

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

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

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

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

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

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

Risk Rating: Very high risk

1. Salvin’s albatross

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

2. Southern Buller’s albatross

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

3. Flesh-footed shearwater

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

4. New Zealand white-capped albatross

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

Risk Rating: High risk

1. Chatham Island albatross

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

2. Westland petrel

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

3. Campbell black-browed albatross

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

Deepwater Management approach

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

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

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

¹⁷ Regulations require trawlers over 28m overall length to deploy a seabird scaring device and bottom longliners to deploy streamer (tori) lines. See [here](#) for links to these regulations.

¹⁸ Information on VMPs is available on the DWG website [here](#)

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

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

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

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

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

C. Science teams (Stock Assessment & Aquatic Environment)

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

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

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

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

Research services scheduled for 2015/16 financial year

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