Ministry for Primary Industries
Manatū Ahu Matua

ANNUAL OPERATIONAL PLAN
FOR HIGHLY MIGRATORY SPECIES FISHERIES 2015/16

Photo courtesy of Stu Morrison

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1 Introduction

The National Fisheries Plan for Highly Migratory Species provides the framework for the management of fisheries for highly migratory species (HMS) in New Zealand fisheries waters for the five-year period 2010–2015, as well as providing a framework for New Zealand's advocacy for management of HMS in international fora. The national plan is supported by three fishery-specific chapters, covering management of large pelagic species, skipjack, and albacore.

Annual operational plans outline actions aimed at achieving the objectives in these plans. This annual operational plan describes the management approach for HMS fisheries for the July 2015 to June 2016 financial year. Many actions contribute to meeting more than one objective in the national fisheries plan for HMS; however, noting that the national plan covers a five-year period, actions have not been identified for the 2015–16 year to contribute to every objective in the national fisheries plan. Instead, key focus areas are identified, along with business as usual tasks. The services required for achieving the tasks are also outlined, including services required of Ministry for Primary Industries (the Ministry) business groups, and of stakeholders with an interest in the management of these fisheries.

The demand for management services is frequently greater than can be provided by the Ministry. Internal prioritisation may occur where needed to ensure sufficient resources to undertake not just the activities in the HMS annual operational plan, but also in annual operational plans for Deepwater, Inshore Finfish, Inshore Shellfish, and Freshwater. Engagement with tangata whenua and stakeholders also provides opportunities to identify where these groups can provide needed or desired services.

2 Management and operational objectives for HMS fisheries

The HMS fisheries plan is designed to contribute towards the overall goal for New Zealand's fisheries that is laid out in the strategy document *Fisheries 2030* – **New Zealanders maximising benefits from the use of fisheries within environmental limits.**[1] This goal is supported by outcomes that are grouped into Use Outcomes, Environment Outcomes, and the Governance Conditions that will be needed to ensure we can meet the outcomes.

2.1 *FISHERIES 2030* OUTCOMES

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 future and current use.

Governance Conditions: Sound governance arrangements that are well specified, transparent, and which support cost-effective and accountable decision-making

[1] http://www.fish.govt.nz/en-nz/Fisheries+2030/default.htm?wbc_purpose=Basic&WBCMODE=PresentationU

The objectives in the HMS fisheries plan are grouped under these outcomes and governance conditions as follows.

2.2 MANAGEMENT OBJECTIVES

Use Outcome	1	Promote a viable and profitable tuna fishery in New Zealand
	2	Maintain / enhance world class gamefisheries in New Zealand fisheries waters
	3	Deliver fair opportunities for access to HMS fisheries
	4	Minimise wastage and promote humane treatment
	5	Maori interests (including customary, commercial, recreational and environmental) are enhanced

Environment Outcome	6	Maintain a sustainable fishery for HMS within environmental standards
	7	Implement an ecosystem approach to fisheries management, taking into account associated and dependent species
	8	Protect, maintain, and enhance fisheries habitat
	9	Allow for HMS aquaculture development while ensuring the ecosystem and wild fisheries are protected

Governance conditions	10	Recognise and provide for Deed of Settlement obligations
	11	Influence international fora and ensure New Zealand interests are taken into account
	12	Maintain an effective fisheries management regime

These objectives are relevant to the management of all HMS fisheries. More specific operational objectives that apply to the management of particular HMS fisheries are outlined in the relevant fisheries plan chapters (i.e. large pelagics, skipjack, and albacore troll fishery chapters). The actions outlined in the following sections are designed to meet both the overall management objectives and the fishery-specific operational objectives.

3 Management actions and services for 2015–16

3.1 KEY FOCUS AREAS

In implementing the HMS fisheries plan, the proposed key focus areas for 2015–16 are as follows:

Key focus area 1	*Support effective international management of highly migratory fisheries*
Contributes to management objective 1 Promote a viable and profitable tuna fishery in New Zealand; Objective 2 Maintain / enhance world class gamefisheries in New Zealand fisheries waters; Objective 6 Maintain a sustainable fishery for HMS within environmental standards	

Management tasks

This key focus area covers work on the two main regional fisheries management organisations (RFMOs) for HMS – the Western and Central Pacific Fisheries Commission (WCPFC) and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT).

Both RFMOs have an annual workload associated with preparation for and attendance at regular meetings and ongoing tasks such as monitoring and administration of the catch documentation scheme in the case of CCSBT. These items are outlined in the business as usual section of the AOP. This section outlines the key strategic priorities for engaging with the RFMOs in 2015-16, including:

- Leading initiatives to improve CCSBT management:
    - Revision of CCSBT's strategic plan
    - Adopting a binding measure on seabird mitigation
    - Ensuring all countries fishing for southern bluefin tuna report and account for all sources of mortality (e.g. recreational catch, discards)
- WCPFC priorities:
    - Improving regional longline management (especially for albacore tuna)
    - Addressing the overfishing of bigeye
    - Maintaining focus on impacts of fishing in the core region for countries (including New Zealand) on the margins of tuna distribution

CCSBT – New Zealand always has an active role to play in CCSBT but this year looks to be a particularly demanding one for the HMS team.

New Zealand is taking the lead on a number of important processes within the Commission, including revisions to the CCSBT strategic plan and the development of minimum standards for seabirds. This will require more resources from the team (in addition to BAU work), including participation at a strategic workshop in Canberra in July, where the focus will be on resolving ongoing funding issues in relation to key research inputs, as well as on revising the strategic plan.

Part of the team's efforts in CCSBT have been aimed at getting other members to account for all sources of mortality (e.g. recreational catch and release mortality) as part of their national allocations. Members were able to reach a historic agreement last year which commits them to this full accounting of mortality by 2018. Our delegation will continue its advocacy role to ensure that there are no delays in the implementation of this agreement.

New Zealand has also been lobbying for better accounting of illegal and non-member catch within its scientific and management processes. We will continue to advocate for the Commission to operate using a transparent and precautionary approach.

WCPFC priorities

Improving regional longline management (especially for albacore tuna)

New Zealand has had a strong focus on progressing zone-based management for albacore over past years, working closely with Forum Fisheries Agency (FFA) members to develop the Tokelau Arrangement (to set zone-based limits on the catch of south Pacific albacore), and proposing revisions to the existing albacore Conservation and Management Measure (CMM) to establish compatible measures on the high seas. Given the challenges in getting agreement on a revised albacore measure at the Commission, New Zealand is considering alternative avenues to progress key issues. New Zealand will continue to strongly advocate for improved management for albacore, whilst extending the focus to include improving overall longline management in the region, including encouraging sub-regional cooperation and identifying opportunities for collective management strategies/ frameworks. Work in 2015/16 will include:

a) improving monitoring and enforcement frameworks to ensure that at a minimum there is compliance with the existing measure;
b) reiterating the need for the provision of operational data;
c) working with FFA members to propose a Target Reference Point (TRP) for albacore that takes into account economic factors and the special requirements of Small Island Developing States (SIDS) [via the Harvest Strategy CMM led by Australia]; and
d) improving in-zone management arrangements via supporting national implementation of the Tokelau Arrangement.

The stock assessment for south Pacific albacore is due to be updated in August 2015, and will need consideration before refining the approach to the Technical and Compliance Committee (Sep 2015) and Commission (Dec 2015).

Addressing the overfishing of bigeye

There is significant and increasing concern for the bigeye tuna stock (now below the Limit Reference Point), and the rules of the Commission state that action must be taken to reduce catch to sustainable levels. In 2014, effort restrictions in the form of closures to the use of Fish Aggregating Devices (FADs) (4 months, with a proposed 5 month closure in 2015) were contingent on a resolution of sharing the cost burden between longline and purse seine methods. However, members have not been able to agree on the share each sector will contribute to conservation action, and in particular whether or not SIDS are receiving a "disproportionate burden" from actions adopted. New Zealand is keen to work with relevant partners to focus efforts on resolving the critical issue of disproportionate burden in order to remove the road block to further bigeye conservation action.

Maintaining focus on impacts of fishing in the core region for countries (including New Zealand) on the margins of tuna distribution

New Zealand is on the margins of distribution for many HMS of interest to fishers, and the presence and availability of HMS in New Zealand waters can be affected by fishing outside of the New Zealand zone (as well as by environmental and oceanic factors).

Yellowfin tuna: Actions in 2015–16 will include continued advocacy for additional range contraction work as required; and considering how the outcomes of the work should be

incorporated into advocacy for WCPFC management of the yellowfin fishery, particularly in the setting of a TRP that limits further increases in effort on yellowfin and results in desirable catch rates across the range of the stock.

Striped marlin: The most recent assessment (2012) indicated that the stock is fully exploited, is not experiencing overfishing, but may be overfished. The Scientific Committee recommended taking measures to reduce the overall catch of this stock, through expanding the geographical scope of CMM 2006-04 to cover the full range of the stock (some of the recent catch increases were in the northern area of the stock, not subject to the current measure). Marlin hotspots were identified in 2013 but no amendments have been made to the existing conservation measure (in place for 9 years). New Zealand will consider any additional steps required in the lead-up to the next assessment scheduled for 2017 (including the need for management action).

In addition, objective 2.1 of the national fisheries plan for HMS outlines a need for further review if recreational catch rates for marlin drop below the long-term mean for three consecutive seasons. This provision was triggered in 2013 (with low catch rates in 2010, 2011, and 2012). However, total recreational catch from the NZSFC (New Zealand Sports Fishing Council) and for long term sport fishing clubs for 2012/13 was up from 2011/12 figures (close to the average in recent years); the mean weight of recreational marlin is trending up and the CPUE for 2012/13 was generally better than 2011/12. New Zealand will continue to monitor recreational catch rates and fish size (next report back due November 2015) to ensure management is meeting the objectives.

Associated services:

- Fisheries management: identify and implement key strategic priorities for engaging with WCPFC and CCSBT in 2015-16. Liaise with stakeholders to keep them informed and get their input
- Science: provide scientific advice as required
- Compliance: provide compliance advice as required
- International: lead input into WCPFC, FFA, and TVM and provide advice as required for CCSBT
- Stakeholders: provide input into New Zealand's key strategic priorities for international management and meetings

Key focus area 2	*Support profitable tuna fisheries in New Zealand*

Contributes to management objective 1– Promote a viable and profitable tuna fishery in New Zealand

Management tasks

New Zealand has a valuable domestic albacore fishery that is certified as sustainably managed by the Marine Stewardship Council (MSC). We continue to advocate for improved management regionally for this species (as outlined in KFA1) to retain this certification – which in the longer term may improve economics of the fishery overall. MPI will also support industry proposals for other candidates for MSC certification where appropriate, via the provision of technical and management support.

Exchange rates have not been favourable for domestic fishers and there is little that can be done to resolve this. Other key concerns from industry have been the burden of cost recovery levies. MPI has worked within the context of the current domestic management arrangements to reduce attributable costs by ensuring all cost-recovered services are essential for management and are undertaken cost-effectively. MPI discussed a potential catch review with stakeholders at a recent meeting (April 2015) but no longer considers

that a review of the bigeye and yellowfin catch limits is appropriate based on the lack of support shown by industry on this topic.

MPI will continue to liaise with industry to support their efforts for collective representation and their efforts to keep costs down where possible (and doing likewise for the costs we do have some control over).

Associated services:

- Tuna Management Association (TMA) of New Zealand: implement Client Action Plan for on-going certification
- Fisheries management: provide support to TMA (via influencing management in international fora) and provide input into assessments for new species where appropriate.
- Science: provide input into Client Action Plan as required
- Stakeholders: provide input and advice on proposed options for profitable tuna fisheries and work towards getting collective representation.

Key focus area 3	*Revise and update the National Fisheries Plan for Highly Migratory Species*

Contributes to management objective 12–Maintain an effective fisheries management regime

Management tasks

The National Fisheries Plan for HMS was adopted by the then-Minister of Fisheries in 2010, and covers the period 2010 to 2015. As noted in the introductory sections, the plan sets goals and objectives for the management of HMS fisheries. An iterative, collaborative process was followed for developing the plan with the fisheries plan advisory group. It is proposed to likewise involve the fisheries plan advisory group in developing a fisheries plan for 2015–2020.

Associated services:

- Fisheries management: work with the fisheries plan advisory group to update the fisheries plan
- Science: provide input as required
- Compliance: provide input as required
- International: provide input as required
- Legal: provide input as required
- Stakeholders: participate in revision of the fish plan through the fisheries plan advisory group process

Key focus area 4	*Manage interactions of HMS fisheries with seabirds*

Contributes to management objective 7– Implement an ecosystem approach to fisheries management, taking into account associated and dependent species

Management tasks

The National Plan of Action to Reduce the Incidental Catch of Seabirds in New Zealand Fisheries (NPOA-Seabirds) sets out a long term objective, supporting high-level subsidiary objectives, and objectives to be met within the first five years. Annual operational plans, including this one for HMS fisheries, incorporate more specific tasks to meet the objectives contained in the NPOA-Seabirds, including its long-term objective:

New Zealand seabirds thrive without pressure from fishing related mortalities, New Zealand fishers avoid or mitigate against seabird captures and New Zealand fisheries are globally recognised as seabird friendly.

The NPOA-Seabirds is based on a **risk assessment** approach to identifying and managing seabird interactions. This focus on limiting captures of high-risk seabird species (those for which populations may not be able to sustain current incidental captures) is complemented by other objectives aimed at **reducing captures overall**; putting in place best practice measures in commercial and non-commercial fisheries; and working internationally to ensure all risks are addressed.

The risk assessment compares annual potential fatalities (based on observed captures, known seabird distributions, and multipliers for factors like unobserved mortalities) to potential biological removals (the maximum number of animals, not including natural mortalities, that may be removed from a stock while allowing that stock to reach or maintain its optimum sustainable population). Further information on specific at-risk species caught in HMS fisheries is outlined in appendix 5.1.

Key seabird actions for 2015-16 are outlined below; a more detailed discussion is included in appendix 5.2, along with the NPOA-Seabirds objectives to which management actions relate.

One of the five-year objectives of the NPOA-Seabirds is that capture rates are reducing in all New Zealand fisheries. A sub-group of the Seabird Advisory Group was tasked with developing a set of principles that could be used when determining the potential for capture rates to be used in individual fisheries. This group recommended that fisheries be defined using the same groupings as those found in the risk assessment. In the case of HMS those groupings are the large surface longline, small surface longline, and swordfish surface longline fisheries. The group also recommended that capture rates be quantitative when possible but that alternative proxies could be developed in cases where current conditions did not allow for a meaningful numeric target.

Best practice: Both the NPOA-Seabirds and the action plan for black petrels produced under the NPOA (see appendix 5.4) include a focus on ensuring commercial fishing vessels are implementing best practice mitigation measures relevant to their area and fishery. A gap analysis of New Zealand legislative requirements and practice in relation to what is considered "best practice" (i.e. advice from the Agreement on the Conservation of Albatrosses and Petrels) is outlined in Appendix 5.3. This gap analysis shows several areas where mandated requirements and/or actual practice differ from what is considered best practice, including:

- Improved compliance with existing measures, particularly tori lines; and
- Improved use of line weighting.

In addition, haul mitigation is likely to be beneficial in the New Zealand fleet. There is no current internationally-recognised "best practice" for haul mitigation, but Appendix 5.3 outlines some suggestions for improvements.

The proposed approach for ensuring vessels are operating to best practice is as follows:

- Analyse existing mitigation measures (in conjunction with DOC and fishers) to assess whether they are impractical and/or of limited effectiveness or have specific operational issues that may need to be overcome;
- Seabird liaison officers will work with fishers to develop seabird management plans or similar for similar vessels (focus is in FMA1 in line with black petrel work). The seabird management plans should take account of specific operational

factors that may affect uptake of specific mitigation tools. Vessels contributing more effort and/or higher bird captures should be prioritised;

- Revise regulations to better meet "best practice", including through application of compulsory line weighting in some or all areas/seasons (a discussion document will be prepared for public consultation on specific proposals); and
- Work with industry on a proposed comprehensive review of existing codes of practice operating in inshore/HMS fleets, and adopt an overarching set of risk reduction and management procedures that can be tailored to individual areas/fisheries as required. This work should pick up the recommendations on offal management and haul mitigation.

It is also proposed to assess new/emerging mitigation measures for their suitability in HMS fisheries, including from an operational stand-point (in conjunction with DOC and fishers). A watching brief will be maintained on the operational effectiveness of the under-water bait setter (a device for setting hooks below a level at which they pose a risk to seabirds). The device is being trialled by a New Zealand fisher and if it proves effective in New Zealand operating conditions, more work may be required to facilitate its use (which would be outside of general mitigation rules if being used as a substitute for other mitigation). A modified hook pod (based on recommendations from the skipper in the last New Zealand trial) may also be trialled if available.

At-risk species: Particular species of interest for surface longline fisheries include the wandering albatross species (Gibson's and Antipodean), the Buller's albatrosses (southern and northern), black petrel, Westland petrel and Campbell Island albatross (see appendix 5.1 for more details). Where resources allow, it is proposed to work with industry to develop fact sheets for key species.

Actions relating to surface longline fisheries contained in the black petrel action plan are outlined in appendix 5.4. Although surface longline fisheries contribute a relatively small amount of the risk to black petrels, the overall risk in this fishery is such that all impacts need to be actively managed where possible.

The HMS team will also take the lead in drafting an action plan for wandering albatrosses.

International actions: Many seabird species found in New Zealand waters also travel widely across the Pacific and beyond, and international advocacy is an important component to successful management of seabird interactions. Out-of-zone impacts can include both fisheries impacts and wider changes such as availability of prey species. In particular, the range of wandering albatrosses, which are caught in domestic longline fisheries, overlaps with a wide range of fisheries outside the New Zealand zone. It also appears these fisheries are foraging over a much wider area now and may be suffering from reduced availability of prey species and/or other changes in oceanographic conditions that are contributing to poor adult survival since the mid-2000s (see appendix 5.1 for more details).

Specific international actions include:

- Undertake and communicate a global seabird risk assessment, including presenting results to CCSBT and WCPFC (first phase to be focussed on the South Pacific and second phase on the southern hemisphere; an alternative funding agency such as ACAP will be sought for extension beyond the southern hemisphere).
- Undertake and communicate a seabird risk assessment covering all ACAP species throughout the Southern Hemisphere, including presenting results to CCSBT and WCPFC. Data collection and analyses are planned in a phased approach with the

Pacific basin due to be assessed by December 2015 and the entire Southern hemisphere by October 2016.

- Seek improvements to data capture and sharing on bycatch species across RFMOs
- Take the lead in negotiating CCSBT seabird mitigation requirements, including at a Strategy and Fisheries Management Working Group meeting to be held in July 2015
- Consider need to advocate changes to WCPFC seabird measure to extend coverage further north; add additional flexibility to allow new mitigation measures to be used (where proven effective); and include small vessels in the North Pacific

Associated services:

- Fisheries management: run regulatory process for reviewing mandatory mitigation measures; hold seabird workshops; advocate for seabird protection and collection and provision of relevant data through RFMOs; and liaise on other seabird tasks
- Science: lead research projects and provide advice as required on other tasks
- Compliance: monitor compliance with existing requirements and regularly report findings to fisheries managers
- Observer services: deliver planned observer coverage (see business as usual area 3)
- Data management: manage data submission process for CCSBT ecologically related species (ERS) data and WCPFC data
- Stakeholders: manage fishing activities to minimise interactions with seabirds; provide input and advice to improve mitigation measures where possible; participate in fisher workshops; support efforts to improve representativeness of observer coverage; lead code of practice review.

Key focus area 5	*Manage the interaction of HMS fisheries with sharks*

Contributes to management objective 6— Maintain a sustainable fishery for HMS within environmental standards

Management tasks

A revised National Plan of Action for the Conservation and Management of Sharks (NPOA–Sharks) was adopted in January 2014. The purpose of the NPOA–Sharks is:

> To maintain the biodiversity and the long-term viability of all New Zealand shark populations by recognising their role in marine ecosystems, ensuring that any utilisation of sharks is sustainable, and that New Zealand receives positive recognition internationally for its efforts in shark conservation and management.

Goals and objectives guide management towards this purpose over the five-year term of the plan, including:

Goal	Planned HMS actions for 2015-16
Biodiversity and long-term viability of shark populations 1. Maintain the biodiversity and long-term viability of New Zealand shark populations based on a risk assessment framework with assessment of stock status, measures to ensure any mortality is at appropriate levels, and protection of critical habitat.	• A qualitative shark risk assessment was completed in November 2014. A quantitative risk assessment is scheduled for mid-2016. • Fisheries managers and scientists will participate in a workshop to assess the outcomes of the risk assessment and determine appropriate responses (including assessment of appropriate management categories under objective 1.2; and consideration of status and information needs for objectives 1.3 and 1.4). Target date July 2015.
Utilisation, waste reduction and the elimination of shark finning	• Shark finning was banned on 1 October 2014. Ongoing monitoring work associated with the shark finning ban

2. Encourage the full use of dead sharks, minimise unutilised incidental catches of sharks, and eliminate shark finning in New Zealand	includes monitoring shark landings (including use of ratios where allowed i.e. for mako and porbeagle; and shark handling and release practices). • Finalise purese seine industry code of practice including measures to improve handling and survival of spine-tailed devil rays (which are caught as incidental bycatch in purse seine fisheries). Tags will be deployed by observers opportunistically to improve information on survival rates.
Domestic engagement and partnerships 3. All commercial, recreational and customary fishers, non-extractive users, Maori, and interested members of the New Zealand public know about the need to conserve and sustainably manage shark populations and what New Zealand is doing to achieve this.	• Sharks will continue to be an agenda item at regular longline workshops with fishers. • Regular updates on shark management will be provided to convenors of iwi forums for them to pass on to forums as appropriate. • Opportunistic media coverage will be sought, e.g. to announce specific management proposals or to provide updates of public interest.
Non-fishing threats 4. New Zealand's non-fishing anthropogenic effects do not adversely affect long-term viability of shark populations and environmental effects on shark populations are taken into account.	• No work planned for HMS fisheries at this time (non-fishing effects were not identified as a high priority in the qualitative risk assessment).
International engagement 5. New Zealand actively engages internationally to promote the conservation of sharks, the management of fisheries that impact upon them, and the long-term sustainable utilisation of sharks.	• Ministers will consider whether New Zealand will become a signatory to the CMS MOU on sharks in mid-2015; actions will depend on Ministers' decisions, but if New Zealand does become a signatory work would be involved in preparing for and attending the next meeting of the Parties (to be held in February 2016), and reviewing management with respect to the Conservation Plan adopted by Signatories. • New Zealand will continue to advocate for adoption of effective, risk-based shark management measures in relevant RFMOs including the Western and Central Pacific Fisheries Commission (WCPFC). • Work is progressing on a porbeagle shark assessment, previously lead by New Zealand and now managed by the Global Coordinator of the Areas Beyond National Jurisdiction (ABNJ) Tuna Project.
Research and information 6. Continuously improve the information available to conserve sharks and manage fisheries that impact on sharks, with prioritisation guided by the risk assessment framework.	• Planned HMS research projects are HMS2015-01 (Age, growth, and reproduction of HMS sharks from observer collected samples – blue sharks); and HMS2015-02 (Stable isotope analysis of highly migratory species to determine their spatial and temporal movements and assess their trophic linkages). • Ongoing research projects include HMS2014-02 (Age, growth and reproduction of mako sharks) and HMS2014-05 (Stable isotope analysis of highly migratory species to assess trophic linkages and spatial and temporal movement trends of HMS sharks). • No relevant aquatic environment projects are planned.

Qualitative risk assessment

The risk assessment considered relative risks to shark populations for QMS, non-QMS, and protected shark species. HMS species that are managed under the **QMS** include blue shark, mako shark, and porbeagle shark. These three species were ranked amongst the lowest risk amongst QMS species (with high expert consensus). The assessment was based on both the degree of overlap between species distribution and fisheries (noting not all of the population is typically vulnerable to the fishery given the age and size distribution of the

catch), as well as a recent indicators analysis that concluded abundance was likely to be increasing for all three species.[2]

Non-QMS HMS sharks include bronze whaler (14th equal out of 66 non-QMS species with enough data to be assessed), smooth hammerhead (32nd), bigeye thresher (43rd equal), Galapagos shark and tiger shark (47th), tiger shark (48th equal). Two other HMS sharks (longfin mako and silky shark) had insufficient data to be covered in risk assessment due to limited to no presence in New Zealand waters.

Protected HMS species include spinetail devil ray (which has a risk score of 13.5, top equal with basking shark). Other HMS sharks (oceanic whitetips and manta rays) had minimal risk scores (1), on the basis that either no captures have been recorded of these species, or none in the last 5 years.

Spinetail devil rays are caught predominantly when purse seining for skipjack tuna, as well as occasionally on tuna longlines; research has revealed that post release survival is potentially low and dependent upon crew handling and release techniques (Jones & Francis 2012, Francis 2014). This work has led to recommendations for improvement of animal release in order to reduce fisheries impacts, which are reflected in a draft code of practice (to be finalised).

Associated services:

- Fisheries management: ensure fishers are aware of existing and any new regulatory requirements; review management based on risk assessment; liaise with fishers on purse seine code of conduct
- Science: manage research process and provide advice on any management proposals; support shark limit reference point work being led by WCPFC
- Compliance: provide advice on any management proposals affecting compliance
- Legal: provide advice on any management proposals
- Stakeholders: provide input into consultation as required

[2] Francis, M., Clarke, S., Griggs, L., Hoyle, S. (2014). Indicator based analysis of the status of New Zealand blue, mako and porbeagle sharks. *New Zealand Fisheries Assessment Report 2014/69*. 109 p.

3.2 BUSINESS AS USUAL AREAS

Management of HMS fisheries also includes a range of 'business as usual' (BAU) tasks, as outlined below. Many of these BAU tasks contribute to multiple fisheries plan objectives, so the individual objectives have not been specifically identified here. For example, BAU area 2 could contribute to objectives 1, 2, 4, 6, 7, 8, 11, and 12 of the national fisheries plan (see section 2.2 for the objectives).

Business as usual area 1	*Contribute to international processes including meetings of CCSBT and WCPFC*

CCSBT: Business as usual tasks include administering the catch documentation scheme; administering the authorised vessel list, including regular updates to ensure all vessels catching southern bluefin tuna are on the list of authorised vessels; preparing and submitting fisheries data; and preparing for annual and subsidiary meetings. Key meeting dates include:

- Strategy and Fisheries Management Working Group meeting (28-30 July 2015)
- a meeting of the scientific committee (1 – 5 September 2015)
- the compliance committee meeting (8 – 11 October 2015)
- the annual meeting of CCSBT (12 – 15 October 2015).

WCPFC: Business as usual tasks include updating New Zealand vessels on WPCFC's record of fishing vessels as required; issuing and updating high seas permits as required to ensure New Zealand vessels fishing within the WCPFC area comply with all relevant measures; preparing and submitting fisheries data; and preparing for annual and subsidiary meetings, including:

- the scientific committee (5 – 13 August 2015)
- the technical and compliance committee (23 – 29 September 2015)
- the annual meeting of WCPFC (3 – 8 December 2015)

MPI is actively engaged with the Forum Fisheries Agency (FFA), a pan-Pacific fisheries body. FFA typically meets in advance of each of the WCPFC meetings, as well as at other times to plan its position on key agenda items.

New Zealand is also a member of Te Vaka Moana (TVM), a grouping of Polynesian countries with shared fisheries interests, particularly in the southern albacore and swordfish fisheries (as well as other WCPFC stocks). TVM typically meets in the margins of FFA and WCPFC meetings. Business as usual tasks for TVM include development and review of planning and management documents (see BAU area 5 below).

Associated services:

- Fisheries management: coordinate input into CCSBT and provide fisheries management input into WCPFC, FFA, and TVM; liaise with stakeholders to keep them informed on international management
- Science: lead input into scientific processes and provide additional scientific advice as required
- Compliance: provide compliance advice as required and attend relevant meetings e.g. Technical and Compliance Committee
- International: lead input into WCPFC, FFA, and TVM and provide advice as required for CCSBT; liaise with stakeholders to keep them informed on international management
- Data management: ensure timely submission of New Zealand's fisheries data as required under WCPFC and CCSBT agreements

- Stakeholders: provide input into New Zealand's negotiating positions as outlined in stakeholder consultation meetings/communications; participate in international meetings as part of the New Zealand delegation (following an approval process) or as meeting observers

Business as usual area 2	*Monitor commercial and non-commercial fisheries for HMS*

Information on HMS fisheries is collected from a variety of sources, including commercial reporting (with semi-independent reporting on catches and landings), non-commercial reporting (for a limited number of recreational gamefisheries), observer monitoring, and scientific research.

Observer data provides the most detailed quantification of catch on a set-by-set basis, and is used for a variety of purposes including as inputs into characterisations and stock assessment. New Zealand also has obligations to WCPFC and CCSBT to provide observer coverage, as follows:

CCSBT– a target of 10% of catch and effort for each fishery component (i.e. the charter and domestic fleets)

WCPFC– 100% coverage for purse seine vessels operating on the high seas between 20° north and 20° south (observers are sourced from the regional observer programme); for other methods operating on the high seas, a minimum of 5% coverage sourced either from the regional observer programme or, if fishing is immediately adjacent to the New Zealand exclusive economic zone boundary, the national observer programme.

Planned observer coverage for HMS fisheries is outlined in section 5.6. Priorities for domestic observer coverage for 2015–16 include:

- Meeting CCSBT observer standards;
- Recording shark handling practices (including live status of returns), and processed states of retained catches; and
- Collecting data to enable better characterisation of risk factors that contribute to protected species captures.

Non-commercial fisheries are also monitored in a variety of ways. Recreational charter boats are subject to compulsory registration, activity reporting, and catch reporting for specified stocks including southern and Pacific bluefin tunas. Monitoring of recreational fisheries for HMS also occurs through voluntary reporting, including through the long-standing gamefish tagging programme, and through targeted logbook schemes. Monitoring and management of information from these sources is coordinated through the HMS research plan (see BAU area 4).

Compliance monitoring is discussed further in BAU area 3.

Associated services:

- Fisheries management: liaise with observers on outcomes of coverage
- Science: lead improvements on observer data capture; liaise with observers on outcomes of coverage
- Compliance: monitor commercial and non-commercial fisheries for HMS as outlined under BAU 4, and follow up on items of interest identified through observer coverage
- Observer services: deliver planned observer coverage; liaise with fisheries management, science and compliance to provide feedback on observer coverage

Business as usual area 3	*HMS compliance*

Key priority areas identified for 2014–15 are outlined in appendix 5.5. Services and strategies are grouped into compliance and fisheries management activities as follows.

Compliance:

- At sea patrols
- Aerial patrols
- Multilateral/regional operations
- Port inspections
- Analysis
- Engagement in RFMO work
- Engaging with fishers

Fisheries management:

- Clearly documenting requirements and disseminating information
- Ensuring robust systems are in place
- Engagement in RFMO work
- Administration of the catch documentation scheme (CDS)

International obligations include reviewing and responding to New Zealand's Draft Compliance Monitoring Report3. The WCPFC Secretariat prepares a report for each member and members have one month to respond to these reports, which are then discussed at the TCC Meeting. WCPFC is continuing to develop its monitoring, control and surveillance (MCS) framework. Work is ongoing on the development of a CDS for WCPFC, as well as on-going reviews of existing measures.

Significant resources will continue to be aimed at maintaining high levels of compliance with the CCSBT CDS.

Associated services:

- Fisheries management: lead input into CCSBT compliance; ensure compliance with CDS; liaise with compliance group and stakeholders on other compliance tasks
- Compliance: provide compliance advice as required; attend relevant meetings e.g. WCPFC's Technical and Compliance Committee; lead or support Ministry responses to specific compliance proposals or other relevant discussions (e.g. development and management of an MCS framework including vessel monitoring systems (VMS), vessel registration; illegal, unreported, and unregulated fishing (IUU) vessel listing, transhipment controls etc); and additional compliance tasks as identified in the compliance strategy under the areas outlined above (patrols, port inspections, analysis etc).
- Legal: provide advice as required
- Stakeholders: meet regulatory requirements for fishing; provide input and advice on how regulations could be improved where appropriate

[3] http://www.wcpfc.int/system/files/CMM%202013-02%20Compliance%20Monitoring%20Scheme.pdf.

Business as usual area 4	*Implement the HMS research plan*

Research projects planned to implement the HMS research plan for 2015–16 are outlined in detail in section 5.5, and include three new projects:

- Albacore catch sampling
- Age, growth and reproduction of HMS sharks from observer collected samples – blue sharks
- Stable isotope analysis of HMS to determine their spatial and temporal movements and assess their trophic linkages;

There are also a number of ongoing projects that are carried over from previous years including:

- Commercial catch sampling programme for highly migratory species;
- Age, growth and reproduction of mako sharks; and
- Stable isotope analysis of highly migratory species to assess trophic linkages and spatial and temporal movement trends of HMS sharks.

In addition, there are a number of other research projects that are of relevance to HMS but are administered under other work streams such as the risk assessment work taking place for both sharks and seabirds.

Associated services:

- Research Advisory Group: develop research proposals to meet information needs for fisheries management (membership of this group is limited to technical experts).
- Fisheries management: review research projects; participate in the Research Advisory Group as required
- Science: run the research process, including working group meetings; convene meetings of the Research Advisory Group as required
- Contracts management: manage research contracts
- Stakeholders: participate in working group meetings to review research projects.

Business as usual area 5	*Contribute to implementation of MPI's Memorandum of Understanding on Pacific capacity development*

MPI has a supporting role providing technical assistance to develop Pacific countries' fisheries management and MCS capacity, including through TVM. The Ministry has signed a new Memorandum of Understanding (MOU) with the Ministry of Foreign Affairs and Trade (spanning Feb 2014 – May 2019) to deliver this work.

Pacific Island countries are highlighting an increasing need for effective community-based fisheries management of inshore fisheries, appropriately implemented at regional, sub-regional and local levels. Additional support is also required for legislative and policy reviews.

MPI facilitates and utilises internal fisheries administration expertise, contributing to strategic relationships with the Secretariat of the Pacific Community (SPC) and FFA for example. These regional relationships ensure a coordinated and targeted approach to the provision of resource across pacific countries.

TVM countries wish to sustainably develop their longline fisheries, and TVM is working on refining the collective development opportunities open to member countries. The initial priority species is albacore, but longer-term objectives will be established for all key tuna species as well as some others of recreational significance. Implementation of robust

regional MCS arrangements is also of mutual interest and is supported by a specific multilateral agreement (Te Vaka Toa).

Associated services:

- Fisheries management: provide fisheries management advice on Pacific capacity building
- Science: provide science advice on Pacific capacity building
- Compliance: provide compliance advice on Pacific capacity building, especially through the Te Vaka Toa agreement on regional compliance
- International: coordinate implementation of the MOU
- Ministry of Foreign Affairs and Trade: monitor and engage on MOU implementation

Business as usual area 6	*Engage with fisheries stakeholders*

Engagement with stakeholders with an interest in HMS fisheries occurs in a variety of ways and through various forums, including through:

- The fisheries plan advisory group, which has representatives of commercial, recreational, and customary fishers, and environmental groups, and typically meets twice yearly to provide input into the annual review report and the annual operational plan;
- Workshops with surface longline fishers, which occur two times a year;
- Recreational and iwi forums;
- A national environmental advisory group;
- Stakeholder consultation meetings held before and/or after key international meetings;
- Targeted meetings or workshops as required; and
- HMS pages on the fisheries website (http://www.fish.govt.nz/en-nz/hms/).

Targeted communications are also used to keep in touch with the sector, including a newsletter for surface longline fishers.

Statutory consultation as required under the Fisheries Act 1996 occurs for changes to sustainability and regulatory measures.

Associated services:

- Fisheries management: engage with stakeholders with an interest in HMS fisheries
- Science: participate in meetings/workshops as required e.g. fish plan meetings and longline workshops
- Compliance: participate in meetings/workshops as required e.g. longline workshops

4 Work plan for 2015–16

HMS Management Actions & objectives they contribute to	Work Period			
	Q1 (JUL-SEP)	Q2 (OCT-DEC)	Q3 (JAN-MAR)	Q4 (APR-JUN)
KEY FOCUS AREAS				
1. Support effective international management of highly migratory species				
Management objective 1— Promote a viable and profitable tuna fishery in New Zealand; Objective 2 Maintain / enhance world class gamefisheries in New Zealand fisheries waters; Objective 6 Maintain a sustainable fishery for HMS within environmental standards	CCSBT: • Attend Strategy and Fisheries Management Working Group meeting (28-30 July 2015) and progress development of the strategic plan, agreements on seabirds, and full accounting for all sources of mortality. • The scientific committee meeting in September will consider any analyses of non-member catch. WCPFC • Attendance at the WCPFC Scientific Committee Meeting with consideration of management responses to the revised albacore stock assessment and alternative approaches to management • Work with MPI Science and Birdlife International to lead a proposal for revision to the seabird measure • Work with relevant partners on potential resolution of the disproportionate burden issue to remove the roadblock to bigeye conservation	CCSBT • Progress at annual commission and compliance committee meetings. • At this year's meeting, members are required to notify the meeting on their efforts to set allowances for all sources of attributable mortality based on best estimates, or if they cannot do so, to notify why they are unable to do so and set a date for achieving it.[4] The Extended Commission will also discuss principles and process for taking account of non-member catch in the 2018-20 TAC period. WCPFC • Attend Management Options Committee in October (FFA) in preparation for WCPFC • Stakeholder consultation prior to Commission Meeting (November TBC) • Attendance at the 11th Regular session of the Commission	CCSBT • Revisions to the strategic plan are likely to be ongoing (process to be agreed at July or October meeting). WCPFC • Implement outcomes and consult with stakeholders on any Commission decisions requiring action to meet international obligations (as required) • Support proposal for a workshop on Regional Longline management (with a sub- discussion to focus on coastal fisheries management) via the Te Vaka Moana group	WCPFC • Ongoing support to implement the Tokelau Arrangement
2. Support profitable tuna fisheries in New Zealand				
Management objective 1— Promote a viable and profitable tuna fishery in New Zealand	• Any follow on actions after the final audit for New Zealand's MSC-certified albacore troll fishery (early June) (including subsequent outcomes relevant to re-assessment if industry choose to re-apply for certification)	• Bi-annual longline fisher workshop to consult with domestic industry on key issues prior to engaging in international fora • Liaise with industry to support their efforts on collective representation • Support further development of a target reference point and associated harvest control rules for albacore at the Sub Committee for South Pacific Tuna and Billfish (SC-SPTBF) meeting (Oct TBC); this will provide support to Tuna Management Association for re-		• Bi-annual longline fisher workshop to consult with domestic industry on key issues prior to engaging in international fora

[4] Refer table 1 of the Report of the Twenty First Annual Meeting of the Commission (2014): http://www.ccsbt.org/userfiles/file/docs_english/meetings/meeting_reports/ccsbt_21/report_of_CCSBT21.pdf

HMS Management Actions & objectives they contribute to	Work Period			
	Q1 (JUL-SEP)	Q2 (OCT-DEC)	Q3 (JAN-MAR)	Q4 (APR-JUN)
		assessment of albacore troll fishery (if required) • Focus efforts on keeping attributable costs down by ensuring all cost recovered services (e.g. research) are essential for management		
• Revise and update the National Fisheries Plan for Highly Migratory Species				
Management objective 12— Maintain an effective fisheries management regime		• Prepare structure and process for revision of the HMS Fish Plan for consultation with FPAG	• Draft revised HMS Fish Plan	• Consult on and finalise revised HMS Fish Plan
• Manage interactions of HMS fisheries with seabirds				
Management objective 7— Implement an ecosystem approach to fisheries management, taking into account associated and dependent species	• Analyse new and existing seabird mitigation measures to assess practicality and effectiveness and identify any potential areas for improvement. • Work with fishers and seabird liaison officers to develop seabird management plans (or equivalent) that are designed to fit operational conditions on individual boats. • This work should also consider analysis of the target depth to which fishing gear should sink by the time the line is no longer protected by a tori line, in order to minimise risk to black petrels (see appendix 5.4). • Release a discussion document outlining outcomes of the work outlined above and any consequent changes to mandated mitigation requirements.	• Keep a watching brief on use and effectiveness of the bait setter mitigation tool. • Develop an Action Plan for minimising bycatch of Wandering Albatrosses by October 2015. • Develop fact sheets on key species caught in SLL fisheries (in conjunction with industry). • On-going work on comprehensive industry-led approach (to replace existing SLL code of practice). • Advocate for improvements to ways seabird bycatch is recorded and reported as well as specific changes to the rules in place for CCSBT and WCPFC respectively (as outlined under key focus area 4). • Phase one of global risk assessment (south Pacific) due to be completed)	• Work on phase two of one of global risk assessment (southern hemisphere)	• On-going review of compliance with existing seabird measures, including through observers and routine compliance monitoring.
3. Manage interactions of HMS fisheries with sharks				
Management objective 6— Maintain a sustainable fishery for HMS within environmental standards	• Fisheries managers and scientists to participate in a workshop to assess to outcomes of the shark risk assessment and determine appropriate responses • Quarterly review of reported catches and landings of HMS sharks. • Industry to adopt a code of practice that includes measures to improve handling and survival of spine-tailed devil rays in the purse seine fishery. • Seek opportunistic media coverage to announce specific management proposals or provide updates of public interest (on-going)	• Quarterly review of reported catches and landings of HMS sharks. • Discuss shark management at SLL workshops as required. • A consultant will be working with a range of countries (including New Zealand) to produce national / regional indicators to contribute to a global stock assessment of porbeagle sharks (coordinated through an Areas Beyond National Jurisdictions project). • New Zealand will continue to advocate for adoption of effective, risk-based shark management measures in relevant RFMOs	• Meeting of the parties to the CMS MOU on Sharks to be held February 2016. • Quarterly review of reported catches and landings of HMS sharks	• Quantitative shark risk assessment scheduled for mid-2016. • Quarterly review of reported catches and landings of HMS sharks • Discuss shark management at SLL workshops as required. • Consultant to deliver outline stock status assessment for porbeagle shark by end April 2016, to be followed by a draft stock assessment by the end of June.

HMS Management Actions & objectives they contribute to	Work Period			
	Q1 (JUL-SEP)	Q2 (OCT-DEC)	Q3 (JAN-MAR)	Q4 (APR-JUN)
	(Shark Week is week of 5 July).	including WCPFC.		
BUSINESS AS USUAL				
1. Contribute to international processes including meetings of CCSBT and WCPFC				
	WCPFC: • Scientific committee (5 – 13 August 2015) • Technical and compliance committee (23-29 September 2015) FFA: • Ministerial Forum Fisheries Committee (FFC) (2-3 Jul 2015) • Meetings in advance of science and TCC meetings CCSBT: • Strategy and Fisheries Management Working Group: 28-30 July 2015 • Scientific committee: 1-5 Sep 2015 (preceded by Operating Model Scientific Technical meeting 30-31 August) • Monthly CDS reporting • Updates to authorised vessel list as required • On-going liaison with fishers and LFRs on CDS	WCPFC: • Annual meeting (3-8 December 2015) FFA: • Sub-committee for South Pacific Tuna and Billfish (SC-SPTBF, October TBC) CCSBT: • Compliance committee (8-10 Oct 2015) • Annual meeting (12-15 Oct 2015) • Monthly CDS reporting • Updates to authorised vessel list as required • Distribute tags and forms for CDS	• Monthly CDS reporting • Updates to authorised vessel list as required • On-going liaison with fishers and LFRs on CDS • Update high seas permits with any new conditions arising from RFMO meetings	• Monthly CDS reporting • Updates to authorised vessel list as required • On-going liaison with fishers and LFRs on CDS • Issue revised high seas permits
2. Monitor commercial and non-commercial fisheries for HMS				
	• Deliver planned observer coverage as outlined in appendix 5.7, inluding plan to ensure coverage is as representative as possible. • Liaise regularly on outcomes of coverage and follow-up as required.	• Deliver planned observer coverage as outlined in appendix 5.7. • Liaise regularly on outcomes of coverage and follow-up as required.	• Deliver planned observer coverage as outlined in appendix 5.7. • Liaise regularly on outcomes of coverage and follow-up as required. • Plan 2016-17 coverage	• Deliver planned observer coverage as outlined in appendix 5.7. • Liaise regularly on outcomes of coverage and follow-up as required. • Finalise 2016-17 coverage
3. HMS compliance				
	• Prepare for CCSBT compliance committee meeting and annual meeting • Prepare for and attend WCPFC technical and compliance committee and any other relevant meetings or workshops. Includes input as required into the New Zealand Part 2 Country Report and Compliance Monitoring Report for WCPFC	• WCPFC annual meeting • Analysis and cross-checking of various data sources on fishing (in and out of zone) (on-going) • Ongoing work contributing to the development of a WCPFC CDS	• Implement any outcomes of WCPFC and CCSBT meetings as required	• Aerial patrols (on-going) • Monitored unloads of domestic vessels (focus southern bluefin tuna and sharks) • CDS monitoring

HMS Management Actions & objectives they contribute to	Work Period			
	Q1 (JUL-SEP)	Q2 (OCT-DEC)	Q3 (JAN-MAR)	Q4 (APR-JUN)
	• At-sea patrol (out of zone) • Aerial patrols (on-going) • Monitored unloads of domestic vessels (focus southern bluefin tuna and sharks) • CDS monitoring			
4. Implement the HMS research plan				
	• 2015-16 research projects commence • Review long-term HMS research plan	• Fisheries plan advisory group identifies information needs for HMS fisheries • Research advisory group develops potential research projects to meet identified needs • Research proposals developed		• Consultation on proposed research proposals as part of cost recovery consultation
5. Contribute to implementation of the Ministry's Memorandum of Understanding on Pacific capacity development				
	• Work with Te Vaka Moana and FFA's SC-SPTBF to consider management approaches for Pacific fisheries (on-going) • Implement the MOU work plan (on-going) • Provide fisheries management advice and assistance to Niue inshore fisheries • Create effective relationships with key fisheries managers in Samoa to support review and/or implementation of fisheries management approaches • Provide fisheries management advice and assistance to Tonga regarding deep water snapper resource (in-country 20-24 July)	• Provide ongoing assistance to Niue as required • Facilitate training workshop for Tokelau inshore fisheries officers • Provide attachment opportunities for Tuvalu fisheries managers • Provide ongoing assistance to Tonga as required	• Provide ongoing assistance to Niue & Tonga as required • Input into Regional Longline management workshop (coastal fisheries) with Te Vaka Moana	• Provide ongoing assistance to Niue & Tonga as required
6. Engage with fisheries stakeholders				
	• Work through iwi forum coordinators to keep them up to date with key HMS issues of relevance	• Meet with fish plan advisory group to discuss annual review report and research needs • Hold surface longline workshop • Meet before and/or after major meetings of the RFMOs to brief/de-brief on key issues and New Zealand position	• Publish 'pelagic update' newsletter (1-2 x per year or as relevant)	• Meet with fish plan advisory group to discuss annual operational plan • Provide information to iwi and recreational forums on planned HMS projects • Hold surface longline workshop

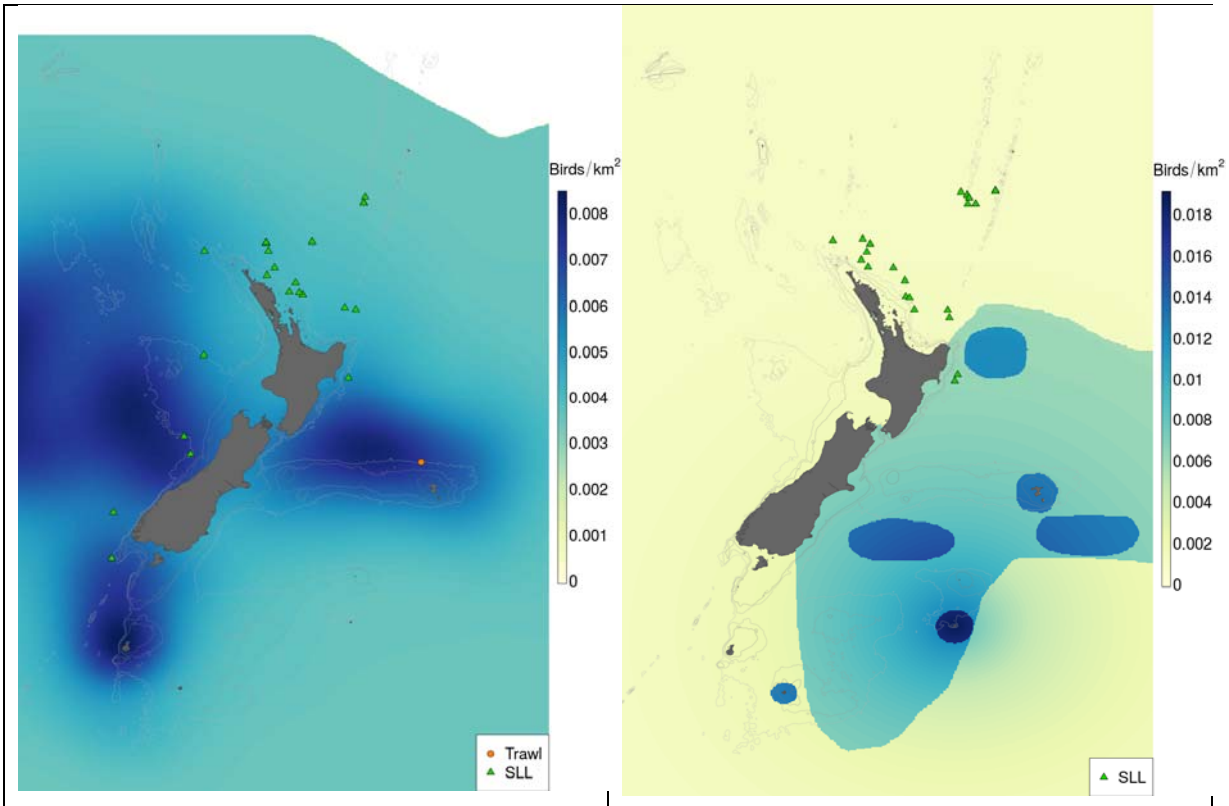
5 Appendices

5.1 AT-RISK SPECIES IDENTIFIED BY THE RISK ASSESSMENT THAT ARE CAUGHT IN SURFACE LONGLINE FISHERIES

For surface longline fisheries, actions are proposed to focus on captures of at-risk species in the small vessel (domestic) fleet. The large-vessel surface longline fleet has limited captures of at-risk species, so actions there are focussed on continuous improvements.

Very high risk species particularly caught in surface longline fisheries include:

Wandering albatrosses (Gibson's and Antipodean albatross)



Gibson's albatross	Antipodean albatross

Relative density of Gibson's albatross (*Diomedea antipodensis gibsoni*) and Antipodean albatross (*Diomedea antipodensis antipodensis*). The breeding season runs throughout the year, hence a single distribution map was created. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom longline (BLL), and set-net (SN) fisheries. (From Richard & Abraham in press).

Gibson's albatross is identified in the risk assessment to be at very high risk; 47.9% of annual potential fatalities of Gibson's albatross come from small surface longline fisheries and a further 35.5% in small swordfish surface longline fisheries (107 and 79 respectively out of a total of 223, compared to potential biological removals of 181). Observed captures of wandering albatrosses (both Gibson's and Antipodean) have showed peaks in 2006-07 (21 observed captures), 2009-10 (10 observed captures), and 2011-12 (eight). The trend since 2009-10 has been downwards, with two observed captures in 2012-13, and zero in 2013-14.

The main sensitivity of the modelled risk comes from uncertainty about adult survival; DOC project POP2015-03 is proposed to include research on population size and adult survival and other demographic parameters for Gibson's albatross. There is also uncertainty in capture estimates for small surface longline fisheries (which additional observer coverage could potentially help resolve).

Antipodean albatross is identified as high risk; 50% and 26% of annual potential fatalities come from small vessel and swordfish surface longline fisheries respectively, compared to potential biological removals of 123.

The foraging distribution of New Zealand wandering albatrosses overlap with a range of major longline and demersal fisheries.[5] A level 3 risk assessment for Gibson's albatrosses concluded it was difficult to assess the effect of fisheries mortality on the viability of the population. However, it concluded that most fisheries mortality is caused by surface longlines; mortality from fishing is now probably lower than it was; and there is no indication in the data that fishing caused the sudden and substantial drops observed in key demographic parameters (adult survival; proportion breeding; and proportion of successful breeding attempts).[6]

Elliott and Walker (2014) report that in the 1990s the population of Gibson's albatrosses slowly increased following a major, presumably fisheries-induced, decline during the 1980s.[7] However, between 2005 and 2008 there was a sudden drop of more than 40% in the size of the breeding population, from which recovery has been very slow. The Gibson's wandering albatross population is now only about two-thirds of its estimated size in 2004, having lost all the gains slowly made through the 1990s. The authors note the combination of increased foraging range and poor breeding success suggests that these albatrosses are foraging more widely for a smaller amount of food, which in turn suggests a reduction in the availability of the squid and fish they prey on.

The Antipodean wandering albatross population also showed a dramatic downturn in 2006, and tracking data indicates that since then, the birds have been foraging over a greater area of ocean than previously and are now frequently visiting places that they only rarely visited in the past.[8] Researchers have concluded that while fisheries bycatch may have contributed to the sudden drop in survival of adults, changed oceanic conditions seem a more likely explanation for the low productivity of survivors.[9]

[5] Including Japanese, Taiwanese, and New Zealand fleets fishing for southern bluefin tuna in the Tasman Sea and to the south and east of Australia and New Zealand; Korean and Taiwanese fleets targeting albacore tuna in the central Pacific; Chilean artisanal and industrial demersal fleets off South America that fish for ling, hake and Patagonian toothfish; New Zealand demersal fleets fishing to the east and south of the country for ling; and Australian and New Zealand boats fishing for Patagonian toothfish in the Southern Ocean. Most parts of the ranges of Gibson's (*Diomedea gibsoni*) and Antipodean albatrosses (*D. antipodensis*) were used by longline fisheries at some stage between 1960 and 1998. Over the past 40 years, longline fishers have used 92% of the 5° squares occupied by *D. gibsoni*, and 54% of those visited by *D. antipodensis* (as outlined in Walker and Elliott (2006) At-sea distribution of Gibson's and Antipodean wandering albatrosses, and relationships with longline fisheries. *Notornis*, 2006, Vol. 53: 265-290).

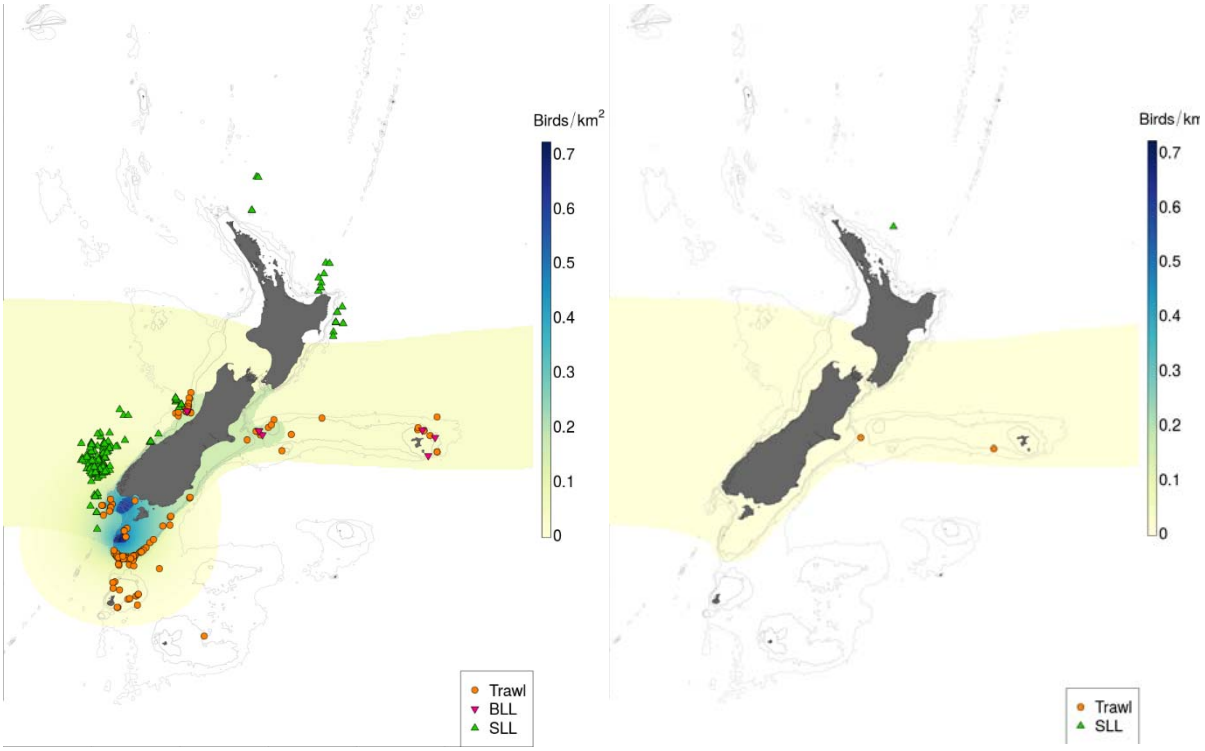
[6] Francis, Elliott and Walker (2012) Fisheries risks to the viability of Gibson's wandering albatross *Diomedea gibsoni*. Draft New Zealand Aquatic Environment and Biodiversity Report February 2012.

[7] Gibson's wandering albatross at Adams Island – population study. Report prepared for Department of Conservation; Graeme Elliott and Kath Walker July 2014 http://doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/meetings/pop2013-03-gibsons-albatross-final-report-2013-14.pdf.

[8] Antipodean wandering albatross research 2013. Kath Walker & Graeme Elliott. March 2013.

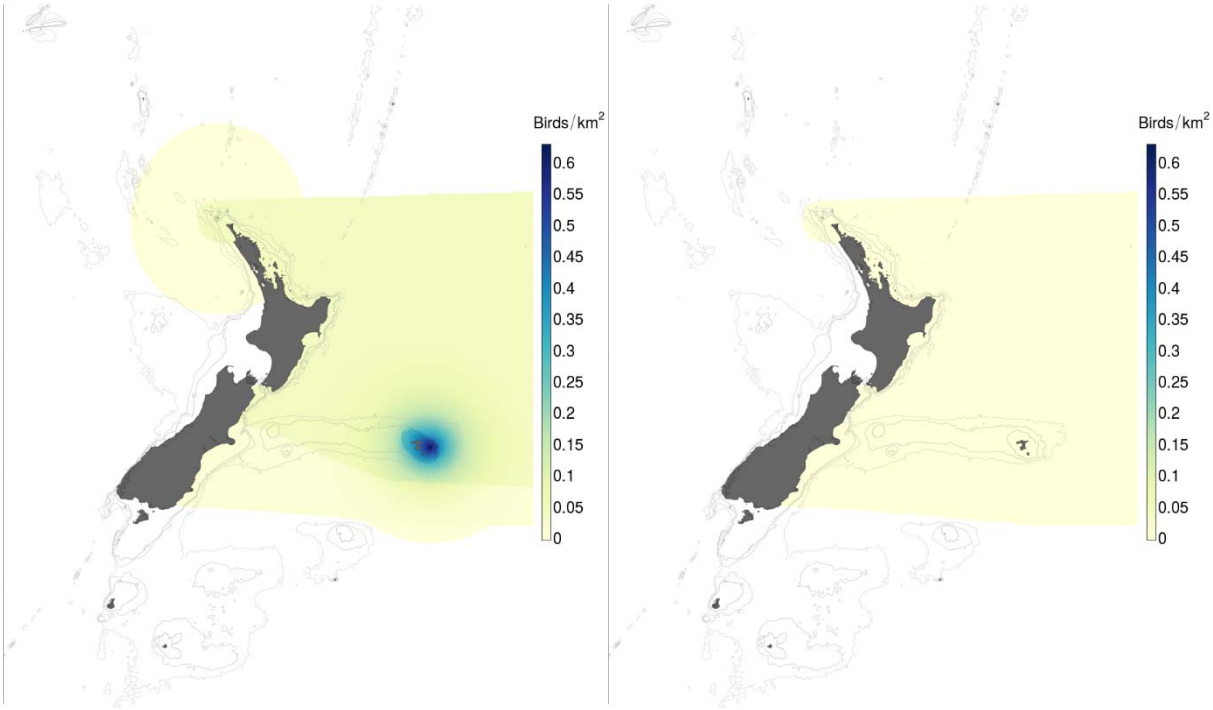
[9] Walker and Elliott (2013) noted two potential explanations for the decline of the Antipodean wandering albatross population: bycatch in fisheries, and reduced food due to changed oceanic conditions. The increased mortality of females is coincident with the rise of a new swordfish fishery in the South Pacific Ocean in which Antipodean wandering albatrosses are known to have been caught (Thompson 2010). However, Walker and Elliott note their data show the conspicuously reduced breeding success is not due to increased mortality in breeding birds, and there seems no mechanism for bycatch to affect the bird's oceanic range. They conclude that while fisheries bycatch may have contributed to the sudden drop in survival of adults, changed oceanic conditions seem a more likely explanation for the low productivity of survivors.

Southern & Northern Buller's albatrosses



Breeding (Jan-September) **Non-breeding**

Relative density of southern Buller's albatross (*Thalassarche bulleri bulleri*). The breeding season runs from January to September. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom-longline (BLL), and set-net (SN) fisheries (From Richard & Abraham in press).



Breeding (Oct-June) **Non-breeding**

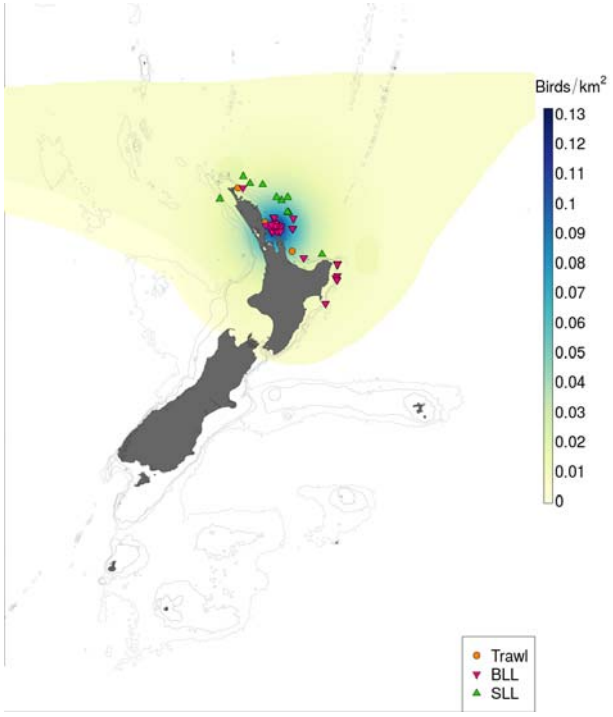
Relative density of northern Buller's albatross (*Thalassarche bulleri platei*). The breeding season runs from October to June. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom-longline (BLL), and set-net (SN) fisheries (From Richard & Abraham in press).

Small surface longline fisheries (predominantly targeting southern bluefin tuna) contribute 7.6% of annual potential fatalities (62 out of a total 812 – compared to potential biological removals of 449). The main uncertainty in the modelled risk for Southern Buller's albatross comes from uncertainty about adult survival, in particular due to the increased variation in survival observed by the long-standing field programme.[10] This resulting uncertainty has raised some concerns about the risk assessment model considers the variation and uncertainty around survival estimates; alternative approaches will be considered in the next iteration of the seabird risk assessment.

Observed captures are relatively high in large surface longline fisheries but appear to have trended downwards in recent years. However, despite higher captures in the charter vessel fleet, this is not identified as a key risk in the risk assessment, likely because this fishery is very well observed so there is high certainty about actual captures. Conversely, the domestic fleet has had one or more years where catches have been much higher than usual (e.g. a total of 25 observed captures on small vessels in 2009-10, compared to a more usual pattern of 4 or less), and this is likely to contribute to an elevated risk assessment for this fishery.

Northern Buller's albatross (53% of annual potential fatalities in small surface longline fishery – 291 out of 549 annual potential fatalities, with potential biological removals of 540). One observed capture in 2005-06 has been recorded as a Northern Buller's albatross. However, northern and southern Buller's cannot reliably be identified, even via necroscopy (examination of dead birds). Therefore, a single vulnerability factor (based on observed captures of either species) is used for both Buller's species, which is applied to each taxa separately based on their population size and overlap with fisheries.

Black petrel



Relative density of black petrel (*Procellaria parkinsoni*). The breeding season runs from October to July. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom-longline (BLL), and set-net (SN) fisheries (From Richard & Abraham in press).

Black petrel captures are also of concern in the risk assessment; although small surface longline fisheries and swordfish fisheries contribute less than 10% of annual potential fatalities (7.2% together), the overall risk in this fishery means that annual potential fatalities in surface longline fisheries alone almost exceed the potential biological removals that can be sustained by the black petrel population (an estimated 81 annual potential fatalities compared with potential biological removals of 100). Observed captures in surface longline fisheries are very low, with no observed

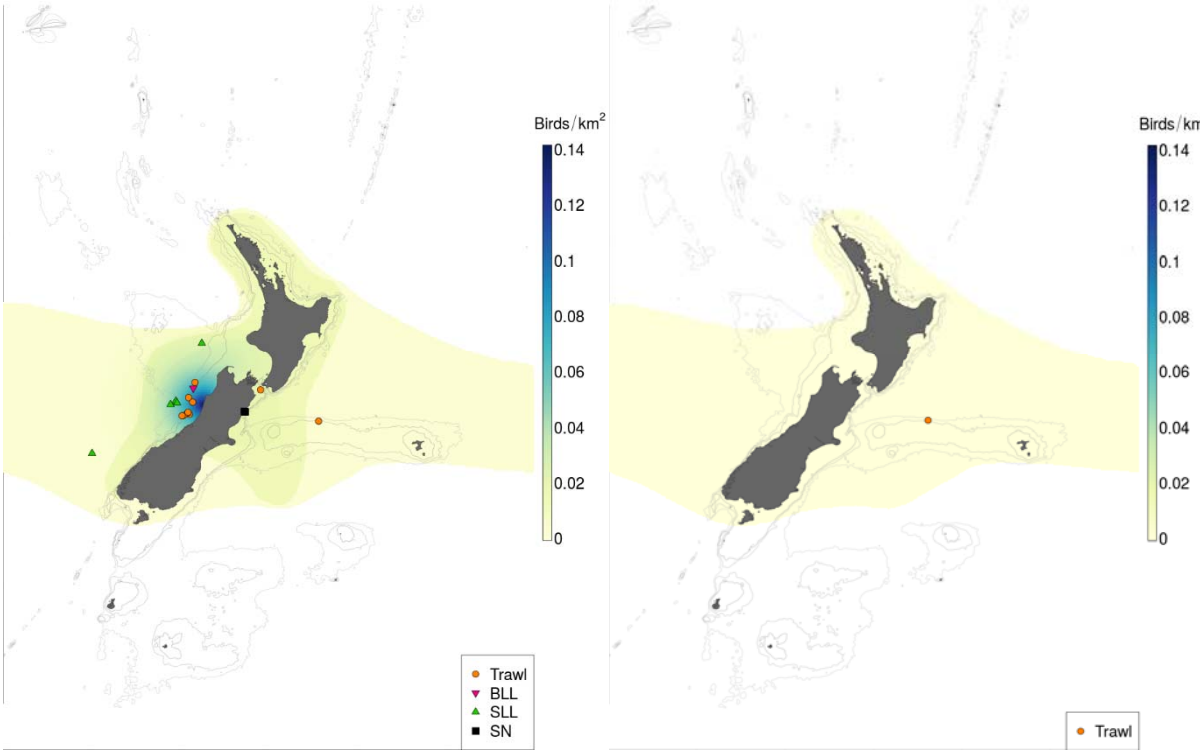
[10] See for example http://www.doc.govt.nz/Documents/conservation/marine-and-coastal/marine-conservation-services/meetings/population-studies-of-southern-bullers-albatrosses-on-the-snares.pdf.

captures in either the 2012-13 or 2013-14 fisheries years. This can in part be attributed to low observer coverage, nonetheless the risk assessment responds to potential risk based on overlap of fishing activity with bird distribution.

Key uncertainties include adult survival; annual potential fatalities in bottom longline fisheries; number of annual breeding pairs; and cryptic multipliers (i.e. how to account for unobserved mortality). Research is proposed on black petrel foraging behaviour around fishing vessels (DOC project INT2015-05); and population size (POP2015-01 – following on from POP2014-02).

Surface longline fisheries also capture various other high risk species, including:

Westland petrel



Breeding (March-Dec) **Non-breeding**

Relative density of Westland petrel (*Procellaria westlandica*). The breeding season runs from March to December. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom-longline (BLL), and set-net (SN) fisheries (From Richard & Abraham in press).

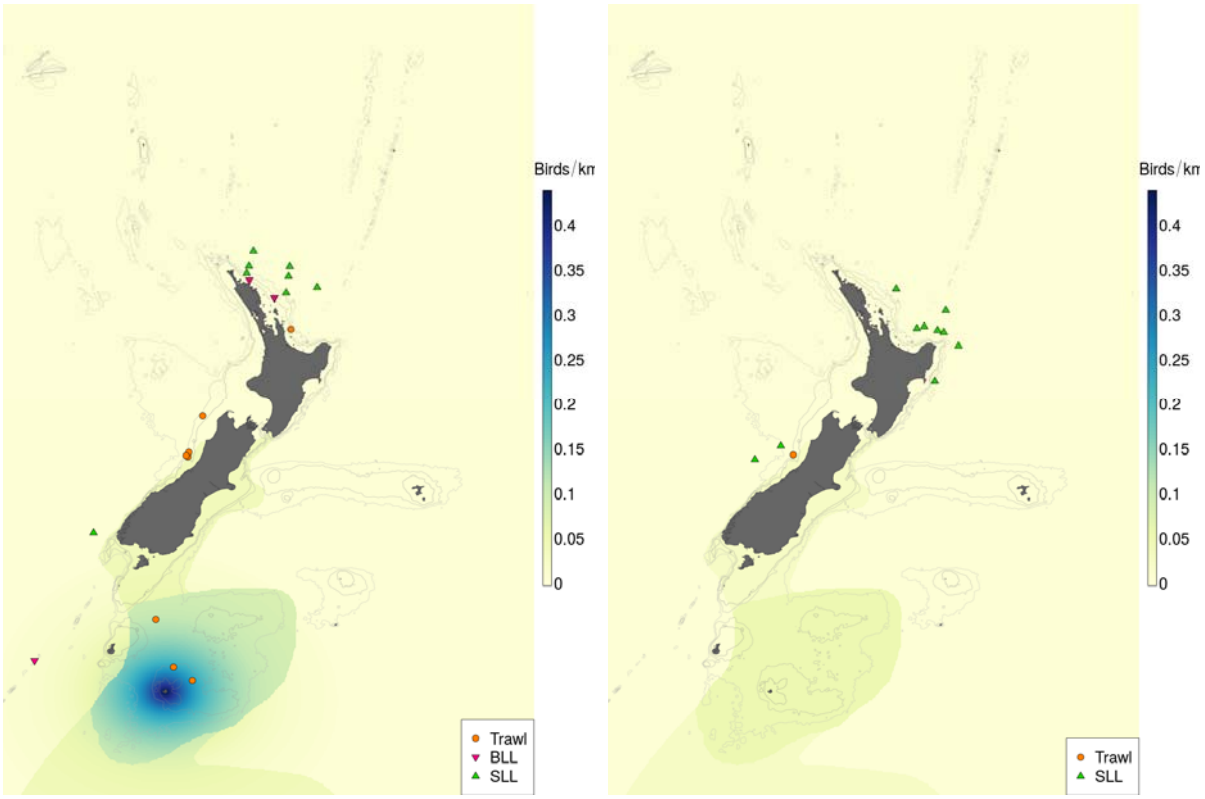
Westland petrel (26.3% accounted for by small surface longline vessels – 23 out of 87 annual potential fatalities, with potential biological removals of 157). Observed captures tend to be low (zero to three observed captures in total in recent years across all surface longline fisheries).

A recent report[11] modelled the population dynamics of the Westland Petrel (*Procellaria westlandica*), which spends its time mostly in subtropical waters during both breeding and the interbreeding migration across the Pacific Ocean. The study found that the population has slowly increased since the early 1970s, a result of high adult survival, high fecundity and moderate mean age at first return to the colony, strong recruitment rate of juveniles, and negligible emigration. Sea-surface temperature anomalies had a negative effect on adult survival during the breeding period and a positive effect on survival outside the breeding season. Local marine productivity as measured by fishery catches was strongly correlated with adult survival: Years with a greater fish catch were also years of higher adult survival. The report concluded that despite many threats operating throughout the breeding and foraging range of Westland Petrels, it appears that marine environmental change is a strongly

[11] Susan M. Waugh, Christophe Barbraud, Lynn Adams, Amanda N. D. Freeman, Kerry-Jayne Wilson, Graham Wood, Todd J. Landers, and G. Barry Baker (2015) Modeling the demography and population dynamics of a subtropical seabird, and the influence of environmental factors. *The Condor* Volume 117, 2015, pp. 147–164.

influential factor for the species, with uncertainty in population growth due to predicted increases in sea-surface temperature in the future.

Campbell black-browed albatross



Breeding (August-May) **Non-breeding**

Relative density of Campbell black-browed albatross (*Thalassarche impavida*). The breeding season runs from August to May. Also shown are incidental captures recorded by observers between the 2006–07 and 2012–13 fishing years in trawl, surface-longline (SLL), bottom-longline (BLL), and set-net (SN) Fisheries (From Richard & Abraham in press).

Campbell balck-browed albatross (33.1% in small surface longline fishery – 71 out of 214 annual potential fatalities out of 673 for potential biological removals). Observed captures have fluctuated without apparent trend at between one and five per year since 2006-07 (although with only one observed capture in the 2012-13 fishing year and no observed captures in 2013-14).

5.2 FIVE-YEAR NPOA-SEABIRDS OBJECTIVES AND PROPOSED ACTIONS

Objective	Planned HMS actions for 2015-16

Five year practical objectives
a). All New Zealand commercial fishing vessels are shown to be implementing current best practice mitigation measures relevant to their area and fishery,
 	
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
 	
c). Capture rates are reducing in all New Zealand fisheries in accordance with reduction targets in the relevant planning documents for those fisheries.
	• New Zealand legislative requirements and practice in relation to what is considered "best practice" (i.e. advice from the Agreement on the Conservation of Albatrosses and Petrels) is outlined in Appendix 5.3. This gap analysis shows several areas where mandated requirements and/or actual practice differ from what is considered best practice, including:
	  - Improved compliance with existing measures, particularly tori lines;
	  - Improved use of line weighting.
	• In addition, haul mitigation is likely to be beneficial in the New Zealand fleet. There is no current internationally-recognised "best practice" for haul mitigation, but Appendix 5.3 also outlines some suggestions for improvement in this area, including:
	  - Improved use of offal management;
	  - Improved use of haul mitigation measures.
	• It is proposed to revise regulations to better meet "best practice", including through application of compulsory line weighting in some or all areas/seasons (for implementation by December 2015) (a discussion document will be prepared for public consultation on specific proposals).
	• Improvements to use of mitigation measures (both mandated and voluntary) are proposed to be undertaken in conjunction with seabird liaison officers, to develop seabird management plans or similar for SLL vessels (focus is in FMA1 in line with black petrel work). This work can be prioritised such that vessel contributing more effort and/or higher bird captures are the initial focus.
	• Work will also take place with industry on a proposed comprehensive review of existing codes of practice operating in inshore/HMS fleets, and adopt an overarching documented set of risk reduction and management procedures that can be tailored to individual areas/fisheries as required.

Five year biological risk objective 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.	• Develop and assist with implementation of species- and fishery-specific action plans for seabirds considered to be at very high or high risk from fishing. The HMS team will take the lead on a Wandering Albatross Action Plan (for Gibson's and Antipodean Albatrosses), as well as contributing to other action plans as appropriate. • Actions from Black Petrel and Flesh-footed Shearwaters Action Plan (see Appendix 5.4 for full list of actions) • Where resources allow, it is proposed to develop fact sheets in conjunction with industry for key species.

Five year research and development objectives

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 (e.g. those identified in paragraph 23 [of the NPOA] and via the risk assessment),

- Analyse existing mitigation measures (in conjunction with DOC and fishers) to assess whether they are impractical and/or of limited effectiveness or have specific operational issues that may need to be overcome (to be done in conjunction with review of regulated measures outlined above).
- Assess new/emerging mitigation measures for their suitability in HMS fisheries (in conjunction with DOC and fishers), including from an operational standpoint.
- Maintain a watching brief on operational effectiveness of under-water bait setter (a device for setting hooks below level at which they pose a risk to seabirds); the device is being trialled by a New Zealand fisher and if it proves effective in New Zealand operating conditions more work may be required to facilitate its use (which would be outside of general mitigation rules if being used as a substitute for other mitigation).

b). New observation and monitoring methods, especially in relation to poorly observed fisheries, are researched, developed and implemented, and

- Improve representativeness of observer coverage across the fleet.
- Monitor use of alternate monitoring methods, such as cameras, being trialled in other fisheries to determine applicability in HMS.
- Encourage full uptake of nonfish bycatch reporting (and facilitate this with provision of ID guides where required).

c). Programmes of research to improve our 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.

Five year international objectives:

In areas beyond the waters under New Zealand jurisdiction, relevant RFMOs and governments (and also relevant industry organisations, fishing companies and fishers) understand the potential risk posed to New Zealand seabirds from fishing activities for which they have responsibility and are taking actions to reduce that risk where it is likely to be high.

- Undertake and communicate a global seabird risk assessment, including presenting results to CCSBT and WCPFC.
- Take the lead in negotiating CCSBT seabird mitigation requirements, including at a Strategy and Fisheries Management Working Group meeting to be held in July 2015.
- Seek improvements to data capture and sharing on bycatch species across RFMOs.
- Consider need to advocate changes to WCPFC seabird measure to extend coverage further north; add additional flexibility to allow new mitigation measures to be used (where proven effective); and include small vessels in the North Pacific.

5.3 GAP ANALYSIS ON BEST PRACTICE IN SURFACE LONGLINE FISHERIES

Small vessels

	ACAP advice	NZ requirements	NZ practice
General	A combination of weighted branch lines, bird scaring lines and night setting are best practice mitigation.	Two from three are required i.e. bird scaring line and either line weighting or night setting.	Most vessels set at night. Use of line weighting is uncommon. Concerns over the use of bird scaring lines (likely variable), which are regarded as a hazard by some vessel operators.[12]
Application of measures	Measures should be applied in areas where fishing effort overlaps with seabirds vulnerable to bycatch to reduce incidental mortality to lowest possible levels. Safety, practical and fishery characteristics should also be recognised.	Measures are currently applied across the entire surface longline fishery irrespective of risk as New Zealand waters overlap with many seabird species, including those assessed as at-risk.	As above – application of measures inconsistent.
Bird scaring lines	Minimum aerial extent 75m Streamer brightly coloured Short streamers (>1m) placed at 1m intervals along aerial extent. Either: mixed design with long streamers at 5m intervals over first 55m; or design with no long streamers. Lightest practical strong fine line. Attached to vessel with barrel swivel to minimise rotation of line.	Mitigation measures outlined in the Fisheries (Seabird Mitigation Measures—Surface Longlines) Circular 2014 meet these specifications.	Some elements of this requirement are difficult to monitor (e.g. aerial extent may be less than specified) but physical characteristics of line itself are generally compliant.
Night setting	Night defined as between nautical twilight and nautical dawn	As above.	Most of fleet sets at night.
Line weighting	> 45g attached within 1m of the hook; or > 65g within 3.5m of the hook; or >98g within 4m of the hook. ACAP guidelines note line weighting is integral to fishing gear which may facilitate compliance and port monitoring, and should be accorded more priority providing preconditions can be met, including adequately specified line weighting regime characteristics; safety	As above; in keeping with New Zealand's requirements under Western and Central Pacific Fisheries Commission's seabird rules, an additional line weighting option of at least 40g within 0.5m of the hook is also available to fishers.	Line weighting is not common in the fleet, although some fishers may use some form of weights. Safety is a key concern, although more options are available now including safe or lumo leads that are designed to overcome safety concerns.

[12] See for example Characterising captures of at-risk seabirds in surface longline. Project SEA2010-20 Final Research Report. Dr Dominique Filippi and Paul Filippi (2012).

	issues adequately addressed; and issues relating to application to artisanal fisheries are taken into account.		
Implementation monitoring	Requires fisheries observers, video surveillance, or at-sea surveillance (e.g. patrol boats or overflights).	New Zealand has a 10% observer coverage target for its southern bluefin tuna fishery. All foreign charter vessels targeting southern bluefin have full observer coverage.	Monitoring primarily occurs through fisheries observers; coverage rates in the domestic fleet are 10% or less. Inspections are typically conducted in port and at-sea inspections are rare.
Other mitigation measures: *proven and recommended*	Area closures i.e. avoiding fishing at peak areas and during periods of intense foraging activity has been used effectively to reduce bycatch in longline fisheries.	No formal requirements.	May occur informally e.g. charter vessels take bird abundance into account when developing their fishing plans, and operate under codes of practice that include provisions for adopting additional measures if catches exceed a certain amount.
Unproven	Management of offal discharge is considered to be *unproven*, as is haul mitigation (due to a lack of research).	No formal requirements. Such measures are documented in an industry COP. Despite being unproven, management of offal discharges (such as holding offal during hauling, or discharging on the opposite side of the boat), and haul mitigation are both considered to have potential given 25% or so of birds are live on capture.	Some vessels may manage offal discharge and/or use haul mitigation but not as an alternative to mandated mitigation requirements. Practices are variable across the fleet. Haul mitigation is thought to be largely confined to the charter fleet.
Unproven and not recommended	ACAP notes a range of other potential mitigation tools including blue dyed bait, line shooter, bait caster, underwater setting chute to be *unproven and not recommended.*	No formal requirements. Blue dyed bait is mentioned as a mitigation measure in an industry COP.	Some vessels may use blue dyed bait but not as an alternative to mandated mitigation requirements.
Not recommended	Use of live bait and frozen baits are *not recommended*.	No formal requirements.	Not known to be used in the New Zealand fishery.

5.4 EXCERPT FROM BLACK PETREL (*PROCELLARIA PARKINSONI*) AND FLESH-FOOTED SHEARWATER (*PUFFINUS CARNEIPES*) ACTION PLAN: SURFACE LONGLINE FISHERIES

Actions to identify 'best practice' mitigation techniques
New Zealand surface longline vessels are required by law[13] to use a tori line at all times, and either night set or use weights. This meets the requirements of the Western and Central Pacific Fisheries Commission's Conservation and Management Measure, which has based its technical specifications on best practice advice provided by the Agreement for the Conservation of Albatrosses and Petrels (ACAP). However, ACAP recommends a combination of line weighting, night setting and use of a tori line, at all times (i.e. three measures rather than two).

Most surface longline sets are made during hours of darkness, with reports from fishers that some vessels prefer to set their lines during the day when targeting swordfish.[14] When daylight setting, fishers are required to use weights, but crew safety concerns mean that this measure is not popular amongst most surface longline fishers. Fishers frequently report in a number of forums the same tori line tangling issues as bottom longline fishers and are therefore reluctant to use them.

A range of new mitigation measures have been developed in recent years to provide surface longline fishers with more options. These include sliding weights that are safer for crew, devices that cover the hook barb until the baited hook has sunk out of reach of seabirds (hook pod and Smart tuna hook) and a machine that releases baited hooks underwater. These measures are all either commercially available now, or likely to be within the next 12 months. To date trials have been carried out on the hook pod and sliding weights to assess their effectiveness in reducing seabird captures in New Zealand waters, and to assess their effect on target catch and crew safety. The results of these trials will be released in the near future.

Actions

1. Improve our knowledge about the foraging behavior of seabirds behind boats, such as the average depth that black petrels and flesh-footed shearwaters will regularly dive to retrieve a baited hook on surface longline gear, by May 2016 (Lead: MPI and DOC). – project proposed in CSP programme
2. Using existing information, set a target depth that baited hooks need to achieve at the end of the protection zone of the tori line, and review and update this as results from Action 1 become available, by October 2016 (Lead MPI and DOC).
3. Review the tori line specifications contained in regulations in terms of their practicality, safety, and effectiveness, and make any recommendations regarding changes to these specifications by October 2016 (Lead MPI and DOC). – fold in with "best practice" work.
4. In collaboration with surface longline fishers, develop best practice guidelines that allow fishers to choose mitigation measures that collectively protect seabirds from baited hooks to the target depth in Action 2 by October 2016 (Lead MPI and DOC). – fold in with best practice work.
5. In collaboration with surface longline fishers, develop best practice vessel-side haul mitigation and bait/offal management options and include these in the guidelines by October 2015 (Lead MPI and DOC) – include in industry-wide COP.
6. If through actions 1- 4, changes to the NZ gazette notice are deemed necessary, advocate for changes to the Western and Central Pacific Fisheries Commission measure (and subsequently the NZ notice to base a new gazette notice on, by May 2017 (Lead: MPI).

Actions to motivate surface longline fishers to use 'best practice' mitigation techniques
Surface longline fishers are now in the fortunate position of having a range of mitigation measures they can choose from, and some fishers are stepping forward to trial these mitigation measures for

[13] http://www.fish.govt.nz/NR/rdonlyres/0506DE4C-F472-4C6B-90BA-067BFEFA6188/0/SurfaceLonglines_2014_213.pdf.
[14] Swordfish make diurnal vertical movements, between the surface at night and deeper water during the day. See http://www.nabis.govt.nz.

themselves on their vessels. Word of mouth is likely to help spread new practices through the fleet over time, although the cost of adoption of some of the measures may be a barrier for fishers.

Actions

1. Work with licensed fish receivers and other influencers to ensure all surface long-line fishers operating each year have received seabird training (Lead: MPI and DOC)
2. Work with licensed fish receivers and other influencers to ensure all surface longline vessels in FMA 1, 2 and 9 have an up to date Seabird Management Plan (SMPs) or equivalent in place that include measure(s) that protect the baited hooks until it reaches target depth, by May 2016 (Lead MPI and DOC).
3. Each year work with industry to deploy liaison officers in the fleet over the black petrel and flesh-footed shearwater breeding season, to assist fishers with mitigation advice, and to ensure vessels have up to date Seabird Management Plans (SMPs) in place (Lead: DOC and MPI) – CSP project proposed
4. Use existing compliance systems as well as observers to check on implementation of SMPs each year (Lead: MPI)
5. Support fishing associations and the Federation of Commercial Fishermen to help build a culture of best practice mitigation use amongst their members (Lead: MPI and DOC)
6. Support the FMA 1 Collaborative working group in its work to recognize fishers and fleets when they meet specified targets and milestones (Lead: MPI and DOC).

Data to measure risk to black petrels and flesh-footed shearwaters from surface long-line fishing over time

As described earlier in relation to bottom longline fishing, lack of reliable capture data, and lack of information on some aspects of the species' population dynamics create uncertainty in the risk assessments for both species. The following actions will improve the reliability of outputs from the risk assessment process.

Actions

1. Determine the monitoring (i.e. percentage of hook coverage) needed to reliably detect changes in captures of black petrels and flesh-footed shearwaters in the surface longline fisheries by June 2015 (Lead: MPI)
2. Increase monitoring effort, trending towards required levels by Oct 2016 (Lead: MPI and DOC)
3. Investigate applicability of electronic fishery monitoring as a tool to improve the practicality and cost effectiveness of collecting relevant data to manage protected species interactions by Feb 2016 (Lead: MPI and DOC)
4. Continue to collect priority population dynamic and foraging area information for both species (Lead: DOC)
5. Continue to update the risk assessment annually, using best available information (Lead:MPI)

5.5 HMS COMPLIANCE PRIORITIES FOR 2015–16

Outcome	Specific Priorities
Compliance with QMS rules for HMS ensured	Specific attention addressed to: • Routine unload inspections • The risk of high-grading of southern bluefin tuna • Compliance with southern bluefin tuna catch documentation requirements • Appropriate conditions for s110 approvals[15]
Compliance input to New Zealand commitments to CCSBT, Te Vaka Toa, FFA and WCPFC is delivered	Specific attention addressed to: • Contributions to annual meetings • Contributions to Te Vaka Toa initiatives
Accurate reporting of shark catches	Specific attention addressed to: • Compliance with shark finning ban including the appropriate use of ratios where applicable • The reporting of 6th Schedule releases and dead releases in accordance with changes made as part of shark finning regulations[16]
Compliance with protected species rules	• Full compliance with regulated seabird mitigation measures • Accurate non-fish bycatch reporting • Assessment and follow-up of observer reports
Compliance with RFMO measures	Specific attention addressed to: • Commercial awareness of the rules relating to fishing on the high seas for HMS
Integrity of the New Zealand Exclusive Economic Zone is maintained	Specific attention addressed to: • Aerial and at-sea patrols • Compliance analysis and profiling

[15] Section 110 of the Fisheries Act relates to conditions that can be applied to landings of fish taken in New Zealand waters that are landed elsewhere. In this case, it applies to conditions to be placed on vessels that fish for southern bluefin tuna under charter to a New Zealand company which lands the fish in Japan.

[16] The 6th Schedule of the Fisheries Act lists species that may be returned to the sea, along with specific conditions associated with the return. HMS sharks (blue, porbeagle, and mako) may now be returned either alive and likely to survive (destination code X), or dead/unlikely to survive (destination code Z). Sharks returned dead (code Z) are covered by annual catch entitlements (ACE). Discards/releases must be reported both on the discards section of the tuna longlining catch and effort form, and on catch landing returns.

5.6 HMS RESEARCH PROJECTS FOR 2015-16

Proposed new projects

ALB2015-01	Albacore catch sampling
HMS2015-01	Age, growth, and reproduction of HMS sharks from observer collected samples – blue sharks
HMS2015-02	Stable isotope analysis of highly migratory species to determine their spatial and temporal movements and assess their trophic linkages

Continuation of Ongoing Projects

HMS2013-01	Data reports for New Zealand HMS fisheries for national and international obligations
HMS2014-01	Commercial catch sampling for Highly Migratory Species
HMS2014-02	Age, growth and reproduction of mako sharks
HMS2014-05	Stable isotope analysis of highly migratory species to assess trophic linkages and spatial and temporal movement trends of HMS sharks
STM2013-01	Multi-year stock monitoring of striped marlin including logbook programme implementation
STN2013-01	Catch-at-age data for Southern Bluefin Tuna
TAG2013-01	Management of data from the gamefish tag recapture programme

5.7 PLANNED OBSERVER DAYS FOR HMS FISHERIES FOR 2015–16

HMS observer days are allocated to reflect the effort in the identified fishery groupings. The table below reflects the proportion of effort expended in each target fleet. Observer days were allocated according to the days available for those target fisheries to achieve 10% coverage for surface longline fisheries, and the days allocated to each month proportionally.

	Total of months	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
FCV - includes Tuna Charter	6000	500	500	500	500	500	500	500	500	500	500	500	500
Tuna longline ET – WCPFC	10										5	5	
Domestic tuna longline -EC STN	180	72	29									24	55
Domestic tuna longline - WC STN	120	14	14							21	21	25	25
Domestic tune longline - EC BIG/SWO	225	5	15	10	10	15	15	20	30	40	35	25	5
Domestic tune longline -WC BIG/SWO	45	5	10	5				5	5	5	5	5	
Domestic purse seine – SKJ	70							25	25	20			
Domestic purse seine - SKJ Super Seiner	30									30			
TOTAL HMS (without FCV)	680	96	68	15	10	15	15	50	60	116	66	79	85

EC – east coast; WC – west coast; STN – southern bluefin tuna; BIG – bigeye tuna; SWO – swordfish; ET – Out-of-zone; WCPFC – Western and Central Pacific Fisheries Management Commission