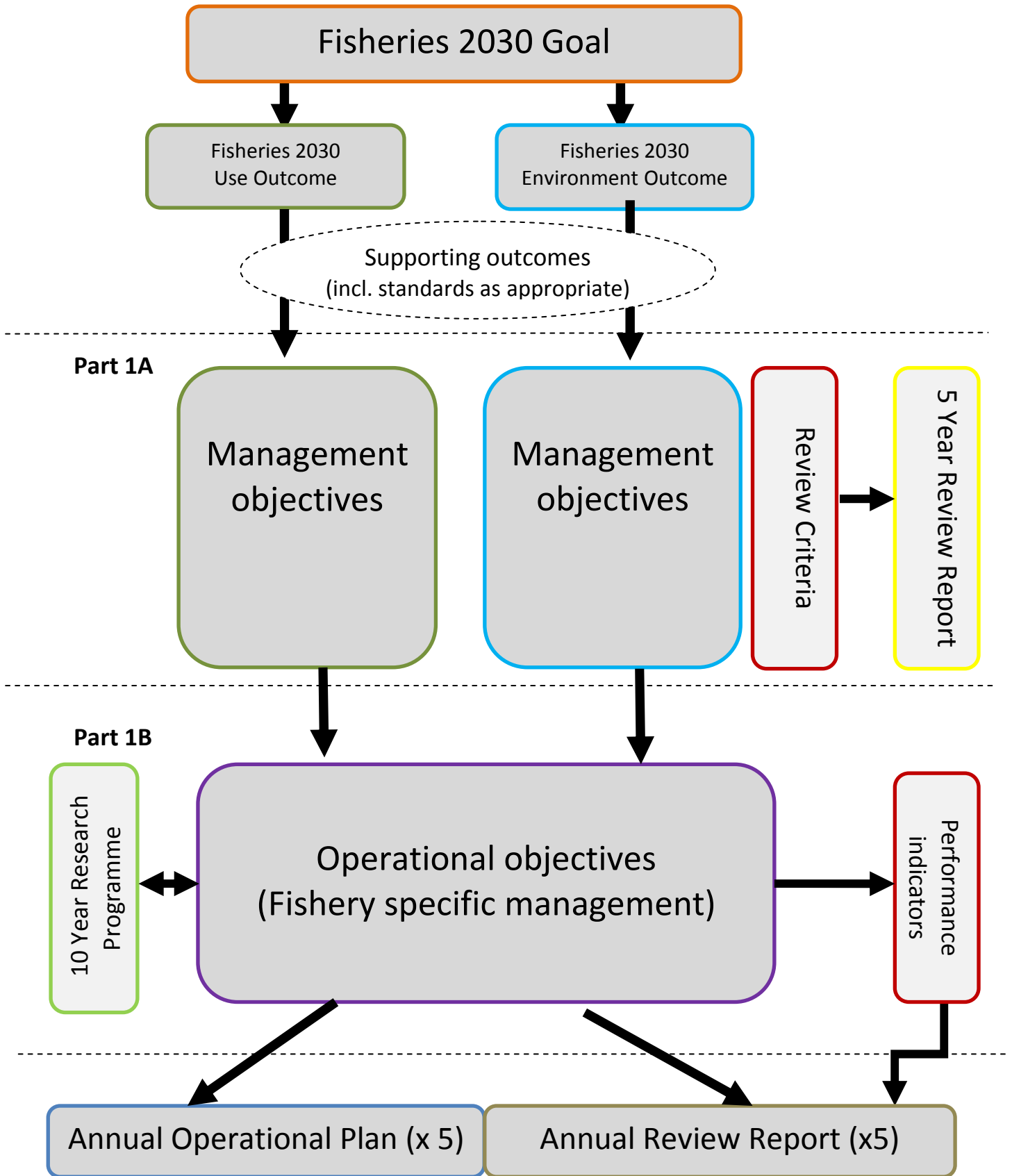
Part 1A

New Zealand Government

Fisheries Plans: Wider Context



National Deepwater Plan Structure



Summary of the National Deepwater Plan

Goal *(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

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

Contents – Part 1A

i	Fisheries Plan: Wider Context <i>schematic</i>	Page 3
ii	National Deepwater Plan Structure <i>schematic</i>	Page 4
iii	Summary of National Deepwater Plan	Page 5
1	Introduction	Page 7
2	Overview of the National Deepwater Plan	Page 8
3	Strategic Context	Page 13
4	Informing Management Objectives	Page 16
5	A five year horizon – implementing the National Deepwater Plan	Page 40
Appendix 1	Profile of New Zealand’s deepwater fisheries sector	Page 52
Appendix 2	10 Year Research Programme	Page 58

1. Introduction

Purpose: The National Fisheries Plan for Deepwater and Middle-depth Fisheries (the National Deepwater Plan) sets the objectives to guide the management of deepwater and middle-depth fisheries (deepwater fisheries) within the New Zealand Exclusive Economic Zone (EEZ). It also describes the performance monitoring regime which will be used to assess if the prescribed objectives have been achieved.

Fisheries 2030 established the goal and outcomes that apply across the entire fisheries sector while the National Deepwater Plan specifically defines the:

- Management objectives for all of New Zealand’s deepwater fisheries
- Review criteria that will be used to assess each fisheries’ performance against the management objectives¹
- Operational objectives for the management of individual deepwater fish stocks
- Performance indicators that will be used to assess the performance of each fishery against its operational objectives²
- Focus for the prioritisation and delivery of services by the Ministry of Fisheries (MFish) to achieve both the National Deepwater Plan and the actions specified in Fisheries 2030.
- Annual planning and review processes to support the implementation of the plan.

The National Deepwater Plan provides an overarching framework for the management of deepwater fisheries for a five year period. The management objectives and the review criteria used to assess performance against the management objectives are generic across all deepwater fisheries. In contrast the operational objectives and their performance indicators are fishery specific.

The high level management objectives specified in the National Deepwater Plan are the outcome of collaborative work between the Deepwater Group Ltd (DWG), representatives from environmental non-governmental organisations (eNGOs) and the Ministry of Fisheries (MFish). To a lesser extent stakeholders also inputted into the development of the operational objectives and the monitoring framework.

The successful implementation of the plan will be driven through five Annual Operational Plans. Each Annual Operational Plan will specify (1) how individual fisheries will be managed (2) the key tasks that will be undertaken to support the successful delivery of the operational objectives specified and (3) the core MFish services required to deliver these tasks. Performance will in turn be assessed through an Annual Review Report.

¹ Review criteria are used to assess performance against management objectives. They enable the measurement of where we are now versus where we will be in five year’s time and should demonstrate how the management of the deepwater fisheries has improved over the five years of the National Deepwater Plan.

² Performance indicators provide information (either qualitative or quantitative) on the extent that an operational objective is achieving its desired outcomes.

2. Overview of the National Deepwater Plan

Fisheries plans are an integral component of the wider strategic context set by *Fisheries 2030*. It is therefore essential these plans clearly and transparently contribute to this wider strategic vision.

The schematic below depicts how *Fisheries 2030* and the National Deepwater Plan are linked. The three components of this schematic are discussed in the following sections:

1. *Strategic Context* describes how the goals, outcomes and supporting outcomes from *Fisheries 2030* inform the generic management objectives that apply across all deepwater fisheries
2. *Informing Management Objectives* describes the rationale, significance and status of the management objectives
3. *A Five Year Horizon – Implementing the National Deepwater Plan* describes the proposed implementation approach, including service specification and stakeholder engagement, and how implementing this plan will contribute to the delivery of the *Fisheries 2030* actions in the short-term and the outcomes and strategic goal over time.



Before discussing how the National Deepwater Plan fits within the wider strategic context described above, there are several important aspects of the National Deepwater Plan that should also be described; these relate to:

- Structure of the National Deepwater Plan
- Legal status of the National Deepwater Plan
- Scope of the National Deepwater Plan
- Timeframe for implementation.

Structure: Collectively the National Deepwater Plan consists of three parts.

- Part 1: 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 has been approved by the Minister of Fisheries under Section 11A of the Fisheries Act 1996. For more information on this please see the following section on Legal Status.
 - Part 1B incorporates 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. The fishery-specific chapters will describe the operational objectives for the target fishery and key bycatch species and how performance against both the management and operational objectives will be assessed at the fishery level.
- Part 2: The Annual Operational Plan describes the management approach for deepwater fisheries, the tasks identified for delivery and the services required to support that delivery, for the financial year that the Operational Plan applies. The Annual Operational Plan also prioritises which services should be delivered and sets out the rationale for this prioritisation.
- Part 3: The Annual Review Report assesses the annual performance of deepwater fisheries against the management approach specified in the Annual Operational Plan and reports on progress towards meeting the operational objectives, management objectives and five year priorities described in Part 1.

Legal status: Section 11A of the Fisheries Act 1996 provides general guidance on what a fisheries plan may contain. Section 11A (2) states that a plan may relate to one or more stocks, fishing years, or areas or any combination of these things. Section 11A (3) states that the plan may include various things including fisheries management objectives to support the purpose and the principles of the Act.

Section 11A provided the legal basis for the development of the National Deepwater Plan and will guide its implementation through the Annual Operational Plan and Annual Review Report. However, none of the management objectives or the tasks to support these objectives will diminish the legal requirement to ensure the purpose and principles of the Fisheries Act 1996 are met. Over time, if there are conflicts between any part of the National Deepwater Plan and legislative obligations as set out in the Fisheries Act then the legislative requirements unequivocally take priority.

Part 1A of the National Deepwater Plan has been approved by the Minister of Fisheries (the Minister) under section 11A of the Act. In approving Part 1A the Minister has agreed to the following:

- The management objectives that will support the purpose and principles of the Act in guiding the management of all deepwater fisheries over the next five year period (pages 19 – 42 in Part 1A);
- The National Deepwater Plan structure, which includes the fishery specific chapters that exist or will be developed in Part 1B, the Annual Operational Plan and the Annual Review Report;
- How the National Deepwater Plan will be implemented (pages 43 – 53 in Part 1A); and
- The process for engaging with stakeholders on the implementation of the National Deepwater Plan (Pages 53 – 56 in Part 1A).

Although the Minister will be provided with an opportunity to consider the fishery specific chapters, the Annual Operational Plan and the Annual Review Report, these components of the National Deepwater Plan have not been approved under section 11A.

However, the structure of the National Deepwater Plan is such that any statutory intervention required to regulate deepwater fishing activity should be identified in the Annual Operational Plan. It will be linked, in turn, to the relevant fishery-specific chapter and the high-level management objectives specified the National Deepwater Plan. The Minister may also be asked to approve certain outputs from the operational objectives particularly when these outputs relate to his/her ability to meet statutory responsibilities e.g. harvest strategies.

Having given his approval, section 11 (2A) specifies that the Minister must take into account Part 1A of the National Deepwater Plan before s/he sets or varies any sustainability measure under Part III of the Act (sections 11–16), or when making any decision or recommendation to regulate or control fishing of deepwater species managed under this plan. This means that while the Minister must take into account Part 1A of the National Deepwater Plan s/he is permitted to make a decision that is different to what is set out in the plan, provided it is clear that in making that decision the content of the fisheries plan was taken into account.

Under section 12 of the Act the Minister is also required to consult if Part 1A of the National Deepwater Plan is amended or revoked. The consultation process should include reasons for

the proposed changes.

Finally, nothing contained in Part 1A of the National Deepwater Plan changes the Crown’s obligations to Māori. Rather the National Deepwater Plan is a key means of giving effect to the Crown’s obligations. With respect to commercial fisheries, the Crown’s obligations are specified in legislation such as the Māori Fisheries Act 1989, the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and the Fisheries Act 1996. More information on how the National Deepwater Plan will contribute to how the Ministry will deliver on its obligations to Māori is included in the section on “Stakeholder engagement”.

Scope: This National Deepwater Plan addresses the management of New Zealand’s deepwater fisheries. Management in this context includes the management of all target stocks, the management of bycatch fish stocks taken with the target species and the management of the environmental effects of fishing.

All deepwater species in the quota management system (QMS) have been ranked into two tiers according to their commercial importance (see Table 1). Tier 1 fisheries are high volume and/or high value fisheries and are traditionally targeted. They are important export revenue earners, which is reflected in the high quota value associated with these species. Tier 2 fisheries are typically less valuable bycatch fisheries or are only target fisheries at certain times of the year.

Table 1: Categorisation of deepwater species

Tier	Species ^{3 4}
1	Hoki, hake, ling, southern blue whiting, jack mackerel, orange roughy, oreo, scampi, squid
2	Alfonsino, silver warehou, barracouta, cardinal fish, frostfish, ribaldo, ruby fish, spiny dogfish, white warehou, lookdown dory, pale ghost shark, blue mackerel, prawn killer, redbait, gemfish, deepwater crabs, dark ghost shark, sea perch.

As noted, Part 1 of the plan collectively specifies the high-level management objectives and, through the individual fishery specific chapters, translates these generic management objectives into operational objectives for each fishery. The fishery specific chapters describe how the management of Tier 1 species (and the Tier 2 bycatch stocks associated with these fisheries) will be monitored and how performance will be assessed. The fishery specific chapters that will, in time, be included are shown in Table 2. The timetable for inclusion of the remaining fisheries is also shown.

³ Note that some stocks of these species will be managed by the inshore team because the bulk of the fishing comes from the inshore fleet particularly in FMAs 1 & 2

⁴ Note that some stocks from a Tier 1 species may be managed as a Tier 2 stock based on the scale of the fishery e.g. SQU1J

Table 2: Proposed timeframe for the delivery of additional fishery chapters in the National Deepwater Plan

Chapter	Target species (Tier 1)	Bycatch stocks managed in conjunction with the target species*	Start date
2.1	Hoki	Silver warehou, spiny dogfish, frostfish, white warehou, lookdown dory	completed
2.2	Orange roughy	Black cardinalfish	completed
2.3	Southern blue whiting		June 2010
2.4	Ling	Ribaldo	November 2010
2.5	Hake		November 2010
2.6	Oreo	Rubyfish, alfonsino	tbc
2.7	Squid	Barracouta	tbc
2.8	Jack Mackerel*	Redbait/ relevant English mackerel stocks	tbc
2.9	Scampi	Prawn killer	tbc

* Note that only some stocks of these species will be managed through the National Deepwater Plan.

Timeframe: The National Deepwater Plan applies for five years, starting in the 2010-2011 financial year and ending in 2015-2016. A comprehensive review of the National Deepwater Plan will take place during 2014-2015. Based on the outcome of this review a revised National Deepwater Plan will commence during the 2015-16 financial year (starting 1 July).

During this five year period Iwi Fisheries Plans (IFPs) and Forum Fisheries Plans (FFP) will be developed.⁵ IFPs and FFPs are the key tools for ensuring tangata whenua have effective input and participation at the appropriate levels of fisheries management decision making. Once an IFP/FFP is finalised, any specific objectives that relate to deepwater fisheries will be considered for inclusion in the Annual Operational Plan, where they will be prioritised for delivery. When the National Deepwater Plan is revised during 2014-2015 it will incorporate the relevant objectives from completed IFPs and FFPs.

⁵ For more information on IFPs and FFPs please see the Ministry of Fisheries website at www.fish.govt.nz

3. Strategic Context

Fisheries 2030 sets the Strategic Goal, Outcomes and supporting Outcomes to inform....

Fisheries 2030 provides increased certainty about the government's goal for the fisheries sector, as well as defining the Ministry's priorities in supporting the sector to achieve this long-term goal. It is a government sector-wide strategy that addresses commercial fishing and aquaculture interests as well as the interests of tangata whenua and fisheries stakeholders.

Fisheries 2030 sets a long-term goal of New Zealanders maximising benefits from the use of fisheries within environmental limits. This goal encapsulates the ideal or aspirational state for New Zealand's deepwater fisheries.

Outcomes and Governance

Fisheries 2030 also specifies two outcomes which support the long-term goal; use and environment outcomes. Both outcomes describe what it will mean to maximise the benefits from the sustainable use of our deepwater fisheries resource and to ensure the health of the aquatic environment is maintained.

USE – Fisheries resources are used in a manner that provides greatest overall economic, social and cultural benefit

ENVIRONMENT – The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for current and future use

Each outcome is further specified through a series of supporting outcomes

USE – Fisheries resources are used in a manner that provides greatest overall economic, social and cultural benefit, including:

- An internationally competitive and profitable seafood industry that makes a significant contribution to our economy
- High quality amateur fisheries that contribute to the social, cultural, and economic well-being of all New Zealanders
- Thriving customary fisheries managed in accordance with kaitiakitanga, supporting the cultural well-being of iwi and hapu
- Healthy fisheries resources in their aquatic environment that reflect and provide for intrinsic and amenity value

ENVIRONMENT - The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for current and future use, including:

- Biodiversity and the function of ecological systems including trophic linkages are conserved
- Habitats of special significance to fisheries are protected
- Adverse effects on protected species are reduced or avoided
- Impacts, including cumulative impacts, of activities on land, air or water on aquatic ecosystems are addressed

Specifying goals and outcomes provides a general statement of the aspirations for deepwater fisheries. The *Fisheries 2030* goal, outcomes and supporting outcomes are deliberately high level and are not intended to be used to determine actions directly. Rather, *Fisheries 2030* sets the broad framework. The management and operational objectives discussed later in this National Deepwater Plan provide operational definition to this strategic vision – consequently they seek to deliver the Fisheries 2030 outcomes.

The *Fisheries 2030* goal and outcomes recognise that the purpose of New Zealand's deepwater fisheries is to derive value both in terms of economic and intrinsic value (the value an individual or community places on preserving a resource or environment in its own right). In turn the realisation of this value must occur in a way that ensures the sustainability of the resource and avoids, remedies or mitigates adverse effects of fishing on the aquatic environment. Specifically *Fisheries 2030* recognises that:

- The biological realities of harvesting our deepwater fisheries mean that the future value of these fisheries can only be assured if the resource is managed sustainably. Measures to increase value must always be considered in the context of ensuring long-term maintenance of both target and bycatch stocks.
- Deepwater target and key bycatch fish stocks exist as part of the broader aquatic environment, and that this broader environment has value, including an intrinsic value, to New Zealanders. It also recognises that, while fishing activities may have an environmental impact, not all environmental impacts have an adverse effect on the aquatic environment.
- Avoiding or minimising adverse effects on the aquatic environment will ensure that the long-term viability of associated or dependent species is assured and that the biological diversity and functionality of marine communities is maintained.
- The purpose of commercial fishing is to derive value and that the purpose of fisheries management is to enable best value to continue to be derived from New Zealand's deepwater fisheries. *Fisheries 2030* also recognises that in the long-term, economic value relies on the environmental sustainability of these fisheries.

Governance

Sound governance arrangements that are well specified, transparent and which support cost-effective and accountable decision making are necessary to ensure the successful delivery of these outcomes. To this end *Fisheries 2030* also describes a series of governance objectives.

The management of deepwater fisheries must be well informed and collaborative to ensure that the fisheries are valued by New Zealanders generally. This means that management of our deepwater fisheries must be seen to be credible, both nationally and internationally. Good and transparent governance structures are critical for success.

Good governance is also necessary to meet the objectives specified in this National Deepwater Plan. In terms of deepwater fisheries management it is proposed that the intent of the *Fisheries 2030* governance objectives - specifically with respect to the desire for an enabling framework that allows stakeholders to create optimal social, cultural and economic value - will be achieved through the revised DWG Memorandum of Understanding (MOU) and the creation of a structured Environmental Advisory Group (EAG). For more information on the MOU and the proposed EAG please see the section on the 'Stakeholder Engagement'.^{6 7}

Our Treaty partnership obligations, in the absence of IFPs and FFPs in the short-term, will be given effect through a structured engagement approach in collaboration with Te Ohu Kai Moana (TOKM). This is discussed in more detail in the section on Stakeholder Engagement.

Finally, the development of Annual Operational Plans and Annual Review Reports, which will be made publicly available, will also contribute to the desired accountable, responsive, and transparent system of management.

⁶ The Deepwater MOU was initiated in October 2006 and was revised in 2008.

⁷ Further discussion with stakeholders is necessary around the proposed EAG and the revised DWG MOU before either proposals are finalised.

4. Informing Management Objectives

....management objectives which drive the stock-specific operational objectives and performance measures....

The *Fisheries 2030* goal and supporting outcomes directly influence the management of deepwater fisheries by shaping the high level management objectives that apply across all deepwater fisheries.

Each of the specified management objectives contributes directly to the delivery of the *Fisheries 2030* outcomes. These management objectives are generally open statements which are not expressed in measurable terms.

However, a simple gap analysis allows an assessment of the current status of our deepwater fisheries in the context of these management objectives and the expected change (i.e. future status) that should exist at the end of the five year implementation period. Describing the expected future status in turn makes explicit a set of review criteria which facilitate monitoring progress towards achieving these management objectives over the five years.

In summary, each management objective is described in terms of its purpose and intent and of its current and future status. The future status clearly describes the expected outcomes that will be achieved through the delivery of the National Deepwater Plan. Also included is an overview of the five year priority assigned to each management objective. The priority status is determined using a set of broad criteria which are detailed below.

Priority	Description
P1	Management Objectives which are considered a high priority for delivery. This means that the focus in the early years of the National Deepwater Plan will be to deliver services and complete the tasks to deliver the fishery specific operational objectives that underpin P1 Management Objectives. Note that prioritisation status will be influenced by the timeframe for the completion of additional fishery specific chapters.
P2	Management Objectives where tasks to complete the operational objectives will be started in the early years of the plan, but will likely take the full five year period before the Management Objective has been achieved. Typically this is because the successful completion of more than one fishery-specific operational objective is required before the management objective has been achieved.
P3	Management Objectives which have a high priority but successful implementation is influenced by external factors. The influence of factors external to MFish can mean that despite a priority focus, these objectives may not be achieved during the initial five year timeframe.
P4	Management Objectives where the timeframe for the delivery of tasks to achieve the fisheries-specific objectives will occur during the latter part of the five year period. In some instances the management objectives may be achieved before the five year period has elapsed but in others successfully achieving the Management Objective will not occur until the second five year period.

Table 3 below provides an overview of each management objective including its prioritisation status and how it contributes to the strategic actions specified in Fisheries 2030.

Fisheries 2030		National Deepwater Plan		Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15
10. Improve Fisheries Information	10.1 Improve our knowledge of fish stocks and the environmental impacts of fishing through implementing long-term research plans	MO1.4: Ensure effective management of deepwater and middle depths fisheries is achieved through the availability of appropriate, accurate and robust information	Successful implementation of a 10 Year Research Programme to ensure appropriate information is available to support fisheries plan objectives	P1				
5. Ensure sustainability of fish stocks	5.1 Set and implement fisheries harvest level standards	MO2.2 Maintain the genetic diversity of deepwater and middle-depth target and bycatch species	Information on sex and age class structure routinely collected for all species managed through the National Deepwater Plan and processes are in place to monitor trends in this information	P2				
	5.2 Enhance the framework for fisheries management planning including the use of decision rules to adjust harvest levels over time	MO 2.1 Ensure deepwater and middle-depth fish stocks and key bycatch fish stocks are managed to an agreed harvest strategy	Tier 1 deepwater stocks will be managed to an agreed harvest strategy based on biological reference points	P1				
			Tier 2 deepwater and middle depths stocks will be managed using agreed management criteria where management based on a comprehensive set of biological reference points is not possible or appropriate.			P4		

<i>Fisheries 2030</i>		National Deepwater Plan		Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15
6. Manage impacts of fishing and aquaculture	6.2 Set and monitor environmental standards for threatened and protected species and seabed impacts	MO2.3 Protect habitats of particular significance for fisheries management	Policy guidelines developed to determine what are habitats of particular significance (P1) application of policy guidelines to deepwater fisheries where necessary (P4)		P1	P4		
		MO2.4 Identify and avoid or minimise adverse effects of deepwater and middle-depth fisheries on incidental bycatch species	Completion of qualitative risk assessment for all non-QMS deepwater bycatch species to inform a monitoring and risk-based management approach		P2			
		MO2.5 Manage deepwater and middle-depth fisheries to avoid or minimise adverse effects on the long term viability of protected, endangered and threatened species	Continuation of existing measures to manage likely adverse effects on seabirds and marine mammals. Ongoing monitoring of nature and extent of interactions and, devise and implement mitigation measures when it is apparent that the impact is beyond acceptable levels (i.e. when assessed against an environmental standard)	P3				

<i>Fisheries 2030</i>		National Deepwater Plan		Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15
6. Manage impacts of fishing and aquaculture	6.2 Set and monitor environmental standards for threatened and protected species and seabed impacts	MO2.6 Manage deepwater and middle-depth fisheries to avoid or minimise adverse effects on biological diversity	Ecological Risk Assessments completed for key deepwater fisheries which will include an assessment of the risks to biological diversity from deepwater fishing activity. Measures identified and partly implemented so as to address any unacceptable risks to biological diversity. Completion of ERA for HAK/HOK/LIN is P1 while completing ERAs for remaining fisheries is P4	P1		P4		
		MO2.7 Identify and avoid or minimise adverse effects of deepwater fishing activity on the benthic habitat	Review appropriateness of current benthic habitat measures (BPAs and seamount closures) in light of the revised marine environment classification. Additional protection methods will be implemented where necessary post 2013			P4		
9. Enable Collective management action	9.2 Strengthen Māori collective management arrangements	MO1.7 Ensure the management of New Zealand's deepwater and middle depths fisheries meets the Crown's obligations to Māori.	Annual Operational Plans and Annual Review Report will be presented to relevant iwi forums for their consideration.		P2			

<i>Fisheries 2030</i>		National Deepwater Plan			Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15	
9. Enable Collective management action	9.2 Strengthen Māori collective management arrangements	MO1.7 Ensure the management of New Zealand's deepwater and middle depths fisheries meets the Crown's obligations to Māori.	Annual Operational Plans will be the vehicle by which Iwi Fish Plan objectives relevant to deepwater plans will be prioritised for implementation.			P3			
			Greater commercial iwi involvement in the management of deepwater and middle depth fisheries facilitated through the Deepwater/MFish MOU	P3					
	9.1 Enable quota owners to take collective management action	MO1.2 Ensure there is consistency and certainty of management measures and processes in the deepwater and middle depths fisheries	Implement a more formal and structured co-management arrangement with commercial quota owners through a revised MOU	P1					
14. Ensure fisheries management system integrity	14.3 Optimise the level of voluntary compliance with fisheries laws and standards and maintain an effective deterrence against illegal activity	MO1.5: Ensure the management of New Zealand's deepwater and middle depths fisheries are recognised as being consistent with or exceeding national and international best practice	(1) Development and assessment of deepwater fisheries against a series of compliance benchmarks. (2) Regular reporting of performance through the Joint MFish/Industry Compliance Committee and the Annual Review Report	P2					

<i>Fisheries 2030</i>		National Deepwater plan			Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15	
14. Ensure fisheries management system integrity	14.1 Report each year on the state of NZ fisheries - including compliance with social, cultural, environmental and economic standards/objectives	MO1.6 Ensure New Zealand's deepwater and middle depths fisheries are transparently managed	Annual Review Report produced detailing the performance of the deepwater fisheries sector across a number of areas including: A) Economic performance of the deepwater fisheries sector assessed in terms of (1) quota value (2) export earnings and (3) ability of management decision to contribute to the value of the fishery. B) Sustainability performance assessed in terms of performance against relevant harvest strategy. Independent certification achieved and maintained for key deepwater and middle-depths species.		P1				
	14.2 Establish mechanisms to monitor Ministry and sector performance	MO1.2 Ensure there is consistency and certainty of management measures and processes in the deepwater and middle depths fisheries		Structured industry involvement in the management processes as part of co-governance through revised MOU	P1				

Fisheries 2030		National Deepwater plan			Five year prioritisation				
Objective	Strategic Actions	Management Objectives	Response	2010-11	2011-12	2012-13	2013-14	2014-15	
1. Improve inter-sector allocation	1.2 Develop alternative stock management targets that ensure the sustainability of fish stocks	MO2.1 Ensure deepwater and middle-depth fish stocks and key bycatch fish stocks are managed to an agreed harvest strategy	Tier 2 deepwater stocks will be managed using agreed management criteria where management based on a comprehensive set of biological reference points is not possible or appropriate.			P4			
2. Cost effective management and services	2.3 Review fisheries laws and regulations with a view to reducing compliance costs and improving effectiveness	MO 1.2 Ensure there is consistency and certainty of management measures and processes in deepwater and middle depths fisheries	Penalty framework and appropriateness of regulations reviewed through the MFish/Industry Joint Compliance Committee		P2				
	2.1 Implement more efficient models for planning, procurement and delivery of research and observer services	MO 1.1 Enable economically viable deepwater and middle-depth fisheries in New Zealand over the long-term	Successfully implementing the funding and contracting component of the 10 Year Research Programme	P1					
13. Improve management system performance	13.5 Ensure the provision of value for money fisheries management services, including efficient tangata whenua and stakeholder consultation arrangements.		All management decisions relating to deepwater and middle depths species are formally assessed in terms of their 'value' contribution		P1				

3. Increase trade and access	3.2 Achieve environmental certification of NZ fisheries and product traceability		MO1.1 Enable economically viable deepwater and middle-depth fisheries in New Zealand over the long-term	NZ deepwater fisheries are managed to a level that will enable selected fisheries to successfully achieve and maintain third party certification	P3
------------------------------	----------------------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------	----

Note: MO1.3 does not directly link with Fisheries 2030 but in essence achieving the actions specified by F2030 should ensure that fisheries resources are managed so as to provide for the needs of future generations.

Management Objectives - Utilisation

MO 1.1	Enable economically viable deepwater and middle depths fisheries in New Zealand over the long-term
--------	----------------------------------------------------------------------------------------------------

Description:

This management objective recognises the contribution that viable and profitable deepwater fisheries make to the New Zealand economy generally.

For this reason the management regime must be structured so that it can contribute to, and support, economically viable fisheries. It means that management measures should be assessed in terms of their value maximisation potential (within environmental limits) and on this basis only those measures that positively contribute to the value of the fishery should be progressed.

This management objective recognises the value in extractive use but also acknowledges that at times difficult decisions have to be made about the nature of this use. This is to ensure that viability and profitability do not just exist in the short-term but are available to New Zealand over the long-term.

How our management regime enables an economically viable deepwater fisheries sector should be transparent. In simple terms, the management framework should ensure that sustainability and environmental requirements are met in such a way that the cost and administrative burden to stakeholders is minimised. A constantly shifting management regime, where there is little understanding of the mechanics of the industry that is being regulated, can lead to uncertainty and increased costs and will unlikely enable value maximisation.

A fisheries management regime which ensures deepwater fisheries are being managed to a level that will support third party certification will also enable a more viable deepwater fisheries sector. The management regime must be sufficiently flexible to support the relevant fishery in meeting any conditions of certification that are put in place.

This is an enabling rather than a prescriptive objective and recognises that some elements that influence the economic viability of fisheries, such as exchange rates and fuel costs, are not within the control of fisheries managers. However, it does acknowledge that management costs and the costs of operating in the deepwater fisheries sector can be influenced through the implementation of the National Deepwater Plan.

Current status:

The current collaborative relationship with quota owners and harvesters through the DWG means there is already a concerted effort to ensure Government intervention only occurs when necessary. Every effort is made to engage with quota owners to develop the appropriate management intervention that will achieve the government's desired outcome and to ensure that this intervention is reasonable, cost effective and is not administratively cumbersome.

To date only the hoki fishery has achieved third party certification although hake, ling and southern blue whiting are currently being assessed.

The success, or otherwise, of the management regime in enabling an economically-viable deepwater fisheries sector can be reflected in some of the standard indicators of value, particularly quota value. Information is available for the following key economic indicators across deepwater stocks:

- The current value of quota across all deepwater fishstocks is estimated to be \$2.14 billion.
- Cost recovery levies across deepwater fisheries have averaged approximately \$19.1 million and currently account for 0.9% of the total quota value.⁸
- Export earnings across all deepwater fisheries are currently \$700M (approx).
- Cost recovery levies account for 2.7% of the total export revenue.
- Number of deepwater fisheries successfully certified – currently 1 of 1 (hoki).

Future status:

While recognising there are external factors that can influence the economic viability of the deepwater sector, the following indicators may collectively provide an assessment of whether, in the intervening five year period, the management approach has contributed to an economically viable seafood industry.

- Real quota value for deepwater stocks has increased.
- Real export revenues have increased.
- Processes are in place to ensure management decisions are formally assessed in terms of their value contribution prior to being implemented and that both government and quota owners participate in this process.
- Increase in the number of fisheries that apply for and successfully achieve third party certification.

Priority status: P1

Given the wider government priority of improving economic performance, measures to support this objective will be delivered as a priority during the early years of the plan.

MO 1.2	Ensure there is consistency and certainty of management measures and processes in the deepwater and middle-depth fisheries
--------	----------------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises that credible fisheries management is achieved when there is clear rationale behind why management measures are in place and specifically when these management measures are implemented as part of a consistent management framework.

New Zealanders should be confident that their deepwater fisheries are internationally recognised as being well managed and that the issues typically associated with the global management of fisheries, such as overexploitation, overcapacity and environmental degradation, are not applicable to New Zealand's deepwater fisheries. It should be clear that if and when issues or concerns emerge there is a comprehensive management programme in place to address such issues.

⁸ Based on average MFish and DoC levies between 05/06 to 07/08 fishing years.

Achieving consistency and certainty in the fisheries management context can also deliver value to commercial fishers by providing certainty around the extent of management intervention, the limits around how they can operate, and the associated costs. It can also provide a stable regulatory environment within which operators can make informed business and investment decisions.

Current status:

Although New Zealand’s deepwater fisheries are managed by the Ministry of Fisheries in collaboration with deepwater quota owners there is no overarching framework to guide objectives-based fisheries management. Key management decisions are typically determined on an annual basis and are rarely assessed in terms of their likely cost and benefit. The lack of specific harvest strategies for the majority of deepwater stocks also makes it difficult to factor management interventions into business planning.

There is widespread consultation across all stakeholder groups and interested parties on proposed management measures and every effort is made to incorporate stakeholders’ views into final management interventions.

There is some information available on the levels of compliance with regulatory and non-regulatory measures but this information is not always in a consistent or usable form.

There is no single source that provides information on the management approach across all deepwater fisheries in a form that all parties can understand.

Future status:

Management decisions are clearly linked to a set of agreed high-level objectives for a fishery. The proven collaborative management regime ensures there is stakeholder participation in the development and implementation of management changes. This collaborative approach means there is good exchange of information to enable full cost/benefit assessments of proposed management measures.

The management approach and decisions are documented and are publicly available in a format that is accessible to all interested parties.

Priority status: P1

This management objective is considered a priority for implementation. Although New Zealand may have a fisheries management regime that is recognised as world leading, for many stakeholders it seems to consist of complex science information and isolated short-term management decisions that are unconnected to any long-term objective. In order for New Zealanders to maximise benefits from the use of fisheries they have to both understand and accept the management regime.

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
--------	----------------------------------------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises that the management of deepwater fisheries should be undertaken to achieve long-term profitability rather than short-term gain. This objective also recognises that value is not simply economic value but can also include social, cultural

and intrinsic values. This means that strategies to maximise economic return in the short-term must not impact on the ability for the fishery to provide for the reasonably foreseeable needs of future generations.

The foreseeable needs of future generations encapsulates not only the need to ensure the availability of a commercially-viable fishery to future generations of fishers and quota owners but also the need to provide for social and cultural needs and to preserve the broader ecosystem. Preservation of the broader ecosystem meets the needs of future generations by preserving both the intrinsic value and the potential to use as yet unknown resources in the future.

Current status:

The foreseeable needs of future generations, including intrinsic and bequest values, have not been specifically identified in relation to deepwater fisheries. Current management is focussed on ensuring sustainable catch limits and avoiding, remedying or mitigating the adverse effects of fishing on the aquatic environment.

Future status:

The successful implementation of the National Deepwater Plan ensures there is a greater public awareness and understanding of how New Zealand’s deepwater fisheries are managed. There is also wider public acknowledgement both within New Zealand and internationally that New Zealand’s deepwater fisheries management regime is world leading and that deepwater seafood products are acknowledged as the sustainable choice.

Priority status: P3

This management objective is classed as a P3 priority because delivering this objective is dependent on the successful completion of the other management objectives. It is likely that this management objective will not be completed during the initial five year implementation period.

MO 1.4	Ensure effective management of the deepwater and middle-depth fisheries is achieved through the availability of appropriate, accurate and robust information
--------	--------------------------------------------------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises that credible fisheries management requires information and data that is both robust and fit for purpose. Information is necessary to support the development of management measures and, once these measures are implemented, assessing performance in terms of delivering expected outcomes.

The successful delivery of the National Deepwater Plan is contingent on the right data and information being available. This issue applies across all deepwater fisheries and is being comprehensively addressed through the development and implementation of the 10 Year Research Programme for deepwater fisheries.

Current status:

The current management of some of the key deepwater fish stocks is supported by a robust and comprehensive stock assessment programme (hoki, southern blue whiting, orange roughy-in part). However there is insufficient data and information available to assess the status of the remaining Tier 1 target stocks and the associated Tier 2 bycatch stocks. Nor is there sufficient information available to fully assess the nature and extent of any adverse

environmental effects associated with deepwater fishing activity.

Future status:

The successful implementation of the 10 Year Research Programme means there is sufficient and consistent information available to assess the status of all QMS deepwater stocks and to monitor the effects deepwater fishing on the marine environment. All Tier 1 and Tier 2 stocks have agreed harvest strategies in place and, the availability of increased data on associated bycatch stocks facilitates the development and implementation of management strategies for these species.

Information is available on the full nature and extent of environmental interactions and this information allows for the successful monitoring of deepwater fisheries against environmental standards.

Priority status: P1

This management objective is considered a priority for implementation because good quality, comprehensive and consistent information is critical to the successful delivery of the remaining management objectives.

MO 1.5	Ensure the management of New Zealand’s deepwater and middle-depth fisheries is recognised as being consistent with, or exceeding, national and international best practice
--------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Description:

This management objective requires that all deepwater fisheries are recognised in New Zealand and in international markets as being managed to best practice standards as a minimum. This can be achieved through:

1. Independent third party certification;
2. Ensuring participants in these fisheries operate within the legislative, regulatory and management framework in place; and
3. Formally assessing the fishery against international standards or best practice guidelines.

New Zealand has a comprehensive legislative and regulatory regime that all deepwater fishing activity must operate within. To ensure these fisheries consistently meet legal and regulatory obligations there should be compliance, management and environmental standards and benchmarks in place against which the performance of the fishery can be assessed.

Achieving this international recognition is also a critical component of delivering on MO1.1, as fisheries that are compliant with international best practice are generally able to perform better in markets thereby having positive outcomes in terms of export revenues generated.

Current status:

Although New Zealand’s fisheries management regime is internationally recognised as world leading there is poor public perception both within New Zealand and internationally on the management of individual deepwater fisheries (e.g. hoki, squid and orange roughy). The successful Marine Stewardship Council certification of the hoki fishery has only addressed

these views to a certain extent.

Future status:

The management regime for deepwater fisheries enables the successful certification of Tier 1 deepwater fisheries (as appropriate) and supports the maintenance of the certification during the five year certification period. The sustainable management of New Zealand’s deepwater fisheries is acknowledged not just within the fisheries sector but by seafood consumers and the wider public both within New Zealand and internationally.

Priority status: P1

This management objective is considered a priority for implementation because achieving international best practice will underpin the value maximisation potential for deepwater fisheries. The ability for any fishery to be assessed against international standards or third party certification schemes is contingent on a sustainable management framework underpinned by good data, information and research.

MO 1.6	Ensure New Zealand’s deepwater and middle-depth fisheries are transparently managed
--------	-------------------------------------------------------------------------------------

Description:

Credible fisheries management is achieved when sustainability, value and environmental objectives are consistently and transparently achieved. Transparency results when the process around developing and implementing management strategies is understood by all with an interest in the management of deepwater fisheries.

This means that the management regime is widely accessible and is understood by all interested parties - from school children to large retailers and seafood distributors. To achieve this, the right information must be available in the right format and to the right level of detail. This management objective recognises that information may have to be tailored to meet different users’ needs, but that the primary focus is to ensure that interested parties can access the information they require.

This management objective recognises that there should also be transparency in the processes that will be followed should management, environmental or compliance performance fall below the agreed standards, targets or benchmarks.

Current status:

Information currently available on the management of New Zealand’s deepwater fisheries consists predominantly of scientific and technical reports which are only accessible to a limited audience. There is currently no primary information source that can be accessed by people with an interest in the management framework in place across all deepwater fisheries. However through section 12 consultation stakeholders have access to information relating to management interventions.

Future status:

The management decisions within this framework are easily accessed and understood by all. Comprehensive information describing the management approach is available through the Annual Operational Plan and the Annual Review Report and these reports are recognised, nationally and internationally as the single source for management information. Through the

availability of these documents there is greater public and media awareness and understanding of how deepwater fisheries are managed.

Priority status: P1

This management objective is considered a priority for implementation because public understanding is critical to enable New Zealanders to maximise benefits from the use of fisheries. In deepwater fisheries this is expressed in terms of:

- Businesses operating in the deepwater fisheries sector having the correct information to support business decisions.
- ENGO groups and consumers are able to assess that the environmental impacts from deepwater fishing activity are addressed appropriately.

MO 1.7	Ensure the management of New Zealand’s deepwater and middle-depth fisheries meets the Crown’s obligations to Māori
--------	--------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises that the Crown’s obligations to Māori influence how deepwater fisheries are managed. Specifically this management objective recognises that in delivering this plan it is critical that:

1. It actively enables tangata whenua to input and participate in the management of the fishery, and provides a clear expression of kaitiakitanga so that it can be given particular regard to by the Minister when fulfilling their section 12(b) obligations under the Act;⁹ and
2. Any measures implemented do not compromise the Crown’s settlement obligations.

Discussions with Māori representatives to date suggest that maximising the return from their quota and responsibly managing their quota assets are important objectives for them, and that the plan should seek to support these. To deliver these Māori objectives it will be important to ensure the distinction between ensuring the long-term sustainability of the asset and the short-term income stream is explicit.

Current status:

There is currently limited iwi involvement in the management of deepwater fisheries. Only twelve iwi have membership of the DWG and only three of these iwi could be considered to be actively involved. Improving this level of engagement through input and participation processes, will be a priority focus of the National Deepwater Plan.

Actions taken by MFish to date to provide for input and participation needs have included:

- Writing to each Iwi forum advising members, through the MFish Pou Hononga team, that work was about to start on developing on a National Deepwater Plan and seeking their views on how they would like to be engaged.
- Circulating draft iterations of the National Deepwater Plan to members of the DWG which includes twelve iwi.

⁹ The Ministry considers that the obligation to “provide for the input and participation” is a more active duty than consultation generally requiring earlier engagement with tangata whenua (at the option definition stage, rather than the evaluation of options). It implies some responsibility to help build the capacity of tangata whenua to participate in fisheries management processes, rather than just supplying information on those processes.

- Liaising with TOKM directly about options to achieve greater iwi involvement in the deepwater fisheries management.

Future status:

Iwi are actively involved in the DWG or have processes in place to ensure they have a mechanism to engage early in deepwater fisheries management issues.

The successful development of IFPs and FFPs means there are SMART¹⁰ objectives in place to support iwi interests with respect to deepwater fisheries. These objectives will be considered for inclusion in the Annual Operational Plan and performance in meeting these objectives is monitored through the Annual Review Report.

Priority status: P2 & P3

This management objective is a priority during the implementation period. However the ability to incorporate IFPs/FFPs into the National Deepwater Plan is contingent on the successful development and approval of IFPs/FFPs. Equally, the ability to increase iwi participation in the DWG is not fully within the control of this plan.

¹⁰ SMART – specific, measurable, achievable, realistic and timely.

Management Objectives - Environment

MO 2.1	Ensure deepwater and middle-depth fish stocks and key bycatch fish stocks are managed to an agreed harvest strategy
--------	---------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises the importance of a sound harvest strategy to support sustainable fish stock management. The critical components of a harvest strategy are:

1. Biological reference points (or agreed proxies) against which the performance of the fishery will be monitored;
2. A harvest control rule (HCR) that will apply to the fishery to ensure the biomass fluctuates within the target range; and
3. A rebuild strategy for the fishery that will be applied if the stock falls below an acceptable level.

Reference points are biological benchmarks against which the abundance of the stock or the fishing mortality rate can be measured in order to determine stock status. Reference points provide guideposts for the performance of the fishery and signal when management action is appropriate and the form that this management action might take. At a minimum these reference points should include limits and management targets. The appropriate management response will vary depending on where a stock is in relation to the reference points but will be guided by the HCR established.

In simple terms an HCR is a set of well-defined rules that can be used as the basis for determining annual catch limits. The HCR should describe (rather than prescribe) the type of management intervention that should be taken depending on the status of the stock. In some instances the action might be to gather more information or to continue to monitor fishing activity against the current TAC. In other cases, more direct action might be proposed. For example if a stock has fallen below a limit reference point then a TAC reduction or the formal adoption of a rebuild strategy will likely be the most appropriate management responses.

The final component of a harvest strategy is a rebuild strategy. The purpose of a rebuild strategy is to guide the specific management response that should occur if a stock falls below the management target to a level where stock recruitment may be impaired. Implementing a rebuild strategy for a stock will require a catch limit reduction.

In the absence of a stock-specific harvest strategy the Harvest Strategy Standard will be used as a default. All stock-specific harvest strategies that are developed will be consistent with the Harvest Strategy Standard.¹¹

All deepwater fisheries have been ranked according to their commercial importance (see Table 4). The immediate focus is on the development of stock-specific harvest strategies for all Tier 1 stocks.

The long-term aim is to also develop appropriate harvest strategies for Tier 2 stocks. This is

¹¹ Ministry of Fisheries (2008) Harvest Strategy Standard for New Zealand Fisheries. 25p.

dependent on the 10 Year Research Programme delivering sufficient data to estimate $B_{current}$ and B_{MSY} (or other appropriate metrics) which will in turn provide the baseline information to support a harvest strategy.

Tier 3 fisheries are incidental bycatch species that are not currently managed under the QMS but are caught during deepwater fishing activity. These species will be addressed through MO 2.4.

Table 4: Categorisation of deepwater species

Tier	Species ^{12 13}
1	Hoki, hake, ling, southern blue whiting, jack mackerel, orange roughy, oreo, scampi, squid
2	Alfonsino, silver warehou, barracouta, cardinal fish, frostfish, ribaldo, ruby fish, spiny dogfish, white warehou, lookdown dory, pale ghost shark, blue mackerel, prawn killer, redbait, gemfish, deepwater crabs, dark ghost shark, sea perch.
3	Incidental bycatch species - non-QMS species which are usually discarded or rendered to fish meal and are considered to be of nil or low commercial value.

Current status:

Stock-specific harvest strategies have only been developed for a handful of Tier 1 stocks, and for many of the remaining stocks, there is insufficient information to support comprehensive harvest strategies.

Future status:

All Tier 1 stocks have stock-specific harvest strategies in place which explicitly determine the appropriate management interventions and harvest levels. This information is understood by all parties so that management interventions are expected when stock status fluctuates beyond specified levels.

For Tier 2 stocks there is sufficient information available to allow for the development and implementation of alternative management strategies which may include stock specific harvest strategies.

Priority status: P1

Under the QMS, setting TACs is the primary mechanism to ensure stocks are fished sustainably. The high priority of this objective also reflects the legislative requirement under section 13 of the Fisheries Act 1996 to, generally, set TACs that move the biomass of the stock toward or above B_{MSY} .

Note that the status of these management objectives is also influenced by timeframes for completing additional fishery-specific chapters as specified in Table 2.

¹² Note that some stocks of these species will be managed by the inshore team because the bulk of the fishing comes from the inshore fleet, particularly in FMAs 1 & 2.

¹³ Note that some stocks from a Tier 1 species may be managed as a Tier 2 stock based on the scale of the fishery e.g. SQU1J

MO 2.2	Maintain the genetic diversity of deepwater and middle-depth target stocks and key bycatch species
--------	----------------------------------------------------------------------------------------------------

Description:

It is important that the genetic diversity within a fish stock is maintained to ensure stocks are resilient to environmental change.

Fishing pressure may reduce the genetic diversity in a fish stock either by selecting particular genotypes (e.g. fishers may target areas favoured by fish with a particular genetic makeup) or simply by removing a large proportion of fish present in a stock thereby restricting the range of genotypes present.

If a stock has been reduced to very low levels at some point in its history, genetic diversity is likely to be low and such a stock may not be genetically equipped to cope with environmental change. The key to meeting this objective is to ensure that all deepwater stocks, including sub-stocks, are not reduced to levels that may jeopardise their long-term viability. Maintaining stocks around target levels should achieve this.

Measures to maintain habitat diversity and the diversity of non-target species are captured in the remaining management objectives under the Environment Outcome.

Current status:

There is limited information available on the sex and age structure of deepwater species with the exception of some of the Tier 1 stocks. The management regime typically focuses on individual stock levels rather than considering the implications of the management approach on the genetic diversity of the species.

Future status:

Through the 10 Year Research Programme there is sufficient information to record and monitor trends in sex and age information across all QMS species (Tier 1 and Tier 2) managed through the National Deepwater Plan.

Priority status: P2

The implementation of the 10 Year Research Programme will mean that information to support this objective will be collected from year one for Tier 1 and Tier 2 species. Ensuring we have the capability to monitor trends in this information will be a priority during the final two years of this five year implementation period.

MO 2.3	Protect habitats of particular significance for fisheries management
--------	----------------------------------------------------------------------

Description:

Habitats of particular significance to fisheries management are those habitats associated with important life history stages of key deepwater stocks, and associated bycatch stocks. These habitats may include areas associated with spawning or feeding activity or areas where juvenile fish congregate. This objective recognises that any significant change to these habitats may have an impact on the distribution and health of deepwater species. For this reason it is important that such habitats are identified and that an appropriate management regime is in place to ensure that they are protected.

Current status:

It is unclear what is meant by 'habitats of particular significance to fisheries management' and there are currently only ad-hoc non-regulatory protection measures in place for certain species - such as the hoki management areas to protect juvenile hoki. There are other forms of marine protection in place across the EEZ (seamount closures and benthic protection areas (BPAs)) but the effect and adequacy of these closures on the wider habitat protection has not been assessed.

Future status:

Policy guidelines are in place determining the criteria for what should be considered as a 'habitat of particular significance'. Based on these criteria, and where protection of these habitats is considered necessary, a programme of protection is developed. The priority focus of such a programme will be on ensuring that the suitability of existing protection measures are first assessed before new protection measures are considered.

Priority status: P1 & P4

With the exception of the development of the policy guidelines (P1) this management objective has been given a P4 priority status because there are no immediate management concerns which would require that it is implemented during the early years of the National Deepwater Plan. It is expected that the policy guidelines and any programme of protection measures will be developed during the next five years but that the actual protection of the habitats may not be completed within this timeframe.

MO 2.4	Identify and avoid or minimise adverse effects of the deepwater and middle-depth fisheries on incidental bycatch species
--------	--------------------------------------------------------------------------------------------------------------------------

Description:

The Fisheries Act 1996 requires that adverse effects of fishing on the aquatic environment should be avoided, remedied or mitigated.

This management objective recognises that deepwater fisheries will have some environmental impact on incidental bycatch species (i.e. those species that have no commercial value and which are typically discarded).

These incidental bycatch species are typically information deficient so it is difficult to assess when an environmental impact is having an adverse effect. Regularly monitoring bycatch levels will ensure that trends in harvest levels and biological characteristics can be monitored.

Where an adverse environmental effect is identified the management priority will be to avoid or minimise the effect so it is no longer adverse.

Current status:

The reporting requirements for QMS species means there is good information on the extent of harvest levels for these non-target QMS species.

However, there is limited information on the extent of actual interactions with non-QMS

bycatch species. The most reliable source of information is observer coverage and the quality of this information is influenced by the extent of coverage in a particular fishery. There is little information available on the status of these non-QMS bycatch species and the likely risk to their long-term sustainability is unknown.

Future status:

A qualitative risk assessment for non-QMS bycatch species is completed under the 10 Year Research Programme. Comprehensive annual monitoring of bycatch species ensures that we are able to assess when harvest levels are considered to be adverse and can make the appropriate management intervention. This intervention can include section 11 measures such as gear restrictions or catch limits or, QMS introduction following an assessment against the *Standard for Introducing Species to the QMS*.

QMS bycatch species are managed under MO2.1.

Priority status: P2

This management objective will be ongoing during the five year implementation period. The risk assessment will be completed during 2011-2012 and the increased observer coverage from the 10 Year Research Programme will improve monitoring of those higher risk non-QMS bycatch species. Any management interventions necessary when risk levels are considered unacceptable will be prioritised in the Annual Operational Plan as required.

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
--------	-------------------------------------------------------------------------------------------------------------------------------------------------------------

Description:

This management objective recognises that within the aquatic environment there are species that are particularly significant to New Zealanders, both due to their intrinsic value and because of their status as endangered or threatened species.

MOs 2.3 and 2.4 ensure that adverse effects on habitat and incidental bycatch species generally are avoided or minimised. This objective acknowledges the special status of endangered, threatened and protected (ETP) species and ensures that action is taken so that fishing activity in New Zealand’s deepwater fisheries does not have an adverse effect on the long-term viability of these species.

Not all interactions with ETP species will constitute an adverse effect on their long-term viability and when interactions occur, additional management intervention above that already in place will not necessarily be required.

Interactions with ETP species will be monitored and the point at which these impacts are deemed adverse will be identified. The point at which an impact becomes adverse will be informed by the best available scientific research. However the management response may also be influenced by societal views as to what is an acceptable level of impact or environmental change.

This point may be explicitly specified in future through environmental standards. When this occurs deepwater fisheries will be managed so that fishing activity ensures that any ETP interactions are within the limits set by the standard.

Current status:

There have been considerable improvements in the management of ETP species interactions over the last 3-4 years (e.g. seabirds and sea lions). Some of these improvements have been driven by regulatory intervention and some by non-regulatory measures supported by a structured and comprehensive implementation, education and audit programme.

The absence of environmental standards has meant that the management response has been to monitor interactions and to strive for continuous improvement.

Future Status:

Environmental standards are in place and the management measures implemented previously mean that deepwater fisheries are already achieving or close to achieving the performance measures set by these standards. When a fishery is unable to meet an environmental standard, mitigation measures will be developed which will be informed by research delivered as part of the 10 Year Research Programme.

Priority status: P3

Notwithstanding the Ministry's priority focus on the development and implementation of environmental standards, this is a high profile issue and is a priority focus for eNGOs. There is a wider concern that in the absence of environmental standards the impact that deepwater fishing activity has on ETP species may be at unacceptable levels.

This is also a priority focus for commercial stakeholders who want (1) greater certainty around the requirements and cost of managing ETP interactions and (2) reliable information on environmental performance to support their brands in overseas markets and (3) to be able to meet third party certification criteria.

The ability to fully achieve MO2.5 will also be influenced by the availability of environmental standards, as appropriate.

MO 2.6	Manage deepwater and middle-depth fisheries to avoid or minimise adverse effects on biological diversity
--------	----------------------------------------------------------------------------------------------------------

Description:

This management objective complements MO 2.1, MO 2.2, MO 2.3, MO 2.4 and MO 2.5. Although these management objectives relate to specific components of the aquatic environment (target and bycatch species, benthic habitats, incidental bycatch species and ETP species) they collectively contribute to the maintenance of biological diversity.

MO 2.6 is more holistic in scope and addresses the impact of fishing on all aspects of the aquatic environment, including consideration of trophic linkages, and symbiotic or commensal relationships between species.

Current status:

Research and information on the full extent of adverse interactions on the biological diversity of the aquatic environment, including trophic relationships, due to deepwater fishing activity is limited. To date this work has only been partly completed for the Chatham Rise.

Future Status:

Ecological Risk Assessments (ERA) completed for all Tier 1 deepwater species and a programme is in place to address the identified risks.

Priority status: P1 & P4

The P1 status reflects the requirement to complete an ERA for hoki and other species seeking Marine Stewardship Council’s certification.

The P4 priority status acknowledges that:

- Achieving this management objective is influenced by how successfully the other management objectives under the Environment Outcome are delivered.
- Increased data collection is necessary to inform ERA work – this will be achieved through the 10 Year Research Programme.

MO 2.7	Identify and avoid or minimise adverse effects of deepwater fishing activity on the benthic habitat
--------	-----------------------------------------------------------------------------------------------------

Description:

This management objective recognises that deepwater fishing activity may physically impact on the benthic environment.

Benthic habitats can be important breeding grounds, foraging areas, or refuges for target, bycatch or ETP species. As such, ensuring that any impact is carefully managed and remains within acceptable limits is an important component of sustainably-managed deepwater fisheries.

Significant progress has been made in protecting the seabed through BPAs and other spatial closures. The spatial management approach will be retained in order to allow fishing to continue while providing appropriate protection to the benthic environment. Existing management measures will be assessed and if necessary amended to ensure relevant standards are met.

Current status:

Existing regulated measures (BPAs and seamount closures) protect 32% of New Zealand’s EEZ from bottom trawling.

Information on the nature of marine habitats has been updated through the recently revised *Benthic Optimised Marine Environmental Classification* and the soon to be available results from Oceans 2020.

Future status:

There are appropriate levels of benthic habitat protection in place across the EEZ and there is public awareness and support for these measures. There is also widespread acknowledgement that trawling is a sustainable fishing method provided it is governed by appropriate management controls.

Priority status: P4

As a condition of the BPA initiative there was a conditional commitment given to quota

owners that no further benthic protection measures would be implemented in the EEZ until after 2013. Ongoing monitoring of trawl footprint and the completion of initiatives outside this plan will determine whether further measures are required after 2013. The implementation of any additional measures will likely extend beyond the initial five year period of this iteration of the National Deepwater Plan.

5. A five year horizon – implementing the National Deepwater Plan

....which will ensure that implementation of the fisheries plan will contribute to the successful delivery of Fisheries 2030

The National Deepwater Plan is a critical component of the strategic framework for the wider fisheries sector. The links between the high level management objectives and the *Fisheries 2030* strategic actions have been described above in Section 3. Successful delivery of these actions will form the basis for value creation and improved environmental performance in the long term.

In moving from the strategic to the operational the focus shifts from management objectives to fishery-specific operational objectives (contained in Part 1B of the National Deepwater Plan). Delivering the tasks that support the fishery-specific objectives will ensure we are meeting the management objectives for deepwater fisheries. In turn this will directly contribute to the strategic actions specified in *Fisheries 2030* allowing government and stakeholders to achieve the wider strategic vision of maximising benefits from the sustainable use of fisheries resources within environmental limits.

Successfully implementing the National Deepwater Plan will require clear specification of the tasks for delivery that underpin the operational objectives, and the resources and services that are needed. The implementation approach allows for the annual prioritisation of tasks to enable decisions to be made about how to deploy limited management resources across deepwater fisheries.

This section moves from the strategic to the operational by describing at a high-level

- How the National Deepwater Plan will be implemented (the implementation approach)
- What will be required to support implementation (services to support implementation)
- Who will be involved (future stakeholder engagement).

Implementation approach

The mechanism to implement the National Deepwater Plan and to report on performance towards meeting both the operational and management objectives will be achieved through two key documents:

1. Annual Operational Plan for Deepwater and Middle-Depth Fisheries (Part 2 of the National Deepwater Plan)
2. Annual Review Report for Deepwater and Middle-Depth Fisheries (Part 3 of the National Deepwater Plan).

Annual Operational Plan The National Deepwater Plan provides an overarching framework for the management of deepwater fisheries for a five year period. It deliberately does not include details of the day to day management measures that will be implemented for each individual fishery. Nor does it specify the required services, delivery mechanism and service prioritisation issues that must be considered.

This information will be specified in the Annual Operational Plan for deepwater fisheries. The Annual Operational Plan will set out:

1. How individual fisheries will be managed during the fishing year
2. Key tasks that will be undertaken to support the successful delivery of the operational tasks specified in the individual fishery chapters
3. The core services (compliance, research and regulatory) that will be required in each fishing year to deliver fisheries objectives. In situations where there are limited business group resources and competing tasks and objectives, the Annual Operational Plan will also prioritise which services should be delivered including a rationale for this prioritisation.

The description of how individual fisheries will be managed will include:

1. Relevant TACs and TACCs.
2. The harvest strategy in place for the fishery. In the early years of the National Deepwater Plan this will simply reflect the status quo management regime until a stock specific harvest strategy is developed. Once finalised, the harvest strategy will include reference points, harvest control rules and a rebuild strategy in conformance with the Harvest Strategy Standard.
3. Environmental standards against which the performance of the fishery will be assessed.
4. Economic indicators which will provide a measure of whether the economic value maximisation objectives are being achieved.
5. Performance of the fishery against the compliance benchmarks.

These five items may remain unchanged from one year to the next, or some or all may change as new information becomes available or as stock-specific objectives are finalised.

The tasks specified in the Annual Operational Plan will contribute directly to the delivery of the operational objectives described in Part 1B of the National Deepwater Plan. Each task or action will be a discrete activity which should be accomplished within a defined period of time.

Details of the services required to ensure the successful delivery of these tasks and actions will also be specified including:

1. The nature of the service
2. The organisation responsible for delivery – MFish or DWG
3. If MFish is responsible for delivery then details of the business groups that will contribute to service delivery and the resources required
4. Prioritisation of services (across deepwater fisheries only).

The Annual Operational Plan will be developed in conjunction with stakeholders and will be produced no later than the April before the start of the next financial year. Its production will be aligned with Ministry of Fisheries' internal planning and prioritisation processes.

Annual Review Report

Monitoring the successful delivery of tasks to support stock-specific objectives and the performance of individual fisheries against the relevant harvest strategy, environmental standards etc. will be through a formal annual review process. This will culminate in the publication of an Annual Review Report on the performance of deepwater fisheries against that year's Annual Operational Plan.

The Annual Review Report will be completed by December for the financial year ended 30 June. This report will also include relevant information concerning the performance of deepwater fisheries during the previous fishing year that ended on 30 September. It will also identify the progress made in meeting those objectives specified in IFPs and FFPs that were included in the Annual Operational Plan.

Once the Annual Review Report is finalised it will signal a mid-year review of the Annual Operational Plan. This is to ensure tasks and services continue to be prioritised appropriately given the results of the annual review.

Both the Annual Operational Plan and the Annual Review Report will be publicly available. These documents will also be presented to the Minister of Fisheries.

Services to support implementation

Successful implementation of fisheries plans is a Ministry-wide responsibility and will require input and commitment of resources from across the Ministry. A primary focus of fisheries plans - in addition to the goal of improving our fisheries management regime - is to provide a planning tool to ensure the Ministry's resources and activities are transparently allocated and are targeted towards achieving agreed objectives.

This section of the National Deepwater Plan describes broadly the nature of the Ministry's services and the approach for ensuring the objectives specified in this plan drive service delivery. Fine scale specification of services to support fishery specific objectives will be described in the Annual Operational Plan which will be developed in collaboration with the relevant service provider.

The key services that will contribute to the delivery of the National Deepwater Plan include:

1. Compliance services (delivered by the Ministry's Field Operations group)
2. Research and Monitoring (delivered through the 10 Year Research Programme for Deepwater Fisheries)
3. Registry and regulatory services (delivered by the Ministry's Strategy Group).

Additional services that will be required less frequently also include legal advice, corporate communications and IT and data/information support. Collectively these services will be delivered by the Ministry's Organisational Services Group and the Office of the Chief Executive.

The collaborative management regime that exists between MFish and the DWG (given effect through the MOU) means there is flexibility around how tasks are delivered and who is responsible for providing the service. Services may be delivered exclusively by the Ministry, exclusively by the DWG or shared by both parties.

Information and Monitoring

Although there is considerable information on fisheries generally, there is still uncertainty around the status of the majority of deepwater fishstocks and the environmental effects that may result from fishing these stocks.

A long-term research approach (the 10 Year Research Programme) has been developed concurrently with the National Deepwater Plan. The outcomes the 10 Year Research Programme seeks to achieve include:

1. Establish a comprehensive, robust and consistent data collection and analysis programme that will provide the baseline information necessary to meet our statutory obligations and to achieve successful third party certification of New Zealand's deepwater fisheries
2. Establish a consistent time series of data and, where feasible, continue any existing time series
3. Achieve a fleet-wide biological and catch sampling programme for all deepwater vessels through full observer coverage

4. Deliver better value through multi-year research contracts and a more robust procurement strategy and contracts monitoring regime
5. Utilise both fishery-independent and fishery-dependent data and information.

The 10 Year Research Programme is the mechanism to deliver on the research and monitoring objectives described in the fisheries specific chapters (Part 1B) of the National Deepwater Plan. Specifically the 10 Year Research Programme will ensure that data and information is available to:

1. Monitor key fisheries against stock specific harvest strategies
2. Monitor biomass trends for bycatch species
3. Assess fishery performance against environmental standards
4. Enable more timely responses to sustainability and environmental impact issues; and
5. Deliver comprehensive monitoring across the deepwater fleet through a programme of increased observer coverage.

The 10 Year Research Programme has been approved for implementation and it is expected to drive the majority of deepwater research from the start of the 2010-2011 financial year.

The 10 Year Research Programme describes how and what baseline data will be collected to inform the management of deepwater fisheries. It also specifies the routine research necessary to meet the management objectives e.g. monitoring of environmental interactions and routine stock assessments to determine stock status in line with harvest strategies.

As the National Deepwater Plan progresses there may be individual fishery objectives that require additional research beyond the structured research currently proposed in the 10 Year Research Programme. When this occurs the fishery-specific research requirements will be specified in the Annual Operational Plan. The additional research requirements will be funded through the 10 Year Research Programme 'additional research' budget.

A description of the key components of the 10 Year Research Programme can be found in Appendix 2.

Compliance services

Meeting fisheries management objectives is dependent upon high levels of compliance with the various sustainability and allocation rules defined in legislation. The Ministry's compliance and enforcement activities are based on education, monitoring, surveillance, audit, analysis, investigation and prosecution of offences. Multi-agency strategies, both overt and covert, help the Ministry to maximise effectiveness and efficiency when monitoring commercial activities.

The deepwater fisheries sector is a highly regulated industry. An extensive regulatory regime under the Fisheries Act conditions fishing activities – and there are a range of other rules under legislation governing labour, general environment, protected species, food safety, etc. Changes to any of the laws, regulations, rules or policies in respect of the harvesting, production, processing, preparation, distribution, packaging or labelling of deepwater fisheries products can have a significant business impact.

Areas of compliance concern in deepwater fisheries relate primarily to misreporting in terms

of areas fished (trucking), species fished (falsifying returns) and quantities taken (discarding and high grading) – particularly with respect to the operation of foreign charter vessels. The scale of fishing activity in the deepwater sector can mean that offending can be lucrative although the costs if detected are high and can result in vessel forfeiture, imprisonment and monetary penalties of up to \$250,000.

Since 2009 MFish has revised its compliance model with respect to commercial fisheries. Prior to this the focus had been directed at breaches of the law through surveillance and extensive investigations. This approach has now changed and while there will continue to be a role for enforcement activity it will now be supported by a less aggressive model of informed and assisted compliance.

This new compliance model focuses on the following four key stages:

- **Voluntary** – Fishers are fully informed and comply voluntarily
- **Assisted** – Fishers will comply where information is available informing them how to comply and where the focus of fishery officer activity is on assisting fishers to comply
- **Directed** – Fishers have the opportunity to offend but (1) the availability of information and (2) patrol and inspection activity from fishery officers, supported by infringement notices and penalties for non-compliant behaviour, move fishers to a compliant state
- **Enforced** – Compliance response to deliberate offending, fraud and criminal activity resulting in a substantial surveillance and investigation focus where identified breaches of law will be ‘prosecution’ focused. The Enforced state is deployed when voluntary, assisted and directed states have been breached.

The key change, from a deepwater perspective, is that compliance activity is now also focused on informing and assisting fishers to comply, in addition to the traditional enforcement model.

The application of this model is reflected in the recent extension of the collaborative arrangement between the Ministry and the DWG with respect to fisheries management to the compliance arena.¹⁴ This collaborative arrangement is given effect through a Ministry/DWG compliance group that actively works together in deepwater fisheries. This includes:

1. Developing information sheets on key compliance issues in deepwater fisheries
2. Using existing industry briefings as an opportunity to brief vessel operators on areas of compliance concern
3. Identifying current areas of legislation and management measures which may, inadvertently, be contributing to levels of non-compliance and identifying ways to address these
4. Collectively monitoring the performance of the deepwater sector against a set of agreed benchmarks.

¹⁴ For more information on the MFish/DWG compliance committee, including details of the Terms of Reference for this group please see the MOU at www.fish.govt.nz

The Ministry's Field Operations Group will be expected to contribute to the delivery of the National Deepwater Plan across the following areas:

1. Routine at-sea and port-based monitoring (includes aerial and vessel based surveillance, port inspections and LFR inspections)
2. Targeted monitoring e.g. SLEDs specification and use, seabird mitigation, adherence to fishery-specific management measures
3. Participation in industry-operator briefings as required
4. Compliance benchmarking – including the production of quarterly information sheets summarising results of the most recent benchmarking exercises and trends in performance
5. Participation in the joint Ministry/DWG compliance group
6. Preparation of information and general communication documents to support informed and assisted compliance e.g. regular Compliance Information sheets
7. Regular exchange of monitoring information with the fisheries management team so that:
 - a. results of monitoring activity can be assessed against fishery specific objectives and
 - b. areas of particular concern are identified using a risk-based approach to determine where future services may need to be targeted.

These services are generic in that they are relevant to and support all deepwater fisheries. In the Annual Operational Plan these generic services will be more specifically tailored to the individual fisheries to reflect the fishery specific objectives.

There are also compliance services that will not be driven by the National Deepwater Plan although there will be linkages between such activity and the on-going management of deepwater fisheries. These services include targeted investigative activity (likely to be fishery specific) to support prosecution cases.

Observer Services is also a function of the Field Operations Group. While observers have a role in observing at-sea performance against regulations, the primary focus of the Observer Programme, from a deepwater perspective, is to support the comprehensive data collection programme under the 10 Year Research Programme. For this reason, observer coverage requirements for deepwater fisheries services will be specified through the 10 Year Research Programme.

Regulatory and Registry Services

Regulatory framework

The fisheries management regime is supported by a complex series of fisheries regulations. These regulations can be stock or species specific, such as a minimum legal landing size, or can be generic across an area or type of fishing method or vessel size category.

In deepwater fisheries the majority of the rules are generic and apply to all vessels operating in the sector irrespective of what species is being targeted. However, a distinction is made, particularly in the area of environmental mitigation, for fishing method type. For example mandatory seabird mitigation measures are different for trawl vessels and long-line vessels.

It is not the role of the National Deepwater Plan to initiate a comprehensive review of the regulatory package that supports the management of deepwater fisheries. Undoubtedly there may be regulations that will no longer be relevant, in that the issues that they were initially put in place to address have changed or no longer exist. However, the extent of the regulatory framework is such that to systematically review each regulation that applies in the deepwater sector would be time consuming and resource intensive, and will come at the expense of delivering on other more valuable objectives.

Instead this plan, through the delivery of the individual stock/species objectives, will identify those regulations which are likely to hinder the successful delivery of management tasks to support objectives-based fisheries management. When this occurs the relevant regulation will be reviewed to assess:

- the original rationale (problem definition) which warranted the regulation in the first instance
- the validity of the rationale today and in the foreseeable future
- risk and implications associated with removing the regulations
- Support for, and cost and benefit of, removing or amending the regulation.

In implementing the National Deepwater Plan there may also be situations where the most appropriate management response is to regulate.

There will also be an opportunity to review appropriateness of regulations through the joint MFish/Industry Compliance Committee. This group will from time to time identify regulations for review. These regulations will then be assessed using the criteria described above and will be retained, removed or amended as appropriate.

Registry services

The Act provides for a range of QMS administration activities to support commercial fishing. These include permitting, vessel registration, cost recovery management, quota and ACE trading and the collection and management of statutory catch reporting from commercial fishers. These services are commonly referred to as registry services.

Almost all of these services are delivered by an external agency (FishServe) either under a 'devolved' delivery model (where the Ministry specifies the quality of service but FishServe is funded directly from quota holders) or under contract (where the Ministry funds the delivery of service and recovers these costs through cost recovery levies).

Accurate assessments of the quantum of each stock harvested are an integral component of a fisheries management regime. Such assessments in deepwater fisheries consist of extensive at-sea reporting by vessels of both quantities of each stock harvested and environmental interactions. Further reporting on landing (in the form of monthly harvest returns and the licensed fish receiver returns) means that quantities of catch can be traced from harvest through to export or domestic markets. This recordkeeping and reporting framework is the key mechanism for determining catch against catch limits.

There is no proposal to amend either the broader catch reporting or registration regime at this time. However, by delivering objectives-based fisheries management it may be apparent that existing catch documentation or vessel registration systems should be modified to ensure the most relevant information is being collected to support management of the resource. If this occurs, the decision to review and amend any aspect of registry services will

be detailed and prioritised through the Annual Operational Plan.

Other services

Organisational Services and the Office of the Chief Executive will provide the legal, IT and data management expertise, and media and communication support to deliver on the National Deepwater Plan. It can be expected that the demand for these services will be less frequent than for services from other Ministry business groups and that the exact nature of these services will vary between Annual Operational Plans. For example, service requirements might include Communications Team support to develop publication material to assist stakeholder engagement, or a comprehensive legal review and advice on a particular management option proposed for a single fishery.

From a generic viewpoint these services will likely take the following form:

External communications:

- Preparing media information and public briefing documents to ensure management activity is transparent (see MO 1.6)
- Providing media support around sustainability and management decisions.

Legal: Providing expert knowledge and legal opinion on the interpretation of the relevant fisheries legislation to support policy development and management interventions.

IT: Ensuring the Ministry's data and information systems are structured so as to maximise the Ministry's data holdings to inform management measures and to enable timely monitoring of at-sea activity.

Information management group:

- Providing regular data downloads to support developing management options
- Providing regular information downloads to enable monitoring of management measures and to assess fisher behaviour and performance
- Ensuring the correct data are collected through updating existing forms or developing new ones.

Future stakeholder engagement

Fisheries 2030 recognises the importance of good governance as a tool to deliver on outcomes. Equally stakeholders, in developing the management objectives for this plan, identified transparent management as critical to ensuring stakeholders understand and have confidence in the management regime.

This section describes an approach to provide for stakeholder engagement during the implementation of the National Deepwater Plan. This approach recognises that engagement should be focused and meaningful, and that with limited resources the Ministry must be smart in how it chooses to engage.

In addition to tangata whenua and two stakeholder groups have been identified as having a priority interest in New Zealand's deepwater fisheries; environmental NGOs and commercial quota owners.

Although some deepwater fisheries have nominal recreational allowances in place, these allowances are typically set at zero or are only a small proportion of the TAC e.g. in 2010 the hoki fishery had a TAC of 110,000 tonnes with a recreational allowance of 20 tonnes. Recreational views were not sought during the development of the National Deepwater Plan but the recreational sector will be involved in aspects of the implementation of the plan when it is apparent that a management issue is of importance to the recreational sector.

Tangata whenua:

The Ministry has agreed that fisheries plans are key to successfully implementing the Fisheries Treaty Strategy. This will be achieved by setting out how regard will be given to kaitiakitanga and by describing how input and participation requirements will be met. The key mechanism to achieve this is through the development and implementation of IFPs and FFPs.

IFP/FFP will be key tools for ensuring tangata whenua have effective input and participation at the appropriate levels of fisheries management decision making. IFP will provide for input from individual iwi and hapu at a local level by communicating individual iwi objectives that reflect their commercial and non-commercial fisheries interests. FFP will help neighbouring iwi to bring together their commercial, non-commercial and other fisheries goals at a scale that can communicate effectively and influentially with Crown decision making.

IFPs/FFPs that incorporate deepwater fisheries have not yet been developed and until this occurs an alternative approach to deliver on our Treaty strategy obligations is proposed. This interim approach is based on two assumptions:

1. Although the intention is to provide for full iwi engagement in the management of our deepwater fisheries there will be a focus on providing for commercial iwi engagement in the first instance. This assumption acknowledges that all but one iwi own deepwater quota and to date their interest has been in maximising the return from this asset normally through participating in the annual ACE market. This assumption also acknowledges that it is also available for iwi to choose how they wish to engage and this choice may mean a preference to engage at a non-commercial level.
2. The majority of deepwater fisheries have zero customary allocations set. IFPs will be the mechanism by which customary interests in deepwater fisheries will be specified

including the need for additional or increased customary allowances. Through the Treaty Partnership and Fisheries Management customary teams MFish will ensure iwi have every opportunity to input into and participate in the subsequent development of management measures to support customary interests.

IFPs/FFPs will likely be developed during the five year period of this plan. In the short term the Annual Operational Plan will be the mechanism by which the objectives specified in IFPs will be considered for delivery. IFPs and FFPs will be more fully integrated into the National Deepwater Plan when it is reviewed and revised for the next five year period starting in 2015-16.

Based on the above assumptions, and in the absence of IFPs and FFPs, the process to meet our input and participation obligations for deepwater fisheries will be achieved by:

1. Working with TOKM to encourage iwi groups to join and participate in the DWG. To date 12 iwi companies are members of the DWG.
2. Supporting TOKM to engage with those iwi groups where the limited size of their deepwater quota portfolio means that either membership or active participation in the DWG is not feasible. This could be achieved by formalising an arrangement where TOKM is nominated to engage with the Ministry on behalf of such iwi groups with respect to implementing the National Deepwater Plan. This support will also take the form of preparing and distributing communication and briefing material to provide iwi with updates on aspects of progress towards implementing the plan and meeting objectives.
3. Provide an opportunity for iwi to input into both the Annual Operational Plan and Annual Review Report through regular presentations at the relevant iwi forum.
4. Ensure iwi have the opportunity to input into annual sustainability and regulatory rounds as part of section 12 consultation requirements.

Environmental stakeholders:

MFish is proposing that environmental stakeholder interests in New Zealand's deepwater fisheries will be best provided for through the creation of an Environmental Advisory Group (EAG). It is proposed that this group is an open access forum which meets no less than quarterly to discuss issues relating to the delivery of the National Deepwater Plan and wider issues around the management of New Zealand's fisheries. This forum will also be the mechanism to provide for eNGO input into the delivery of conditions on any Marine Stewardship Council certified (or other third party certification initiative) deepwater fishery. It will be the forum by which eNGOs can monitor and assess the performance of this plan through ensuring that deepwater fisheries are performing against environmental standards and that both the operational and management objectives are being met.

The purpose of the EAG, including terms of reference and structure, will be developed in collaboration with eNGOs but it is expected to provide the opportunity for eNGOs to participate in high-level collaborative engagement on the management of deepwater fisheries. Once agreed the EAG will also be linked to the MOU between MFish and the commercial quota owners.

Commercial quota owners:

The majority of commercial quota owners of the species that will be managed through the National Deepwater Plan are represented by the DWG Ltd.

In 2006 MFish and the DWG (on behalf of deepwater quota owners) formed a collaborative partnership to manage New Zealand's deepwater fisheries. This partnership was given effect through a Memorandum of Understanding (MOU) signed by the Chief Executive of MFish and the Chair of the DWG.

The overarching purpose of this collaborative partnership is to increase the value New Zealand obtains from its deepwater fisheries by improving management, reducing duplication of effort and resources, reducing inefficiencies in processes, and reducing business costs for both parties.

In the intervening four year period this collaborative arrangement has delivered real benefits to deepwater fisheries management. These include a closer working relationship supported by real-time open communication and information sharing.

During this period the MOU has been revised to reflect changes in the management approach and the maturation of the partnership. The current revision of the MOU will prescribe the informal governance arrangements that have developed around the management of deepwater fisheries during the last four years. It will recognise that successfully implementing the National Deepwater Plan is the joint responsibility of the Ministry and industry, and both parties must co-operate to solve problems. Neither group has all the knowledge required to solve complex and dynamic problems, has access to all instruments needed to move in the desired direction, nor is able to unilaterally control all other participants.

The day to day management of deepwater fisheries will continue to be a collaborative initiative with the DWG under the National Deepwater Plan which will ensure that industry and Ministry resources are targeted at common objectives.

The MOU does not in any way affect section 12 consultation requirements that are set out in the Fisheries Act 1996. Rather, it establishes how we can ensure more efficient and effective engagement with the commercial sector in a more structured and managed forum before the formal consultation phase.

Finally, certain species included in the National Deepwater Plan, such a barracouta and alfonsino, will continue to be represented among commercial fishers through the inshore commercial stakeholder organisations (CSOs). As the fishery-specific chapters for these species are developed and implemented, the relevant CSOs will be encouraged to engage in the process.

Recreational Fishers:

Although recreational fishing is only a small component of the deepwater fisheries sector there are certain fisheries where recreational fishers have an active interest in how these fisheries are managed. These include the hoki and squid fisheries. To account for this interest MFish will ensure that the recreational sector is involved in key management decisions through:

- section 12 consultation on all sustainability decisions
- being provided an opportunity to review the draft Annual Review Report and Annual Operational Plan.

Appendix 1: Profile of New Zealand's deepwater fisheries sector

This section provides an overview of the management, economic and social context within which the deepwater fisheries sector currently operates.

Fisheries management context

In many countries, fisheries are used as an instrument of regional economic development, a component of the national or regional cultural identity, and/or a means to maintain employment and income in marginal areas or among workers with fewer transferable skills. This has led to management systems in which government retains control over access and allocation of fisheries, to ensure that these economic, social and cultural agendas can be promoted.

By contrast, New Zealand's commercial fisheries are managed with a full individual transferable quota (ITQ) system (quota management system (QMS)), giving security of tenure to quota owners, and considerable flexibility to structure business operations. Few of the objectives stated in the paragraph above are present in New Zealand. Overall, when compared internationally, the New Zealand government generally exercises less direct influence on the business decisions of fishing companies.

The role of government in fisheries management is currently best specified in the Fisheries Act 1996. Put simply it is to provide for the utilisation of New Zealand's fisheries while ensuring sustainability.

Although there is less government involvement in comparison to fisheries regimes internationally, New Zealand's deepwater fisheries are a highly regulated industry in comparison to other domestic primary production sectors. This means that changes to any of the laws, regulations, rules or policies relating to the harvesting, production, processing, preparation, distribution, packaging or labelling of deepwater fisheries products can have a significant business impact. There is an extensive collection of notices, orders, and regulations under the Fisheries Act alone that condition fishing activities – and there are a range of other non-fisheries rules under legislation governing labour, general environment, protected species, food safety, etc.

Economic context

The focus of deepwater and middle-depth fisheries is on commercial utilisation and profit maximisation. In inshore fisheries limiting commercial utilisation may provide for customary and recreational sectors to extract additional value from the resource. In contrast, if deepwater fisheries are not commercially fished in a sustainable manner then the value will likely be lost.

Within the deepwater sector the key revenue driver is export earnings and the limiting factors are fishing and export costs; which include government levies, fuel prices, cost of quota and processing costs.

The long term asset value of deepwater fisheries resources is assessed annually based on the value of quota from this sector. Quota value represents the perceived future value of the fishery to the sector. Factors that can influence this asset value include the long-term

sustainability of the resource and the ability of the fisheries management regime to support economic development in the fisheries sector. Trends in asset value provide an indicator of how well the management of the fisheries resource is contributing to long-term value.

Export earnings

New Zealand is a small producer, supplying less than 1% of global seafood production and less than 2% of global seafood trade.

However, the New Zealand seafood sector is the fifth largest exporting sector in the New Zealand economy. Total export revenues in 2009 from deepwater fisheries were \$650 million. International markets provide over 90% of total revenues for the sector as there is a limited domestic market for these species.

Five of the ten largest export-earning fisheries are deepwater species. These five species (hoki, hake, ling, squid, orange roughy and jack mackerel) alone accounted for over \$360 million in export earnings (2009).

New Zealand is generally a price-taker in the global seafood commodity market, and supplies a relatively small proportion in each export category. Even for orange roughy, where New Zealand supplies the majority of the world market, New Zealand's influence on price is limited, due to the possibility of product substitution with other seafood products in the same market niche.

Quota value

The capital worth of fish stocks (value of the fishing quota asset) can be estimated using quota trades (and in some cases ACE trades). The QMS provides a comprehensive source of market information, and quota trade analysis can provide an estimate of the environmental asset value of all QMS fish stocks.¹⁵ This is available in the Fish Monetary Stock Account 1996 to 2008 produced by Statistics New Zealand. The asset value for the key deepwater and middle depths species has increased by 25% over the past ten years, despite the decline in the hoki catch, and is currently estimated to be \$1,929m.¹⁶

¹⁵ The United Nations System of Integrated Environmental and Economic Accounting (SEEA) framework advises that wherever possible, market values should be used to estimate natural capital.

¹⁶ Evaluating total asset value over time for all deepwater stocks is not a useful measure – as stocks entered into the QMS their quota acquired an asset value. Therefore the increase in value overall is in part a reflection of adding species, not an increase in the value of the existing asset base. Eight of the ten key deepwater stocks have asset values dating back to at least 1986; SBW started in 2000, and scampi in 2004.

Table 2: Quota Asset value for key deepwater species for 2004 – 2009 (\$million)

Species	2004	2005	2006	2007	2008	2009
Hake	147.3	123.4	187.7	141.0	156.9	135.5
Hoki	695.0	541.0	626.8	692.8	729.6	814.6
Jack Mackerel	99.5	58.0	27.0	26.5	27.6	53.6
Ling	195.6	219.5	196.9	231.4	247.9	246.2
Orange roughy	324.4	299.7	276.9	250.3	319.2	282.0
Oreo	67.5	67.5	72.3	84.6	86.5	74.4
Scampi	*	115.7	124.9	117.1	118.4	132.3
Southern blue whiting	52.3	58.6	62.0	52.8	63.7	74.3
Squid	240.3	137.9	297.5	169.6	95.3	116.5
Total	1,822	1,621	1,872	1,766	1,845	1,929.4

This asset value reflects the anticipated income stream from fishing quota taking into account a range of relevant factors, including market conditions, costs, resource availability, quality of the fishing right, TACC changes etc.

This quota value estimate provides a useful indicator to assess trends in economic value in the major deepwater species.

Fleet configuration

The fleet that operates in the deepwater fishery consists of a mixture of trawl and long-line vessels, domestic and foreign chartered vessels and factory trawler and fresher vessels. Approximately 45 vessels operate in the fleet.

The majority of the fishing activity is undertaken by trawl vessels using a combination of bottom and mid-water trawl nets. There is also a long-line fleet that fishes for ling and a developing pot fishery for deepwater crabs.

New Zealand companies are permitted to use foreign charter vessels beyond the territorial sea, and many companies avail themselves of this option. Operating costs are often lower than New Zealand vessels, due to reduced crew and vessel maintenance costs, and most of the operators in the deepwater sector include foreign charter vessels in their fleet mix. Currently vessels are sourced from Japan, Korea and the Ukraine.

Most charter vessels can only produce the simplest commodity forms (typically headed and gutted frozen product). Therefore these vessels tend to focus on bulk, low unit value fisheries, such as southern blue whiting, jack mackerel and squid, with some seasonal activity in other fisheries such as hoki and silver warehou. Although these vessels typically fish to a foreign flag they are still required to abide by the requirements of the Fisheries Act 1996 and all associated management measures.

A review of the operation of foreign charter vessels in New Zealand's EEZ took place in 2008. The outcome of this review has resulted in a comprehensive vessel registration process, increased observer coverage, formal standards addressing on-board conditions for observers and new measures to address issues with crew pay and conditions. All foreign charter vessels are now also required to pass a safety inspection by Maritime New Zealand prior to being registered.

Government costs

There are no government subsidies available to the New Zealand deepwater fishing sector, and some governance costs (including around 95% of the research costs) are recovered directly from the commercial fishing industry. Government currently cost recovers approximately \$20 million from the deepwater sector per year (from a total of \$31m across all sectors).¹⁷

The situation in New Zealand is in marked contrast to many overseas countries where many international competitors receive direct subsidies or cost-reducing transfers.

Third party certification

Supermarket chains in the USA and Europe are publicly committing themselves to 'responsible' sourcing policies for food generally and seafood products are at the forefront of this strategy. This has led to requests or requirements for independent certification to confirm that fish are sourced legally from well-managed and sustainable fisheries. At present the Marine Stewardship Council's standard dominates the independent certification market.

The financial return from environmental certification, particularly in terms of increased market prices, remains uncertain. However, it is increasingly apparent that third party certification is becoming the minimum standard for entry into certain markets.

New Zealand hoki was certified in 2001, and was recertified in 2007. Three further deepwater and middle-depth species will progress through MSC certification during 2010: hake, ling and southern blue whiting.

Achieving third party certification is an acknowledgement that the fisheries management regime in place across New Zealand's deepwater fisheries can successfully meet international standards.

Environmental context

Deepwater environmental issues grow more prominent year by year. Issues of particular prominence include:

- target stock sustainability;
- impacts of fishing methods on benthic ecosystems;
- finfish bycatch – particularly for species not managed under the QMS;
- incidental captures of endangered, threatened and protected species;
- the effect of deepwater fishing activity on wider ecosystem functioning including trophic linkages; and
- the use of spatial tools such as marine reserves, marine mammal sanctuaries and Marine Protected Areas to address environmental concerns.

The role of eNGOs in highlighting areas of concern regarding the impact that fishing may be having on the marine environment has encouraged industry to work proactively with

¹⁷ This includes Department of Conservation levies.

government to manage environmental impacts outside the legislative framework. Successful initiatives include the recent Benthic Protection Area closures, efforts to reduce sea lion interactions in the squid fishery and seabird capture mitigation through vessel management plans.

Social and cultural context

In addition to the commercial fishing industry there are other stakeholder groups and interested parties that have a role in determining how New Zealand's deepwater fisheries are managed.

Māori fishing interests

Iwi representation in New Zealand's deepwater fisheries is largely through the Deed of Settlement allocation of quota. Through this allocation many iwi now own significant portions of quota across the deepwater stocks. This quota is rarely fished directly by the iwi group but generates income through the annual sale of ACE. Any iwi group that owns quota shares in a deepwater stock is eligible to become a member of the DWG Ltd. In addition their interests are represented through TOKM which also has representation on the DWG board.

One of the key challenges facing iwi quota owners is how to effectively manage the annual income stream from their quota while maintaining the value of their asset over the long term. To address this challenge iwi should be encouraged to take an active interest in the state of their fisheries, how they are managed and who is operating on their behalf. The DWG, with MFish support, is actively working with TOKM to assist iwi quota owners in this area.

Recreational interests

There is little recreational fishing effort associated with New Zealand's deepwater fisheries. Where recreational harvest has been known to occur, recreational allowances are made as part of the TAC and TACC setting process but these allowances are only a small proportion of the total allocation and only occur in a few deepwater fisheries – in 2010 the hoki fishery had a commercial allocation of 110,000 tonnes while the recreational and customary allocations were only 20 tonnes apiece.

Recreational fishers are not considered a significant stakeholder group with respect to deepwater fisheries management.

Environmental organisations interests

A number of eNGO groups take an active interest in the management of New Zealand's deepwater fisheries. These groups provide:

- Issue awareness - bringing forward issues not yet of broad public concern, but that may require proactive management attention
- Technical expertise on key environmental issues (such as ecological expertise).

New Zealand eNGOs involvement in deepwater fisheries management issues takes a number of forms, including structured involvement in government stakeholder groups, working directly with industry on an informal basis and campaigning to raise public awareness. The majority of the input is providing perspective on issues, raising awareness, or providing a view on which course of action a decision-maker should adopt. They have also been actively

involved in the development of the management objectives included in this National Deepwater Plan.

New Zealand eNGOs tend to be subscription-based (members self-identify by joining the organisation and/or making financial contributions) rather than endowment-based. As a result these groups have limited resources and engagement is selective in terms of focusing on high profile environmental issues (e.g. sea lions), or by participating in processes where the overarching management framework is determined (e.g. in developing environmental standards).

Appendix 2: 10 Year Research Programme

A summary of the key components of the 10 Year Research Programme is presented below.

Trawl surveys form a key part of stock assessment research. They often provide the most accurate information on stock abundance and each survey can monitor multiple target and bycatch fish stocks; information is also provided about incidental bycatch. However, trawl surveys are expensive and are most appropriate when they provide information for a range of high and medium value stocks. The 10 Year Research Programme includes the following trawl surveys:

- Chatham Rise survey, including extending the survey into deepwater strata. This trawl survey is scheduled for delivery in eight of the next 10 years.
- Sub-Antarctic survey. This survey will be conducted annually initially and then in alternate years. Consideration was given to extending the depth range of this survey, both shallower and deeper, but the additional information that would have been provided did not justify the additional expense.
- A new trawl survey is scheduled for the West Coast South Island. This will be conducted in each of the first four years to establish baseline information and then conducted every second year so as to alternate with the sub-Antarctic survey.
- A trawl survey has also been identified for orange roughy (ORH MEC).
- Additional trawl surveys may also be required depending on the efficacy of new acoustic surveys that are planned under the 10 Year Research Programme.

Acoustic surveys

Acoustic surveys provide a cost-effective alternative to trawl surveys and can be used to assess stock biomass. Acoustic surveys are most effective when fish form single species schools, usually during spawning aggregations (e.g. southern blue whiting), and those fish are readily seen and identified using acoustic equipment.

The 10 Year Research Programme envisages that seven or eight acoustic surveys will be conducted in most years. MFish currently contracts about 2-3 acoustic surveys annually although additional surveys are delivered by industry through direct purchase arrangements. The current acoustic surveys conducted by industry for southern blue whiting (SBW6B), orange roughy (ORH3B) and hoki (Cook Strait) will continue. In addition to these surveys, trial acoustic surveys will be done for several additional stocks. Acoustic surveys have not previously been conducted for some of these stocks but information suggests that it is feasible to use this method to determine stock status.

Scampi camera surveys

Cameras attached to trawls are currently used to count scampi burrows and estimate stock size. The 10 Year Research Programme continues with this approach but will implement it as part of a wider and more formalised programme of camera surveys for the four main scampi fisheries. It is also proposed that the feasibility of using industry vessels to undertake this camera work be tested.

Catch sampling and otolith collection

A key element of the 10 Year Research Programme is full observer coverage across the deepwater and middle-depth fleet. Full observer coverage will result in significant additional information being obtained on length frequencies, fish sex and stage and age information

from otoliths. This information will be important for the stock assessments and characterisations discussed below. This catch sampling is particularly important for those stocks where trawl or acoustic surveys are not economic survey options.

Stock assessments and characterisations

Based on the information obtained from the trawl, acoustic and camera surveys, and the data collected by onboard observer sampling, stock assessments and characterisations will be conducted regularly on all major deepwater stocks. High volume/value stocks will have full stock assessments while low knowledge bycatch stocks will typically have regular stock characterisations. The sequencing of assessments and characterisations is timed to use the information collected in surveys conducted in preceding years. In most years under the 10 Year Research Programme 8-10 stocks will undergo a full stock assessment and 5-7 stocks will undergo characterisations.

Aquatic environment research

The majority of the deepwater aquatic environment research will be supported by observer monitoring of environmental impacts. The observer information will be used to produce an annual report on interactions with threatened, endangered and protected species across all deepwater fisheries. Full observer coverage on deepwater vessels will ensure this report is more comprehensive than current information. Other major aquatic environment research projects proposed include annual/frequent:

- Ecological risk assessments
- Monitoring of the trawl footprint
- Analysis of bycatch
- Taxonomic identification of benthic samples
- Analysis of ecosystem indicators.

Additional research

The 10 Year Research Programme does not envisage that all research required to manage deepwater fisheries will be specified up front. As such, the 10 Year Research Programme has some built-in flexibility by way of a discretionary fund to reflect the possibility that additional research will be required in most years. This fund can also be used to manage cost over-runs, although long term contracting should limit this necessity.

For example, the discretionary fund may be used to conduct additional research into mitigating bird captures should a fishery breach the relevant environmental standard. Similarly, additional research may also be commissioned to respond to a concern about the sustainability of a fish stock, to investigate new ways to conduct stock assessment research or to review management strategies. In essence the discretionary research pool will be used if any of the stock specific objectives require further research.