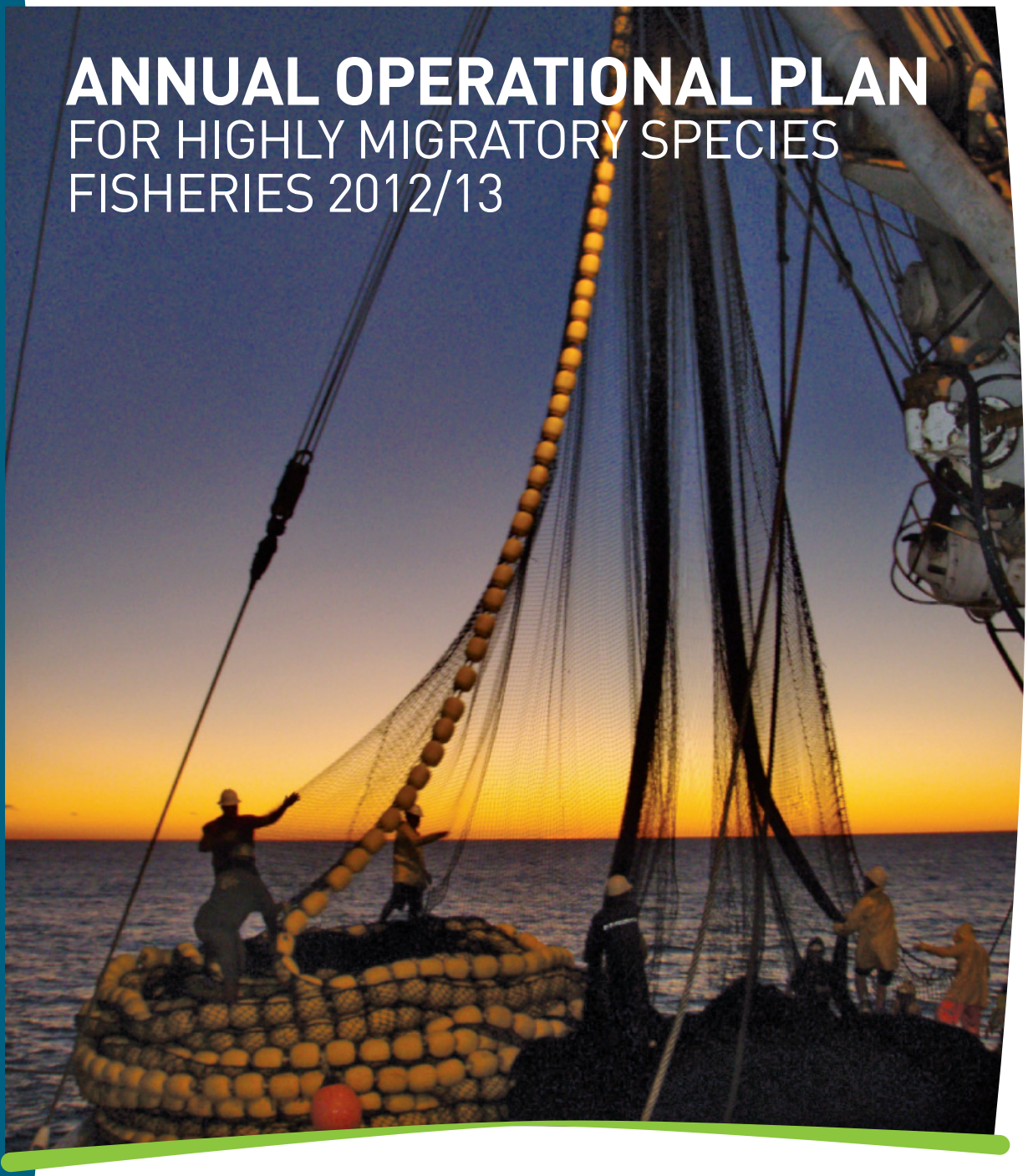
Ministry for Primary Industries
Manatū Ahu Matua

# ANNUAL OPERATIONAL PLAN
## FOR HIGHLY MIGRATORY SPECIES FISHERIES 2012/13



This annual operational plan provides information on the management actions and associated services planned for New Zealand fisheries for highly migratory species for the 2012/13 financial year to meet objectives in the National Fisheries Plans for Highly Migratory Species.

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*Growing and Protecting New Zealand*

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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 a five-year period, 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 (large pelagics, skipjack and albacore). The planning framework is given effect through Annual Operational Plans.

This annual operational plan describes the management approach for HMS fisheries for the July 2012 to June 2013 financial year, including actions identified for delivery on the management and operational objectives contained in the National Plan and fishery-specific chapters, and the services required to support delivery of the plan. The annual operational plan prioritises which services should be delivered, based on consideration of the priorities set out in the fisheries plan. Services must also be prioritised across fisheries plans (i.e. between HMS, deepwater, and inshore fisheries).

The annual operational plan will be reviewed quarterly and updated as required over the course of the year.

## *On-going and emerging issues*

On-going and emerging issues addressed by this annual operational plan include:

- Continued low availability of some HMS stocks, particularly yellowfin tuna. The Oceanic Fisheries Program of SPC (Secretariat of the Pacific Community) has been carrying out some research on stock range contraction in tunas; there is no evidence of range contraction to date. A recent update was provided at the Sub Committee meeting for South Pacific Tuna and Billfish (SC-SPTBF) in May 2012, with a further update to be provided to the October meeting of SC-SPTBF. New Zealand continues to support and encourage progress of this research recognising concerns over possible impacts on yellowfin tuna availability.
- Continued work by the Western and Central Pacific Fisheries Commission (WCPFC) towards a revised Conservation and Management Measure for bigeye, yellowfin and skipjack tunas. The original measure (CMM 2008-01) had the overall objective to ensure that bigeye and yellowfin tuna stocks are maintained at levels capable of producing their maximum sustainable yield (MSY).Due to the ineffectiveness of certain parts of the measure and an expanded focus to include target fisheries for skipjack tuna, a revision of the measure was the central issue to be addressed at the recent Commission meeting in Guam (March 2012). Members were unable to agree to a revised measure and there will be another attempt at the Commission meeting this year (December 2012). In the interim, a rollover of a modified version[1] of the existing CMM was adopted at plenary.
- Implementation of conditions and recommendations associated with Marine Stewardship Council (MSC) certification of albacore tuna in conjunction with industry. The first annual audit was undertaken in May 2012. Progress with respect to conditions was noted.
- Continuing focus by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) on two main areas: monitoring and compliance; and rebuilding the stock (including setting and allocating a global catch limit). Work is still being undertaken on the development of an independent audit scheme with potential implementation reliant upon reaching agreement during the 2012 Compliance Committee and Extended Commission meetings.

[1] http://www.wcpfc.int/doc/WCPFC8-2011-53/Draft-Decision-CMM-2008-01-%282%29

- Formal review of New Zealand's National Plan of Action for the Conservation and Management of Sharks (NPOA—Sharks) to be completed by end of 2012. In the international context, there is still strong interest in the issue of shark finning and several countries including the U.S. and Chile have either adopted or are in the process of adopting shark finning bans whereby fins must be landed naturally attached to the shark trunks. Currently this requirement applies only to HMS sharks landed from the high seas.
- Compulsory reporting was introduced for the recreational charter fleet in 2010, including catch reporting for southern and Pacific bluefin tuna. Access to this information remains critical for New Zealand, particularly in the context of southern bluefin tuna where a national allocation applies, part of which has been set aside as a recreational allowance. Without good information that catches remain within this allocation, alternative management arrangements may have to be considered for the recreational fishery.
- Draft National Plan of Action—Seabirds and implementation of risk-based management strategy for seabirds.
- Review of management of the marlin fishery.
- A need for a structured approach to getting information on Māori interests in HMS and other fisheries in the short-term (to supplement information that will come from iwi and forum fisheries plans over the medium term).

### *Structure*

The Annual Operational Plan includes:

1. *Management actions for HMS fisheries for the 2012/2013 financial year*

The management actions are linked to the specific objective or objectives to which they contribute.

2. *Services to deliver management actions*

This section outlines services required to deliver on the management actions, including services from:

- Resource Management & Programmes
- Compliance & Response
- Policy
- Corporate Services
- Office of the Director-General
- Māori Primary Sector Partnerships

3. *Appendix one: work plan*

The work plan outlines the quarterly breakdown of actions, including on-going monitoring and management tasks.

## 2. Management actions

This section describes the management actions scheduled for delivery during the 2012/13 financial year. Management actions are linked to the relevant management objective(s) and fishery specific operational objective(s) in the National Fisheries Plan for HMS.

| Management Action 1 | ***Support MSC certification for the albacore fishery*** |
|---|---|
| Contributes to management objective 1—Promote a viable and profitable tuna fishery in New–Zealand<br>Operational objective 1.11—Devise incentives to add value to the albacore fishery | |

The MSC (Marine Stewardship Council) has certified that the New Zealand troll fishery for albacore conforms to the requirements of the MSC Principles and Criteria for Sustainable Fishing.[2] The certification report includes conditions and recommendations. The Ministry for Primary Industries (MPI)[3] will continue to work with industry to implement these conditions as appropriate. The current focus for MPI is working with neighbouring Pacific Island Countries (PICs) in the development of target and limit reference points (MSC Condition 1) for the southern albacore stock, and advocacy for adoption of these reference points within the wider WCPFC. Officials participated in the first annual audit of the MSC certification to report on progress on achieving stock wide management of south Pacific albacore.

| Management Action 2 | ***Review management of the marlin fishery*** |
|---|---|
| Contributes to operational objective 3.2—Discuss with stakeholders and review management of marlin | |

Commercial fishers are currently prohibited from landing marlin caught within New Zealand fisheries waters. Originally this prohibition applied only to northern waters and resulted from decisions in 1987 designed to protect the recreational game fishery. The prohibition was extended to include all New Zealand fishery waters in the early 1990s. Since that time the prohibition on commercial access to marlin has been strongly supported by the recreational sector, which believes that the prohibition should extend to the high seas and to imports of marlin to reduce the risk of illegal catch finding its way onto the New Zealand market.

Currently commercial catches are low, but include both live and dead marlin, all of which must be discarded. Commercial fishers believe it should be possible to introduce management arrangements to allow the use of marlin which arrive at their vessels dead in order to improve the value of the fishery and reduce waste, while some believe all marlin should be available for use.

During development of the fisheries plan, stakeholders identified marlin management as a topic requiring further discussion, as reflected in operational objective 3.2. Those views were again stated during the advisory group meeting held to discuss this year's AOP and members of the group suggested that additional discussions take place following the release of the WCPFC assessment of marlins.

New Zealand has recently coordinated a review of recreational fisheries in New Zealand and Australia in preparation for a new stock assessment of south Pacific striped marlin planned for 2012. This material has proven to be useful background to future discussions of marlin fishery management but this must occur in the context of a WCPFC conservation and management measure that applies to the stock.

[2] For details see http://www.msc.org/track-a-fishery/certified/pacific/NZ_albacore_tuna_troll/assessment-downloads.

[3] The former Ministry of Fisheries became the Ministry for Primary Industries on 1 May 2012 as part of the merger with the former Ministry of Agriculture and Forestry.

| Management Action 3 | ***Explore options to increase knowledge of Māori interests in HMS fisheries*** |
|---|---|
| Contributes to management objective 5.1—Take into account the unique differences between individual iwi & hapu in management of HMS<br>5.2—Ensure abundant HMS for customary use<br>10.1—Implement Deed of Settlement obligations as they relate to HMS<br>11.3—Improve Māori capacity to engage with other stakeholders in international fora | |

The national fisheries plan for HMS outlines that to date little specific information has been collected on relationships of tangata whenua with HMS (e.g. species that are of particular importance in some regions). The development of iwi fisheries plans should contribute to meeting this objective over the medium term. A number of iwi fisheries plans are already in place. In addition, a research project to help identify specific relationships of iwi and hapu with particular species, including those of relevance to HMS, will begin in August of 2012. The project will be a test case initially that will look to develop an appropriate information collection method, which can then be applied nationwide.

| Management Action 4 | ***Implement HMS research plan*** |
|---|---|
| Contributes to: Management objective 6—Maintain a sustainable fishery for HMS within environmental standards<br>6.1 Encourage management of HMS at specified target reference points<br>6.3 Improve knowledge of HMS fisheries<br>Also: Management objective 7—Implement an ecosystem approach to fisheries management, taking into account associated and dependent species<br>Management objective 8.1—Identify and where appropriate protect habitats of particular significance to HMS, especially within New Zealand waters<br>Operational objective 6.10—Monitor the New Zealand albacore fishery to contribute into WCPFC science processes | |

The HMS research plan outlines key priorities for research on HMS fisheries and describes research activities that will be conducted to meet objectives in the fisheries plan for HMS. Five new projects have been proposed for the 2012-13 financial year, as outlined in appendix 3. In addition, some research projects that were planned in previous years are on-going (see appendix 2 for the full set of HMS research projects).

| Management Action 5 | ***Identify target and limit reference points for HMS stocks*** |
|---|---|
| Contributes to management objective 6—Maintain a sustainable fishery for HMS within environmental standards | |

Explicit targets and limits for HMS managed under WCPFC have not been set either nationally or internationally. The WCPFC Convention provides for members of the Commission to determine stock-specific reference points and the action to be taken if they are exceeded (Article 6(1)(a)). WCPFC has not yet implemented this provision, although its scientific committee has done preparatory work.[4]

[4] For example, see 'Identification of candidate limit reference points for the key target species in the WCPFC.' Preece *et al.* 2011 (MI-WP-03; presented to the 7th session of the WCPFC Scientific Committee).

For southern albacore tuna (temperate) New Zealand MPI is working within Te Vaka Moana (TVM) on the development of target and limit reference points that reflect economic as well as biological interests. This work contributes to the MSC conditions for certification of the New Zealand troll fishery for albacore.

MPI held a workshop in May 2011 to develop a New Zealand position on reference points. With New Zealand being at the outer limit of distribution for many HMS stocks, there are some concerns for the potential of range contraction in tropical tunas; work is being carried out by SPC to investigate range contraction. The latest Commission meeting (March 2012) adopted a 3-tiered hierarchical approach in the setting of reference points as recommended by the Scientific Committee (SC7). Further detail on this approach (including possible limits) will be presented to SC8 (August 2012) and outcomes will feed into a WCPFC reference point workshop (December 2012). In preparation for this workshop New Zealand officials are working actively with FFA members to decide on candidate reference points for south Pacific albacore to advocate at WCPFC.

| Management Action 6 | ***Provide New Zealand input into CCSBT*** |
|---|---|
| Contributes to: Management objective 6—Maintain a sustainable fishery for HMS within environmental standards<br>Also: management objective 1.2—Negotiate favourable country allocations for New Zealand fishers<br>Management objective 2—Maintain/enhance world class game fisheries in New Zealand fisheries waters<br>Management objective 11—Influence international fora and ensure New Zealand interests are taken into account | |

CCSBT's focus for 2012 continues to be on two main areas: monitoring and compliance; and rebuilding the stock (including setting and allocating a global catch limit). A revised compliance proposal to independently audit members' compliance systems will be presented at the 2012 Compliance Committee meeting and if agreed would begin a trial implementation period in 2012/13. The adoption of a management procedure has clarified the future approach to setting both the global catch limit and future allocations among CCSBT members. This has allowed New Zealand to provide greater certainty to industry by adjusting the TAC/TACC on an annual rather than "in season" basis.

New Zealand participates in inter-sessional activities arising from its membership of CCSBT, and in CCSBT's annual and subsidiary meetings, including in 2012/13:

- the scientific committee (August 27-31)
- the compliance committee meeting (27-29 September)
- the annual meeting of CCSBT (1-4 October)
- a meeting of the Ecologically Related Species Working Group (TBA; planned for first half of 2013)

| Management Action 7 | ***Provide New Zealand input into WCPFC, FFA, Te Vaka Moana*** |
|---|---|
| Contributes to: Management objective 6—Maintain a sustainable fishery for HMS within environmental standards<br>Also: management objective 1.2—Negotiate favourable country allocations for New Zealand fishers<br>2—Maintain/enhance world class gamefisheries in New Zealand fisheries waters<br>6.3—Improve knowledge of HMS fisheries<br>11—Influence international fora and ensure New Zealand interests are taken into account<br>Operational objectives 6.6, 6.8—Promote sustainable management of skipjack, albacore in the Western & Central Pacific including allocation of rights in the fishery | |

New Zealand participates in various organisations involved in sustainable management of Pacific fisheries for HMS, including WCPFC, FFA, and more recently Te Vaka Moana. Skipjack, bigeye and yellowfin tuna management will continue to be the focus for WCPFC in 2012. As well as the focus on bigeye and yellowfin bycatch, there is a move to control skipjack fishing directly. While TVM countries have an interest in all HMS fisheries, albacore has assumed short-term priority because of the reliance on this species to support longline fisheries. New Zealand continues to play an active role in the wider FFA and Sub Committee processes (SC-SPTBF) including the provision of technical advice and support to Pacific Island Countries within the Te Vaka Moana Arrangement. Bigeye and yellowfin are already subject to the QMS in New Zealand fisheries waters. Proposals to set commercial catch limits (to be fished competitively) are intended to take a proactive approach to setting a New Zealand "share" in these fisheries.

**WCPFC**

- Scientific Committee (7-15 August)
- Technical and Compliance Committee (27 September-3 October)
- Management objectives and reference points workshop (to be held prior to the 2012 annual meeting)
- Regular session of the Commission (10-14 December)

**FFA**

- FFA meetings in advance of the Scientific Committee and Technical and Compliance Committee meetings (August and September)
- Management Options Consultation (MOC) and associated FFC (TBC – proposed for 29–October to 3 November)
- Special FFC to prepare for annual WCPFC meeting (4-7 December)

**Te Vaka Moana**

- Meetings not yet scheduled for 2012/13 but likely to occur in the margins of or before/after FFA and/or WCPFC meetings

| Management Action 8 | ***Review catch limits*** |
|---|---|
| Contributes to: Management objective 6.1—Encourage management of HMS at specified target reference points<br>6.5—Review non-commercial allowances & management measures (as required) when new information becomes available<br>Also: management objective 1.2—Negotiate favourable country allocations for New Zealand fishers | |

Reviews of total allowable catches, total allowable commercial catches, allowances for non-commercial fishing, and other allowances are proposed for the following species:

- Southern bluefin tuna: review of baseline TAC as required to implement CCSBT decisions on New Zealand's national allocation
- Mako and porbeagle sharks: review of TAC

Reviews to set commercial catch limits (to be fished competitively) as required:

- Albacore
- Skipjack

| Management Action 9 | ***Improve access to and quality of ex-zone fisheries data for HMS*** |
|---|---|
| Contributes to management objective 6.2—Comprehensive reporting framework for New Zealand-flagged vessels fishing outside the New Zealand zone that allows for independent verification of catch | |

Reporting of high seas catches is not well-integrated with domestic reporting requirements, and there is currently no system for independent verification (e.g. separate reporting from fishers and fish receivers) and error checking. Work on this issue is ongoing.

| Management Action 10 | ***Monitor commercial HMS fisheries*** |
|---|---|
| Contributes to management objective 6.3—Improve knowledge of HMS fisheries<br>7.3—Increase the level and quality of information available on the capture of protected species | |

In HMS fisheries, observer data provides the most detailed quantification of catch on a set-by-set basis available to scientists. Observer data are, to some extent, independent of the fishery and accordingly provide valuable insight into fishery dynamics through time. Observers collect catch effort data, biological data and biological specimens for a variety of scientific purposes. In particular, observers are able to provide data describing biological parameters that cannot be captured from other catch sampling techniques (e.g. shed sampling).

Where possible, additional data on a range of HMS species including Ray's bream and moonfish are also collected in other fisheries they are caught in, such as middle depths trawl fisheries. Data on a wide range of non-target species are also collected in the tuna fishery (e.g. lancetfish, escolar).

New Zealand has obligations to the WCPFC and CCSBT to provide observer coverage of our vessels fishing for HMS as follows:

CCSBT: Observer coverage of 10% of catch and effort in the fishery with a hierarchy of data collection

WCPFC: for purse seine vessels operating on the high seas between 20$^{o}$ north and 20$^{o}$ south 100% observer coverage with observers sourced from the regional observer program (ROP). For other methods operating on the high seas a minimum of 5% coverage sourced either from the ROP or if fishing immediately adjacent to the New Zealand EEZ boundary the national observer program. The intent of this coverage is not only for compliance (e.g. with the FAD closure) but also to help quantify the catch and provide information on incidental capture of non-target species and the effectiveness of mitigation measures. Specific coverage requirements for HMS fisheries for 2012/13 are outlined in appendix four. Priorities for observer coverage include:

- Six monthly report on landed states of high–seas shark captures
- Meeting CCSBT observer standards
- Collection of data to assess existing conversion factors for HMS sharks, especially blue shark
- Data collection to enable better characterisation of risk factors that may contribute to captures of protected species, particularly seabirds
- Record use of mitigation equipment supplied to vessels
- Record shark handling practices

| Management Action 11 | ***Review of the National Plan of Action for the Conservation and Management of Sharks (NPOA—Sharks)*** |
|---|---|
| Contributes to: operational objective 6.4—Maintain the reproductive capacity of HMS shark populations<br>Also 4.3—Minimise waste of HMS sharks<br>4.4—Implement a shark handling code of conduct for all fishers | |

The current NPOA—Sharks is reaching the end of its five year term and is due for review later in 2012.

An action contained in the NPOA—Sharks is to determine the efficacy of management measures to ensure sustainability through the collection and analysis of data from various sources. Given the uncertainty in information about the status of stocks in the south Pacific, mako and porbeagle sharks have been put forward for review as part of the October 2012 sustainability round for potential changes to TACs and deemed values. Measures banning the retention for sale of oceanic white tip sharks are also being put forward in response to a recent decision of the WCPFC.

Eight shark species were (unsuccessfully) proposed for inclusion on Appendix II of CITES (the Convention on International Trade in Endangered Species) in 2010 (porbeagle shark, spiny dogfish, scalloped, great and smooth hammerhead sharks, oceanic whitetip shark, dusky shark, sandbar shark). Of these, smooth hammerhead, porbeagle and spiny dogfish are found in New Zealand waters, while scalloped hammerhead, great hammerhead, dusky shark and oceanic whitetip shark are seasonal vagrants. The sandbar shark does not occur in our waters. The next meeting of the CITES parties is scheduled for March 2013 and it is likely that a similar list of species will be proposed for trade restriction at that time.

The existing NPOA—Sharks outlines that a 'prohibited utilisation' standard would be developed, in part in response to continued international interest in management of vulnerable shark species, including outside of the framework of RFMO management. Part of the review of the NPOA—Sharks will encompass assessment of whether such a standard is still required (including if it will have value internationally in demonstrating New Zealand's commitment to conservation and management of shark species).

| Management Action 12 | ***Monitor non-commercial fisheries for HMS*** |
|---|---|
| Contributes to: Management objective 2.1—Maintain/enhance recreational catch rates for HMS game fisheries<br>2.2—Ensure at least 50% of recreational marlin, pacific bluefin tuna, HMS shark catch is released<br>Operational objective 6.5—Review non-commercial allowances and management measures (as required) when new information becomes available | |

Prior to 2010 recreational charter boat reporting for southern and Pacific bluefin tuna was voluntary. Compulsory registration and activity reporting for recreational charter vessels was introduced in November 2010. Reporting of catches of Pacific and southern bluefin tuna started in FMA 7 in November 2010 and was followed by FMA 1 in 2011 with the final stage of implementation covering the rest of the country by October 2012.

Although there was some initial resistance to these requirements from recreational charter boat operators, the majority have complied with the measures. The initial compliance focus was on informing charter operators of their obligations and assisting them to comply but other enforcement tools such as infringements have begun to be used as expectations of operator awareness increases. There have been very few breaches to date but this is an area that deserves continued monitoring as the rollout reaches its final stage.

Monitoring of recreational fisheries for HMS also occurs through voluntary reporting, including through the game fish tagging programme; and through targeted logbook schemes. Monitoring and management of information from these sources is coordinated through the HMS research plan (see Management Action 4—implement the HMS research plan).

| Management Action 13 | ***Implement the MoU on Pacific capacity development*** |
|---|---|
| Contributes to Operational objective 6.8—Promote sustainable management of the South Pacific albacore stock including allocation of rights in the fishery<br>6.9—Review management of the New Zealand fishery to achieve regional goals for stock-wide management [of albacore]<br>Also: management objective 11.2—Build strong relationships with other fishing nations in order to influence international fora | |

MPI has a supporting role to provide technical support to Pacific countries, including through Te Vaka Moana, to assist development of their fisheries management and MCS capacity. Te Vaka Moana countries are keen to develop their longline fisheries, and to ensure they are managed sustainably both domestically and within the region (including by WCPFC). Implementation of robust regional MCS arrangements are of mutual interest to Te Vaka Moana countries.

On-going work within Te Vaka Moana is refining the collective development opportunities available to TVM with a focus on the management framework that sits around the establishment and development of rights in zones. This work is centred on albacore as a priority species but includes long term objectives for all key tuna species and some other species of recreational significance.

As part of the ongoing provision of technical support and advice under the MoU on Pacific capacity development, MPI recently delivered a two-week workshop on Fisheries Management to the Tokelau Fisheries Administration of EDNRE (Economic Development, Natural Resource and Environment).

| Management Action 14 | *Implement a strategy for managing seabird interactions* |
|---|---|
| Contributes to: management objective 7.2—Minimise unwanted bycatch and maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach<br>Related operational objectives 7. 5—Develop & apply effective seabird mitigation, including options for vessel specific measures & compliance<br>7.6—Ensure through regular review & update that effective mitigation measures are in place | |

Last year, changes were made to allow seabird mitigation requirements to be made under regulation 58A rather than the previous section 11 notices. We also proposed removing the requirements that line weights be metal but did not make the change in the end following submissions about the specific gravities of various materials. We are now in a position to consider rules for seabirds that can use the more flexible arrangements provided for under regulation 58A.

One of the mechanisms used to manage seabird interactions as part of the new NPOA—Seabirds involves the use of risk assessment, meaning the likely impact of fishing on individual seabird populations will be assessed. The risk assessment may indicate a need for additional measures to reduce the risk to specific seabird populations caused by fishing for HMS species. Risk could be mitigated by focusing on specific vessels, areas and/or times that pose the greatest risk. One strategy outlined in the national fisheries plan is to consider a framework for vessel specific mitigation, similar to that which currently operates in the deepwater fishery.

The working group has recently been re-established and are developing an agreed framework to deal with seabird interactions. The HMS Team will continue to input into the drafting of the NPOA–Seabirds and work with stakeholders to lower risks in the fishery using all tools including our enhanced regulatory flexibility.

| Management Action 15 | ***Provide New Zealand input into other international processes as required*** |
|---|---|
| Contributes to management objective 7.4—Recognise the intrinsic values of HMS and their ecosystems, comprising predators, prey, and protected species<br>11.1—Decisions taken by relevant RFMOs and associated bodies take into account New Zealand interests<br>Operational objective 1.8—Manage the impacts of any fishing in New Zealand waters under provisions of the US Tuna Treaty | |

Includes ACAP, CMS, CITES – for which DOC is the lead agency for New Zealand.

MPI contributes to the New Zealand position for a range of international processes, including meetings and inter-sessional work of ACAP (Agreement on Albatrosses and Petrels), CMS (Convention on Migratory Species), and CITES (Convention on International Trade in Endangered Species). DOC is generally the lead agency for these bodies, but MPI provides input on fisheries management and the New Zealand management framework (but does not necessarily attend meetings). Meetings are scheduled for 2012/13 as follows:

- CITES Conference of the Parties (3-15 March)
- ACAP 7th meeting of the advisory committee (April 2013)

MPI also participates as lead agency in the meetings of the joint tuna RFMOs (next scheduled for July 11-15), which are intended to improve performance across RFMOs by developing common standards and approaches.

This management action may also include *ad hoc* provision of fisheries management advice as required. For example, further advice could be required on proposals for a marine sanctuary covering the Kermadec area.

| Management Action 16 | ***Administer catch documentation schemes for HMS fisheries*** |
|---|---|
| Contributes to: management objective 12—Maintain an effective fisheries management regime | |

New Zealand operates catch documentation schemes for southern bluefin tuna (CCSBT's catch documentation scheme – CDS), and for bigeye tuna, swordfish, Pacific bluefin tuna and Atlantic bluefin tuna (which must be accompanied by a New Zealand Fish Export Statistical Document, which complies with requirements for import into ICCAT member countries). Administration of this scheme involves distributing form books and tags (for southern bluefin tuna only); compiling and reviewing data; and reporting to the tuna commission. The proposed compliance approach at present is to inform and assist fishers to ensure they are able to fully comply with their obligations. For example, southern bluefin tuna exports will not be accepted by CCSBT market states if the catch documentation scheme is not complied with. This presents a significant commercial risk for fresh southern bluefin tuna exports to Japan and a strong incentive for fishers to comply.

At present the catch documentation scheme for CCSBT is implemented via instructions for permit holders and licensed fish receivers issued by the Director-General. The focus is on ensuring New Zealand complies with the requirements for export and domestic sales, with less emphasis on any imports we may receive (such imports are currently

rare). The need for a regulatory prohibition on import/export to ensure the borders are monitored will be considered during 2012/13.

| Management Action 17 | ***Implement the compliance strategy*** |
|---|---|
| Contributes to: Management objective 4.1—Encourage full use of catches of HMS and live release of fish that will not be used.<br>Management objective 7.1—Avoid, remedy or mitigate the adverse effects of fishing on associated and dependent species.<br>Management objective 11.4—Monitor new and existing fisheries in the vicinity of New Zealand fisheries waters and identify potential threats and opportunities.<br>Management objective 12.2—Ensure foreign vessels know and abide by the relevant rules and voluntary agreements for HMS fishing in New Zealand. | |

One of the deliverables of the 2011/12 AOP was the development of a compliance strategy. This strategy will now drive the delivery of compliance services in the coming year focusing on the following risks:

- Inaccurate and/or incomplete catch reporting
- Inaccurate catch reporting for vessels that fish in New Zealand waters but do not unload here
- High grading/discarding
- Illegal, unregulated, and unreported fishing (i.e. "IUU" activity)
- Non-compliance by New Zealand and foreign-flagged vessels with core monitoring, control, and surveillance (MCS) measures and stock management measures adopted by Regional Fisheries Management Organisations
- Species misidentification

As part of this work, quarterly meetings with compliance officials will ensure that emerging risks are identified and addressed using an appropriate response based on the Ministry's VADE model of enforcement.

# 3. Services to deliver management actions

## *Fisheries Management—HMS*

| | |
|---|---|
| Management Action 1<br>Support MSC certification for the albacore fishery | - fulfil MPI obligations to meet MSC requirements and recommendations for certification as appropriate |
| Management Action 2<br>Review management of the marlin fishery | - convene stakeholder meeting to discuss future management of marlin following release of WCPFC assessment of marlins. |
| Management Action 3<br>Explore options to increase knowledge of Māori interests in HMS fisheries | - contribute to development of a methodology to collect information on iwi HMS values.<br>- support initial trial of iwi fish utilisation research<br>- use forums and/or other networks to liaise with Māori and increase knowledge of customary interests in HMS fisheries |
| Management Action 4<br>Implement HMS research plan | - set priorities for HMS research in 2013/14 based on fisheries plan<br>- sign-off of research contracts |
| Management Action 5<br>Identify target and limit reference points for HMS | - continue to work within SC-SPTBF, FFA and the wider Commission so develop and advocate for target and limit reference points that take into account commercial as well |

| | |
|---|---|
| stocks | as biological objectives and protect against range contraction. |
| Management Action 6<br>Provide New Zealand input into CCSBT | - inter-sessional fisheries management support<br>- fisheries management support for annual/subsidiary meetings with a focus on seabird risk assessment in 2013<br>- implement Commission decisions as required (including catch limits – refer action 8). |
| Management Action 7<br>Provide New Zealand input into WCPFC, FFA, Te Vaka Moana | - inter-sessional fisheries management support<br>- support for annual/subsidiary meetings<br>- implement Commission decisions as required |
| Management Action 8<br>Review catch limits | - review of baseline TAC for southern bluefin tuna<br>- review of TACs for HMS sharks<br>- consider setting commercial catch limits for albacore and skipjack |
| Management Action 9<br>Improve access to and quality of ex-zone fisheries data | - contribute to prioritisation and delivery of tasks to improve access to and quality of data |
| Management Action 10<br>Monitor HMS fisheries | - set priorities for observer coverage based on fisheries plan<br>- monitor delivery of observer services |
| Management Action 11<br>Review of the NPOA—Sharks | - contribute to the review of NPOA—Sharks<br>- Ensure fishers know and understand rules relating to 6th schedule releases and reporting<br>- Review conversion factors if necessary/data is available |
| Management Action 12<br>Monitor non-commercial fisheries for HMS | - Document anecdotal reports received on non-commercial fisheries as appropriate<br>- Consider national diary survey results for HMS<br>- Monitor recreational charter vessel catches of TOR and STN |
| Management Action 13<br>Implement MOU on Pacific capacity development | - Provide technical fisheries management support for implementation of the MOU |
| Management Action 14<br>Implement a strategy for managing seabird interactions | - Input into NPOA—Seabirds<br>- Analyse and prioritise risk to seabirds caused by New Zealand fisheries for HMS<br>- Determine management responses<br>- Investigate framework for vessel specific mitigation<br>- Assist in trials of seabird mitigation measures as required |
| Management Action 15<br>Provide New Zealand input into other international processes as required | - Provide technical fisheries management support as required for CITES and ACAP 2013. |
| Management Action 16<br>Administer catch documentation schemes for HMS fisheries | - Administer CDS for southern bluefin tuna, including distributing tags and forms, receiving and collating data, reporting to CCSBT Secretariat, and providing point of contact for fishers and LFRS<br>- Consider alternative delivery options for CCSBT CDS administration<br>- Administer trade documentation scheme for exports of swordfish, bigeye tuna, and Pacific and Atlantic tuna<br>- Provide quarterly summaries of data |
| Management Action 17<br>Implement compliance strategy | - Set priorities for compliance action based on fisheries plan and compliance strategy in conjunction with compliance & response (see below)<br>- Identify fisheries management needs for port and at sea monitoring of vessels fishing for HMS |

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| | - Operate inclusive processes for rule-setting |

## *Fisheries Management—Science*

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|---|---|
| Management Action 1<br>Support MSC certification for the albacore fishery | - Provide advice on implementation requirements and recommendations for certification as appropriate |
| Management Action 3<br>Explore options to increase knowledge of Māori interests in HMS fisheries | - Contribute to development of a plan for gathering information on Māori interests in fisheries including HMS fisheries, to supplement information from iwi and forum fisheries plans<br>- Implement plan in phases (e.g. phase 1 survey design, phase 2 surveying)<br>- Use forums and/or other networks to liaise with Māori and increase knowledge of customary interests in HMS fisheries |
| Management Action 4<br>Implement HMS research plan | - Manage process for tendering and receiving research reports, including on-going (appendix 2) and new projects (appendix 3).<br>- Peer review of research reports<br>- Run working groups |
| Management Action 5<br>Identify target and limit reference points for HMS stocks | - Provide science input into national and regional processes aimed at setting reference points for HMS stocks in the WCPFC area. |
| Management Action 6<br>Provide New Zealand input into CCSBT | - Provide scientific advice to support the New Zealand delegation at meetings and inter-sessionally |
| Management Action 7<br>Provide New Zealand input into WCPFC, FFA, Te Vaka Moana | - Provide scientific advice to support the New Zealand delegation at meetings and inter-sessionally |
| Management Action 8<br>Review catch limits | - Support the review through provision of technical scientific advice |
| Management Action 9<br>Improve access to and quality of ex-zone fisheries data | - Contribute to prioritisation and delivery of tasks to improve access to and quality of data |
| Management Action 10<br>Monitor HMS fisheries | - Contribute to planning of observer priorities and tasks including analysis necessary to develop plan to ensure representativeness of coverage |
| Management Action 11<br>Prepare for a review of the NPOA—Sharks | - Coordinate research project to support NPOA—Sharks review |
| Management Action 12<br>Monitor non-commercial fisheries for HMS | - Support gamefish tagging programme and logbook programmes as required |
| Management Action 13<br>Implement MOU on Pacific capacity development | - Provide scientific advice to support implementation of the MOU as required |
| Management Action 14<br>Implement a strategy for managing seabird interactions | - Analyse data on HMS fisheries interactions with seabirds<br>- Administer risk assessment process for seabirds<br>- Monitor information on effectiveness of mitigation measures<br>- Develop research proposals for mitigation trials as necessary<br>- Develop proposal for more detailed risk assessment for HMS fisheries covering spatial and temporal risk factors and |

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| | fishing vessel practices<br>- Provide scientific support for seabird mitigation trials |
| Management Action 15<br>Provide New Zealand input into other international processes as required | - Provide scientific support as required |

## *Māori Primary Sector Partnerships*

| | |
|---|---|
| Management Action 3<br>Explore options to increase knowledge of Māori interests in HMS fisheries | - Use forums and/or other networks to liaise with Māori and increase knowledge of customary interests in HMS fisheries<br>- Scope ways of increasing Māori participation in international fisheries management<br>- Ensure HMS team are aware of relevant deed of settlement protocols<br>- Assist with implementation of any relevant deed of settlement obligations as required<br>- Establish/support forums that HMS team can interact with to discuss HMS fisheries interests as required |

## *Compliance & Response*

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|---|---|
| Management Action 6<br>Provide New Zealand input into CCSBT | - Provide input into annual reporting to the Compliance Committee and annual meeting<br>- Provide input into inter-sessional compliance work including the compliance plan and compliance policies under development<br>- Provide advice on management proposals considered by CCSBT |
| Management Action 7<br>Provide New Zealand input into WCPFC, FFA, Te Vaka Moana | - Provide input into annual reporting to the Technical and Compliance Committee<br>- Support for annual/subsidiary meetings including TCC<br>- Provide input into inter-sessional compliance work including management of IUU cases<br>- Provide advice on management proposals considered by WCPFC<br>- Monitor New Zealand vessels operating outside the New Zealand EEZ |
| Management Action 8<br>Review catch limits | - Support the review through provision of technical field operations advice |
| Management Action 11<br>Review of the NPOA—Sharks | - Ensure fishers know and understand rules relating to 6th schedule releases and reporting, and Animal Welfare Act provisions in relation to live shark finning |
| Management Action 12<br>Monitor non-commercial fisheries for HMS | - Monitor the recreational game fishery for Pacific and southern bluefin tuna<br>- Monitor reporting from amateur charter vessels |
| Management Action 13<br>Implement MOU on Pacific capacity development | - Provide technical field operations support for implementation of the MOU |
| Management Action 14<br>Implement a strategy for managing seabird interactions | - Seabird-related actions as required based on risk assessment |
| Management Action 15<br>Provide New Zealand input into other international processes as required | - Provide technical field operations support as required |

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| Management Action 16<br>Administer catch documentation schemes for HMS fisheries | - Inform and assist fishers with implementation of catch documentation schemes |
| Management Action 17<br>Implement compliance strategy | - Implement and review compliance strategy<br>- Quarterly meeting with fisheries management to discuss trends and issues<br>- Compliance activities prioritised using highest risks identified in compliance strategy |

## *Resource Management – Observer Services*

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|---|---|
| Management Action 1<br>Support MSC certification for the albacore fishery | - Deliver albacore observer coverage levels required to meet MSC certification requirements |
| Management Action 6<br>Provide New Zealand input into CCSBT | - Provide level of coverage to ensure New Zealand is able to meet CCSBT observer requirements<br>- Deliver coverage that meets the CCSBT Scientific Observer Program Standards (www.ccsbt.org) |
| Management Action 7<br>Provide New Zealand input into WCPFC, FFA, Te Vaka Moana | - Provide level of coverage to ensure New Zealand is able to meet WCPFC observer requirements<br>- Serve as New Zealand's contact point for WCPFC regional observer programme (in conjunction with field operations and fisheries management) |
| Management Action 10<br>Monitor HMS fisheries | - Liaise with fishers to deliver coverage of the large pelagic fishery (domestic and charter surface longline vessels); skipjack fishery; and albacore troll fishery as outlined in appendix 4.<br>- Six-monthly report on shark landed states<br>- Monitor use of mitigation equipment supplied to vessels |
| Management Action 11<br>Prepare for a review of the NPOA—Sharks | - Collect HMS shark conversion factor data, as well continuing to record information on shark catches and discards (including live status) |
| Management Action 14<br>Implement a strategy for managing seabird interactions | - Provide specified level of observer coverage and tasks to enable adequate monitoring of seabird interactions<br>- Collect data on risk factors that contribute to protected species captures including standardising data collection to enable electronic storage and report production. |
| Management Action 18<br>Implement a compliance plan | - Contribute to implementation of compliance plan |

## *International Fisheries Management*

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| Management Action 6<br>Provide New Zealand input into CCSBT | - Provide international strategy support as required |
| Management Action 7<br>Provide New Zealand input into WCPFC, FFA, Te Vaka Moana | - Inter-sessional international strategy support<br>- Support for annual/subsidiary meetings<br>- Contribute to implementation of Commission decisions |
| Management Action 13<br>Implement MOU on Pacific capacity development | - Coordinate implementation of the MOU |
| Management Action 15<br>Provide New Zealand input into other international processes as required | - Provide international strategy support as required |

## *Chief Scientist*

- General support services

## *Corporate Services – Legal*

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| Management Action 8<br>Review catch limits | - Support the review through provision of technical legal advice |

## *Corporate Services – Finance*

- Administer cost recovery process
- General support services

## *Corporate Services – Information Services*

| | |
|---|---|
| Management Action 6<br>Provide New Zealand input into CCSBT | - Ensure New Zealand meets data exchange requirements for CCSBT (on time and to specifications of the annual data exchange) |
| Management Action 3<br>Explore options to increase knowledge of Māori interests in HMS fisheries | - Management of customary database |
| Management Action 9<br>Improve access to and quality of ex-zone fisheries data | - Continue to improve quality of high seas database |

## *Office of the Director-General – Ministerial Correspondence*

- General support services

## *Office of the Director-General – Communications*

- Assistance in producing pelagic update newsletters 2-3 times per year
- Assistance with media queries as required
- Assistance with internal and external publications as required

# Appendix 1: Work plan

**Table 1: 2011/12 work plan for HMS fisheries. On-going monitoring tasks are identified in the last column of the table; the outcomes of this monitoring will be contained in the annual review report.**

<table>
<tr><th rowspan="2">HMS Management Actions & objectives they contribute to</th><th colspan="4">Work Period</th><th rowspan="2">Annual monitoring & reporting (to be addressed in annual review reports)</th></tr>
<tr><th>Q1 (JUL-SEP)</th><th>Q2 (OCT-DEC)</th><th>Q3 (JAN-MAR)</th><th>Q4 (APR-JUN)</th></tr>
<tr><td colspan="6">1. Support MSC certification for the albacore fishery</td></tr>
<tr><td>1. Promote a viable and profitable tuna fishery in New Zealand<br>1.11 Devise incentives to add value to the albacore fishery</td><td colspan="4">• Implement albacore certification requirements as required in conjunction with industry</td><td>• Value of landed catch<br>• Milestones as outlined in MSC certification report</td></tr>
<tr><td colspan="6">2. Review management of the marlin fishery</td></tr>
<tr><td>3.2 Discuss with other stakeholders and review management of marlin</td><td></td><td colspan="2">• convene stakeholder meeting to discuss future management of marlin</td><td></td><td></td></tr>
<tr><td colspan="6">3. Explore options to increase knowledge of Māori interests in HMS fisheries</td></tr>
<tr><td rowspan="3">5.1 Take into account the unique differences between individual iwi & hapu in management of HMS<br>5.2 Ensure abundant HMS for customary use<br>10.1 Implement Deed of Settlement obligations as they relate to HMS<br>11.3 Improve Māori capacity to engage with other stakeholders in international fora</td><td></td><td></td><td colspan="2">• Incorporate feedback from iwi fisheries plans into planning of services for 2013/14<br>• Incorporate protocols and iwi fisheries plans as appropriate into planning and prioritisation<br>• Review of current catch/effort reporting systems and the potential to use TUFFART as a customary database.</td><td rowspan="3">• Catches of HMS species authorised by customary permits (if any)<br>• Any items of relevance in Deed of Settlement protocols, iwi management plans, and iwi fisheries plans</td></tr>
<tr><td>• Identify research provider for iwi utilisation research and conduct initial trial</td><td colspan="3">• Research completed and methodology assessed against broader implementation</td></tr>
<tr><td colspan="4">• Encourage consideration of interests in HMS fisheries during development of iwi fisheries plans<br>• Work with iwi to increase consideration of any interests in HMS when customary tools are used<br>• Improve information flows to iwi on the management of HMS fisheries<br>• Facilitate iwi engagement on sustainability reviews.</td></tr>
</table>

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| **4. Implement HMS research plan** | | | | | |
| **6.** Maintain a sustainable fishery for HMS within environmental standards<br>**6.1** Encourage management of HMS at specified target reference points<br>**6.3** Improve knowledge of HMS fisheries<br>**6.10** Monitor the New Zealand albacore fishery to contribute into WCPFC science processes<br>**7.** Implement an ecosystem approach to fisheries management, taking into account associated and dependent species<br>**7.1** Avoid, remedy or mitigate the adverse effects of fishing on associated & dependent species, including through maintaining food chain relationships<br>**8.1** Identify and where appropriate protect habitats of particular significance to HMS, especially within New Zealand waters | • Review port sampling programme that monitors New Zealand troll fishery for albacore | • Develop proposals for HMS research based on the HMS research plan and priorities and needs identified in the fisheries plan, including research requirements to meet objective 7.1; proposals for mitigation research; and further consideration of proposals for a desk-top study to evaluate available information on identifying habitats of significance to the management of HMS | • Review level of observer coverage of the albacore fishery | | • Various research projects (see appendix 2)<br>• Any new information on implementation of an ecosystem based approach to fisheries management.<br>• Trends in longline catches of albacore (including trends in fish size) and output from 11/12 observer coverage of albacore fishery |
| | • Update research plan as required<br>• Provide annual reports for and attend WCPFC and CCSBT scientific committee meetings. | | | | |

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| **5. Identify target and limit reference points for HMS stocks** | | | | | |
| **6.** Maintain a sustainable fishery for HMS within environmental standards | • HMS working group to meet prior to WCPFC Science Committee meeting in August<br>• Continue work within TVM and the SC-SPTBF to develop reference points and advocate for adoption in the wider WCPFC | • Participate in WCPFC workshop on reference points | | | • Progress on reference points |
| | • See also management action 1 (support MSC certification for the albacore fishery) | | | | |
| **6. Provide New Zealand input into CCSBT** | | | | | |
| **6.** Maintain a sustainable fishery for HMS within environmental standards<br>**1.2** Negotiate favourable country allocations for New Zealand fishers<br>**2.** Maintain/enhance world class gamefisheries in New Zealand fisheries waters<br>**11.** Influence international fora and ensure New Zealand interests are taken into account | • Participate in CCSBT Science Committee meeting | • Participate in CCSBT Special and Annual Meetings and Compliance Committee. | • Participate in CCSBT Strategy and Fisheries Management Working Group and Ecologically Related Species Working Group meetings as required. | | • New Zealand's share of global TAC<br>• Compliance with CCSBT measures |
| | | • Implement STN1 allocation based on CCSBT management procedure | | | |
| | • Hold briefings and debriefings with fisheries stakeholders before and after tuna commission and subsidiary meetings as required and ensure stakeholder and iwi views incorporated into New Zealand negotiating positions<br>• Undertake CCSBT administrative and reporting tasks including updates to authorised vessel list, quota and catch-against-quota reporting, submission of country reports, data exchange, and administration of CDS (see management action 17). | | | | |
| **7. Provide New Zealand input into WCPFC, FFA, Te Vaka Moana** | | | | | |
| **6.** Maintain a sustainable fishery for HMS within environmental standards<br>**Also: 1.2** Negotiate favourable country allocations for New Zealand fishers<br>**2.** Maintain/enhance world class gamefisheries in New Zealand fisheries waters<br>**6.3** Improve knowledge of HMS fisheries<br>**6.6, 6.8** Promote sustainable management of skipjack, | • Participate in WCPFC Scientific Committee and Technical and Compliance Committee meetings, including input into stock assessments where relevant.<br>• Review outcomes of stock assesments for 2012 (albacore, striped marlin and swordfish) and indicator analysis of bigeye, yellowfin and | • Develop and promote NZ strategies for sustainable management of HMS stocks<br>• Participate in FFA management options workshop and preparatory meeting<br>• Participate in WCPFC Annual | • Implement any WCPFC decisions as required e.g. through high seas permit conditions | | • Review trends in the New Zealand domestic catches of skipjack and albacore for any signs of stock contraction<br>• Target and non-target catches by NZ vessels in the tropical fishery [WCPFC Regional Observer Programme]<br>• Undertake analysis and risk assessment of high seas fishing activities |

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| albacore in the Western & Central Pacific including allocation of rights in the fishery<br>**7.7** Manage bycatch of juvenile tuna in tropical skipjack fisheries in accordance with WCPFC conservation & management measures<br><br>**11.** Influence international fora and ensure New Zealand interests are taken into account | skipjack tuna.<br>• Participate in FFC meeting and FFA preparatory meetings | Commission meeting, including ongoing work in the development of a new management measure for bigeye, yellowfin and skipjack<br>• Participate in SC-SPTBF meeting and workshop | | | |
| | • Work with other Pacific countries through FFA, and with Polynesian countries through Te Vaka Moana<br>• Identify and utilise opportunities to build stronger relationships with other fishing nations<br>• Identify and advocate for stock-wide catch limits for albacore in cooperation with Pacific Island countries<br>• Develop NZ-preferred means to implement stock-wide management approach, taking into account circumstances of the New Zealand fishery.<br>• Ongoing co-operation within TVM, SC-SPTBF and FFA to develop collective strategy to approach the Commission in relation to zone-based management of the southern albacore stock and target and limit refeence points for all key tuna species.<br>• Hold briefings and debriefings with fisheries stakeholders before and after tuna commission and subsidiary meetings as required and ensure stakeholder and iwi views incorporated into New Zealand negotiating positions<br>• Monitor compliance with high seas permit conditions<br>• Analyse information from domestic and regional observer programmes | | | |
| **8. Review catch limits** | | | | | |
| **6.1.** Encourage management of HMS at specified target reference points<br>**6.5** Review non-commercial allowances & management measures (as required) when new information becomes available<br>**1.2**. Negotiate favourable country allocations for New Zealand fishers | • Southern bluefin tuna: change to baseline TAC as required to implement CCSBT decisions on management procedure and New Zealand's national allocation<br>• Review of sustainability measures for HMS sharks (mako, porbeagle and oceanic whitetip).<br>• Develop a proposal for a catch limit for albacore in preparation for implemetation of zone based management od the southern albacore fishery.<br>• Hold meetings with industry to discuss potential catch limit setting in the skipjack fishery.<br>• Consider setting a commercial catch limit for the New Zealand skipjack fishery in 2012 or 2013. | | | • Catch versus TAC/Cs and allowances |

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| **9. Improve access to and quality of ex-zone fisheries data for HMS** | | | | | |
| **6.2** Comprehensive reporting framework for New Zealand flagged vessels fishing outside the New Zealand zone that allows for independent verification of catch | | | • Clarify reporting requirements for out-of-zone fishing and discuss with industry to ensure appropriate operating procedures are in place (including review of possibility of electronic data transmission)<br>• Develop validation rules to improve data quality<br>• Review data needs for use of high seas data for catch history attribution (if required) | | |
| **10. Monitor HMS fisheries** | | | | | |
| **6.3** Improve knowledge of HMS fisheries<br><br>**7.3** Increase the level & quality of information available on the capture of protected species | | | • Optimise observer coverage to achieve representativeness across vessels, areas, seasons, target species and provide desired level of precision | | • Delivery against target levels of observer coverage in each HMS fishery.<br>• Representativeness of observer coverage<br>• Variance and number/scale of discrepancies between observer and fisher reports of incidental bycatch<br>• Trends and issues in reporting and any compliance actions taken |
| | • Monitor the accuracy and timeliness of catch reporting and record-keeping | | | | |
| | | | | • Specify target observer coverage levels in annual operational plans | |
| **11. Review of the National Plan of Action for the Conservation and Management of Sharks** | | | | | |
| **6.4** Maintain the reproductive capacity of HMS shark populations<br>**4.3** Minimise waste of HMS sharks<br>**4.4** Implement a shark handling code of conduct for all fishers | • 6-monthly report of landed state of high seas shark catches (observer services) | • Review commercial code of conduct (lead SeaFIC) | • 6-monthly report of landed state of high seas shark catches (observer services)<br>• Re-print and distribute code of conduct including any revisions | | • Shark catches including 6th schedule releases, use of species codes, landings vs discards, shark catches vs target fishery catches; landed states incuding of high seas catches; NZSFC records<br>• Uptake of commercial code of practice<br>• Summarise observer reports on shark handling practises |
| | • Input into review and drafting of NPOA–Sharks | | | | |
| | • Continue to collect and assess data for shark conversion factor review<br>• Contribute to Pacific-wide stock assessment for key HMS sharks<br>• Review of NPOA–Sharks<br>• Encourage uptake of the shark handling code of conduct in commercial fisheries for HMS | | | | |
| **12. Monitor non-commercial fisheries for HMS** | | | | | |
| **2.1** Maintain / enhance recreational catch rates for HMS gamefisheries | • Inspect recreational charter vessels fishing for bluefin tuna | | | | • Reporting on trends and key issues in amateur charter reporting<br>• Recreational catches from NZSFC |

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| **2.2** Ensure at least 50% of recreational marlin, Pacific bluefin tuna, & HMS shark catch is released<br>**6.5** Review non-commercial allowances & management measures (as required) when new information becomes available | • Monitor registration and the accuracy and timeliness of amateur charter catch reporting<br>• Scientific monitoring of non-commercial fisheries including through the gamefish tagging programme, logbook scheme, and specific research projects —see management action 4 (implement HMS research plan) | | | | records and CPUE from logbook programme [STM2009-01, STM2011-01, TAG2009-01, TAG2010-01][5]<br>• Recreational stakeholder perceptions of issues in and access to the fishery<br>• Report back on yellowfin tuna research [HMS2010-01]<br>• Reported release rates of marlin, Pacific bluefin tuna and sharks for NZSFC clubs, and anecdotal information on release rates for non-affiliated fishers; and provision of tag release cards |
| **13. Implement MOU on Pacific capacity development** | | | | | |
| **6.8** Promote sustainable management of albacore in the Western & Central Pacific including allocation of rights in the fishery<br>**6.9** Review management of the New Zealand albacore fishery to achieve regional goals for stock-wide management<br>**11.2** Build strong relationships with other fishing nations in order to influence international fora | • Work with members of Te Vaka Moana and FFA's Sub-Committee on South Pacific Tuna and Billfish to consider management approaches for Pacific fisheries<br>• Implement the MOU work plan for Fisheries Management, including:<br>- *The provision of Fisheries Management advice and assistance for development and improvement of national frameworks*<br>- *Provision of assistance to members on the implementation of an agreed TVMA regional plan*<br>- *Engagement of New Zealand industry with Pacific Island countries* | | | | • Assess the need for further management within New Zealand fisheries waters required to support Te Vaka Moana agreements and/or WCPFC conservation and management measures |
| **14. Implement a strategy for managing seabird interactions** | | | | | |
| **7.2** Minimise unwanted bycatch & maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach<br>**7.5** Develop & apply effective seabird mitigation, including options for vessel specific measures & compliance<br>**7.6** Ensure through regular review & update that effective mitigation measures are in place | • Input into review of NPOA–Seabirds<br>• Review implications of seabird risk assessment for HMS fisheries, including further characterisation of fishery interactions | • Consider proposals for mitigation research<br>• Consider the need for any further interventions | | • Develop proposals for actions required to mitigate risk to seabirds as identified by risk assessment (as part of annual operational planning process) | • Fisher and observer bycatch reports<br>• Compliance with regulated mitigation measures and others (e.g. dehookers)<br>• Use of circle hooks in fishery<br>• Review mitigation requirements and specifications against new information |
| | | | • Participate in Ecologically Related Species Working Group for CCSBT<br>• Develop and evaluate framework for vessel specific mitigation | | |

[5] For striped marlin, if CPUE drops below the long-term mean for 3 consecutive years, a management review will be triggered.

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| | • Implement commercial code of practice, and educate fishers on mitigation measures<br>• Provide for the trial and use of alternative seabird mitigation strategies as appropriate<br>• Develop a seabird risk assessment for the southern bluefin tuna fishery in conjunction with ACAP | | | | |
| **15. Provide New Zealand input into other international processes as required** | | | | | |
| **7.4** Recognise the intrinsic values of HMS & their ecosystems, comprising predators, prey, & protected species<br>**11.1** Decisions taken by relevant RFMOs and associated bodies take into account New Zealand interests<br>**1.8** Manage the impacts of any fishing in New Zealand waters under provisions of the US Tuna Treaty | • Consider research requirements to meet objective 7.4 | | | | • Review the need for protection status for any species of HMS. |
| | • Participate in development of New Zealand position for international processes that identify species at risk (e.g. CMS, CITES)<br>• Monitor and critically review the New Zealand position during renegotiation of the US Tuna Treaty, and keep stakeholders involved in the process. | | | | |
| **16. Administer catch documentation schemes for HMS fisheries** | | | | | |
| **12. Maintain an effective fisheries management regime** | • On-going administration of catch documentation scheme for southern bluefin tuna (including quarterly CDS reports) and trade information scheme for bigeye, Pacific bluefin, and swordfish | | | | • Review CCSBT Secretariat's summary of CDS data and any points of note raised |
| **17. Implement compliance Strategy** | | | | | |
| **11.4** Monitor new & existing fisheries in the vicinity of New Zealand fisheries waters & identify potential threats & opportunities<br>**12.2** Ensure foreign vessels know & abide by the relevant rules & voluntary agreements for HMS fishing in New Zealand | | | • Annually review NZ-Japan Tuna Co. code of practice (and/or codes submitted by other companies)<br>• Ensure foreign charter vessels have correctly specified mitigation equipment on board<br>Ensure fishing companies chartering foreign vessels have access to ACE to cover likely catches. | • Incorporate relevant compliance actions into specification of services for 2013/14<br>Risk assessment of high seas permit conditions and s.113 approvals | • Assess new and existing fisheries in vicinity of New Zealand's EEZ; exchange information with stakeholders as appropriate<br>• Report on compliance issues and trends along with actions taken (if any) |
| | • Monitoring and analysis of HMS fishing activity in NZ EEZ and bordering waters<br>• Vessel inspections (in port and at sea), including inspections of foreign-flagged vessels and exercising port state controls as appropriate<br>• Provide information to foreign vessels (or agents) to increase awareness and understanding of relevant | | | | |

| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| | rules and voluntary agreements<br>• Quarterly meetings between HMS team and Compliance & Response<br>• Periodic audit of NZ vessel activity against out-of-zone authorisations<br>• Provide information to southern bluefin tuna fishers regarding obligations relating to CDS<br>• Analyse observer reports to identify potential high grading, bycatch misreporting and non-compliance with bird mitigation or 6th schedule requirements | | | | |
| | • Draft compliance fact sheet relating to shark bycatch, high seas permit requirements and domestic reporting | | | | |
| **On-going activities and monitoring to achieve objectives** | | | | | |
| **1.1** Reduce administrative barriers to profitability in the HMS fishery<br>**1.4** Ensure fair allocation of levy costs for quota owners in HMS fishstocks<br>**1.6, 1.10** Maintain catch-based attribution of cost recovery levies (skipjack/albacore) | | • Review delivery of services, including efficiency of delivery | • Identify required services for cost recovery | • Assess required services with respect to total fishery costs | • Catches versus TAC/Cs<br>• CPUE (if available)<br>• Breakdown of cost recovery levies |
| | • Contribute to overall review of cost recovery | | | | |
| **1.3** Ensure catch limits are not exceeded & annual catch entitlements are readily available & used to cover catches | • Monitor the accuracy and timeliness of catch reporting and record-keeping. Address risks identified through application of the 'Voluntary-Assisted-Directed-Enforced' model. | | | | • Deemed value payments, deemed value vs. ACE price, catch against TACCs<br>• Report on catch reporting and record-keeping trends and risks |
| **1.5, 1.9** Regularly monitor the need for more active management of skipjack/ albacore, based on utilisation criteria<br>**6.7** Regularly monitor the need for more active management of skipjack based on sustainability criteria | • Seek input of stakeholders on need for more active management of SKJ, ALB | | | | • Assess skipjack and albacore against QMS introduction standard and/or the need for alternative management arrangements<br>• Annually assess the need for further management within NZ fisheries waters required to support WCPFC agreements |
| **3.1** Sector groups develop coordinated, collaborative responses to potential spatial conflicts | | | | | • Identify existing and/or potential inter-sector conflicts and manage as required under agreed process. |
| **3.3** Implement a Code of Practice | • Review industry code | | | | • Anecdotal reports of interactions between commercial purse seiners and |

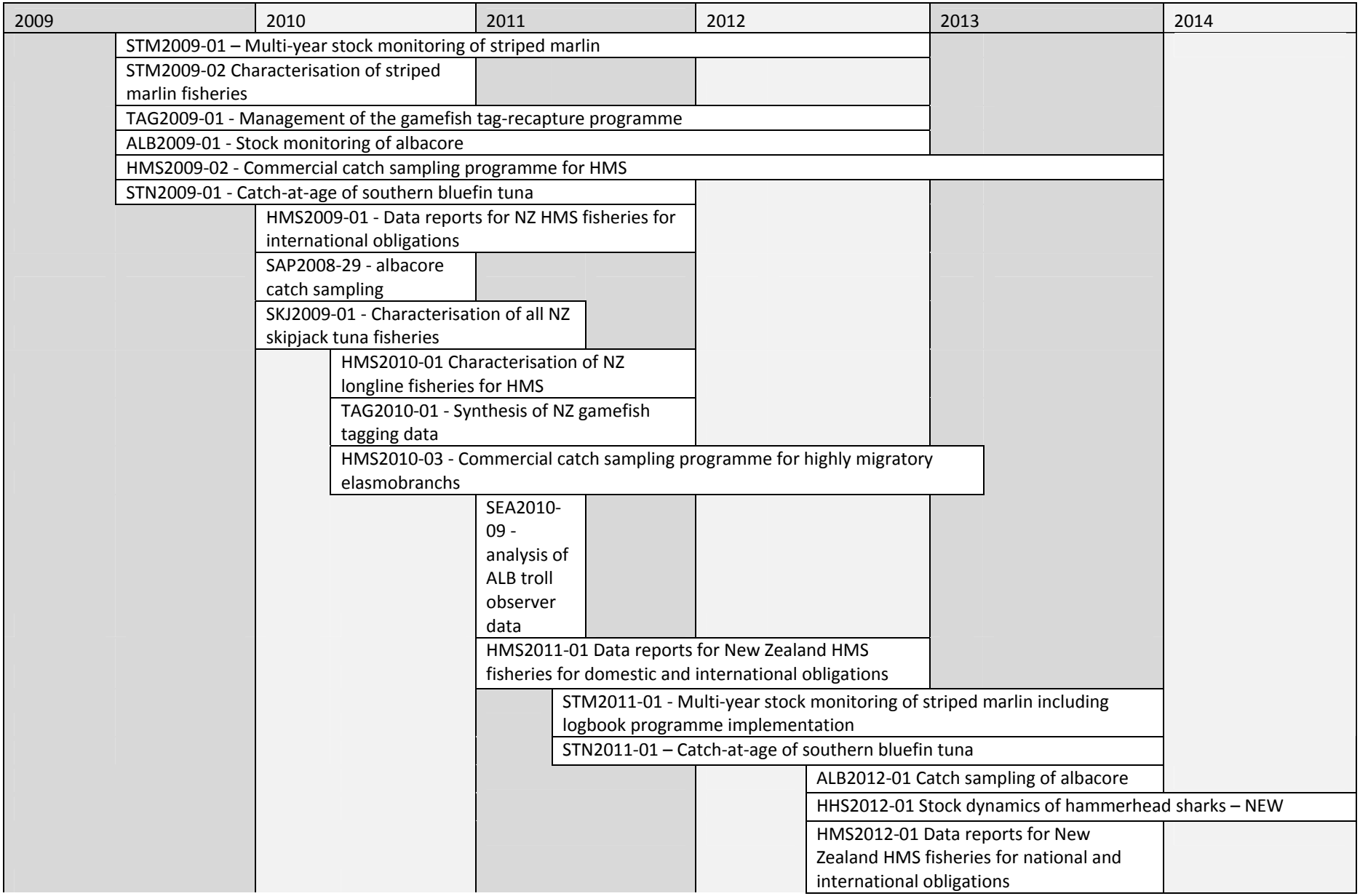
| HMS Management Actions & objectives they contribute to | Work Period | | | | Annual monitoring & reporting (to be addressed in annual review reports) |
|---|---|---|---|---|---|
| | Q1 (JUL-SEP) | Q2 (OCT-DEC) | Q3 (JAN-MAR) | Q4 (APR-JUN) | |
| for skipjack fishing | | | | | non-commercial fishers<br>• Annual review of code of practice |
| **4.1** Encourage full use of catches of HMS & live release of fish that will not be used | • Monitor the accuracy of catch reporting, and landed states for high seas catches<br>• Compile information on use of and compliance with discard requirements | | | | • Reporting of discards and compliance with 6th schedule release conditions [HMS2011-01] |
| **4.2** Encourage full use in the recreational fishery for Pacific bluefin tuna | • Compliance services to promote objective of encouraging full use and discouraging wastage | | | | • Charter boat reporting of catches and tag/release information<br>• Anecdotal information on retention of Pacific bluefin catches |
| **7.2** Minimise unwanted bycatch & maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach<br>**7.6** Ensure through regular review & update that effective mitigation measures are in place | • Implement commercial code of practice, and educate fishers on mitigation measures | | | | • Fisher and observer bycatch reports<br>• Review management against any relevant protected species standards<br>• Bycatch of turtles against 'minimal' level specified by WCPFC science committee [HMS2011-01]<br>• Vessel performance against turtle/ marine mammal avoidance and handling procedures<br>• Compliance with regulated mitigation measures and others (e.g. dehookers)<br>• Use of circle hooks in fishery<br>• Review mitigation requirements and specifications against new information |
| **9.1** Monitor HMS aquaculture development, its potential, & potential for disease transfer & stock depletion | | | | | • Document any aquaculture development (including both potential risks and potential opportunities) occurring during the course of the preceding year. |
| **12.3** Enable public assessment of how HMS fisheries are managed | | • Meet with fisheries plan advisory group to discuss annual review report and research needs and priorities | • In conjunction with fisheries plan advisory group, prepare and consult on annual operational plan and allow for tangata whenua input and participation | | • Review delivery of services including efficiency |
| | • Provide information to the public as required<br>• Update HMS research plan | | | | |

Timeline for Major Milestones

| | Jan 2012 | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 2013 | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 calendar year | | | | | | | | | | | | 2013 calendar year | | | | | | | | | | | |
| | 2011/12 financial year | | | | | | 2012/13 financial year | | | | | | | | | | | | 2013/14 financial year | | | | | |
| | 2011/12fishing year | | | | | | | | | 2012/13 fishing year | | | | | | | | | | | | 2013/14 fishing year | | |
| Research planning process / setting of cost recovery levies | | | | | | | | | | | | | | | | | | | | | | | | |
| Draft (early May) | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult (6 weeks) | | | | | | | | | | | | | | | | | | | | | | | | |
| Minister approves services (early July) | | | | | | | | | | | | | | | | | | | | | | | | |
| Send AOP (mid-late July) | | | | | | | | | | | | | | | | | | | | | | | | |
| Sustainability review (September round) | | | | | | | | | | | | | | | | | | | | | | | | |
| Preliminary discussion with stakeholders | | | | | | | | | | | | | | | | | | | | | | | | |
| Initial Position Paper | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult (6 weeks) | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Advice Paper | | | | | | | | | | | | | | | | | | | | | | | | |
| Minister's consideration and final decision | | | | | | | | | | | | | | | | | | | | | | | | |

| | Jan 2012 | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 2013 | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 calendar year | | | | | | | | | | | | 2013 calendar year | | | | | | | | | | | |
| | 2011/12 financial year | | | | | | 2012/13 financial year | | | | | | | | | | | | 2013/14 financial year | | | | | |
| | 2011/12fishing year | | | | | | | | | 2012/13 fishing year | | | | | | | | | | | | 2013/14 fishing year | | |
| FPAG meetings | | | | | | | | | | | | | | | | | | | | | | | | |
| *2012/13 AOP* | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan development | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan finalised | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan implemented | | | | | | | | | | | | | | | | | | | | | | | | |
| International Meetings | | | | | | | | | | | | | | | | | | | | | | | | |
| CCSBT | | | | | | | | | | | | | | | | | | | | | | | | |
| WCPFC | | | | | | | | | | | | | | | | | | | | | | | | |
| FFA | | | | | | | | | | | | | | | | | | | | | | | | |
| Te Vaka Moana | | | | | | | | | | | | ? | | | | | | | | | | | | |

# Appendix 2: New and on-going HMS research projects



| | | | | | |
|---|---|---|---|---|---|
| | | | | HMS2012-02 Commercial catch sampling for HMS | |
| | | | | HMS2012-03 Distribution and abundance of skipjack in NZ waters – NEW | |
| | | | | HMS2012-04 Rapid assessment of iwi fish utilisation – NEW | |
| | | | | HMS2012-05 Longline seabird mitigation trial - NEW | |
| | | | | TAG2012-01 Data management from gamefish tag programme | |
| | | | | ZBD2011-10 Evaluation of ecotrophic and environmental factors affecting distribution of HMS – NEW | |

# Appendix 3: Tender specifications for new HMS research projects for 2012/13

**Project:** Stock dynamics of hammerhead sharks
**Project Code:** HHS2012-01
**Start Date:** 1 August 2012
**Completion Date:** 30 September 2014
**Vessel Use:** None

**Management Objective**

Objective 6.4 - maintaining the reproductive capacity of HMS shark populations
Objective 8.1 - Identifying and, where appropriate, protecting habitats of particular significance to HMS.

**Overall Objectives:**

Determine the distribution of and potential for a tagging programme to assess the movement patterns of hammerhead sharks in New Zealand waters.

**Specific Objectives:**

1. Characterise the catch and distribution of hammerhead sharks in New Zealand waters.
2. Tag and release adult and juvenile hammerhead sharks to assess movement patterns of this species.

**Rationale:**

*General*

In December 2010 hammerhead sharks were added to the list of key shark species for the Western and Central Pacific Fisheries Commission's (WCPFC) Conservation and Management Measure (CMM2010-07). As a signatory to the WCPFC, New Zealand has obligations for recording, reporting and undertaking research into species listed as "key shark species".

Despite some recent analysis of hammerhead catches in New Zealand, currently little is known about their distribution and abundance in New Zealand fishery waters, particularly, for adults, and the extent to which they are linked to the wider Pacific Ocean stock. Francis (2010) concluded that juvenile hammerhead sharks of several age classes are common in shallow coastal waters around the northern North Island, and it appears that these waters are important hammerhead nursery areas. Important areas include the Hauraki Gulf, Firth of Thames, eastern Bay of Plenty and 90-Mile Beach, but juveniles are widely distributed north of New Plymouth and Napier. Other areas are probably also important (e.g. Kaipara and Manukau Harbours) but data to confirm this are lacking. Aerial survey observations indicate that juveniles of 150–200 cm TL (total length) are abundant off the west coast of North Island.

Large mature adults are uncommon in coastal waters, suggesting that they may inhabit oceanic waters or regions to the north of New Zealand. Virtually nothing is known about the distribution and abundance of adult hammerheads, or whether they migrate seasonally within New Zealand or between New Zealand and other regions. However, females appear to move into shallow coastal waters to give birth to their young. This research is necessary because:

- Additional information on hammerhead sharks could contribute to implementation of WCPFC's shark research plan;
- These species are an important part of the ecosystem; and
- The project contributes to achieving Objective 6 of the National Fisheries Plan for Highly Migratory Species, specifically operational objective 6.4 for large pelagic species (maintaining the reproductive capacity of HMS shark populations), as well as Objective 8.1of the national plan (identifying and, where appropriate, protecting habitats of particular significance to HMS).

Within this context, this research project is considered a **high** priority.

*Objective 1*
The characterisation will update the work undertaken by Francis (2010) and gather and collate all additional information available from the commercial (catch and observer data) and recreational fisheries in New Zealand.

*Objective 2*
It should be noted that conventional tagging is unlikely to yield informative results and electronic methods are envisaged. The research provider should include in the tender information on what type of tagging system(s) they intend to use for adults, sub-adults and juveniles and why; and the number of each needed to be tagged and released to determine movement patterns of this species, assessing local distributions and links to the wider Pacific. It is likely that juveniles, sub-adults and adults will all need to get tagged and released, a table specifying the numbers of each and the associated costs is required in the tender. It would be advantageous to provide a range of alternative options in the schedule 1 e.g. 5 juveniles + 5 sub-adults + 5 adults =$x; 10 juveniles + 10 sub-adults + 10 adults =$y etc.

Note a sub-sample (10-15 fish) should be tagged and released in the first year. The results from those releases will be presented to the Working Group for review and, pending the success of that programme, a decision will be made whether or not to expand the programme.

**References**
Francis, M. 2010. Review of research and observer data on hammerhead sharks (*Sphyrna zygaena*). *Unpublished Final Research Report, Ministry of Fisheries, New Zealand.* 8pp.

**Cost Recovery Information:**
This project is 100% Crown funded.
The project is estimated to cost up to $50,000.

**Project:** Evaluation of the distribution and abundance of skipjack tuna in New Zealand waters
**Project Code:** HMS2012-03
**Start Date:** 1 August 2012
**Completion Date:** 30 September 2013
**Vessel Use:** None

**Management Objective**

Objective 1 - Promote a viable and profitable tuna fishery in New Zealand;
Objective 6 - Maintain a sustainable fishery for HMS within environmental standards
Objective 6.6 - Promote sustainable management of skipjack in the Western and Central Pacific including allocation of rights in the fishery.

**Overall Objectives:**

To determine the abundance and distribution of skipjack tuna in New Zealand fishery waters

**Specific Objectives:**

1. Design a fishery independent aerial survey to assess the spatial extent and abundance of skipjack tuna in New Zealand.
2. To determine the relative abundance and distribution of skipjack tuna in New Zealand fishery waters.
3. To estimate the skipjack tuna biomass within New Zealand fishery waters.
4. To assess factors affecting the distribution and abundance of skipjack tuna in New Zealand fishery waters.

**Note:** Objectives 2-4 will only proceed if the Highly Migratory Species Working Group approves the sample design.

**Rationale:**

*General*

Management of skipjack tuna throughout the Western and Central Pacific Ocean (WCPO) is the responsibility of the Western and Central Pacific Fisheries Commission (WCPFC). Under this regional convention New Zealand is responsible for ensuring that the management measures applied within New Zealand fisheries waters are compatible with those adopted by the Commission. Currently there are no catch limits set on WCPO skipjack catches but, in future, it is likely that the Commission will move to allocate catches of this stock to Members. In order for New Zealand to declare an appropriate quantum of the skipjack tuna for our allocation we need to assess the size of the stock in New Zealand fishery waters.

The domestic purse-seine fishery is supported by spotter pilots who fly light aircraft to search for schools of pelagic fish. Aerial sightings data are routinely collected from individual spotter flights. For each day, the spotter pilot records the duration spent searching within each half degree of latitude and longitude and the number of schools and estimated tonnage of the main pelagic fish species (including skipjack tuna) sighted. Since 1998, individual sightings have been recorded at a finer spatial resolution (usually to the nearest minute).

Langley (2010) undertook an analysis of the New Zealand skipjack tuna fishery and used the aerial sightings data to assess skipjack abundance. In general, consecutive daily aerial sightings estimates of the total skipjack tonnage (by fishery area) were relatively consistent and were well correlated with the daily catch. On that basis, these data appear to provide a useful indicator of the relative abundance of skipjack tuna among fishery areas and fishing seasons. However, given the high variability in the availability of skipjack tuna within New Zealand waters, it is very unlikely that such indices would be representative of the abundance of the wider skipjack tuna stock (or unit of the stock). Other problems with the data set are that the aerial flights are directed by the companies and only target species are recorded so on some days skipjack tuna would be ignored; furthermore, the flights are directed based on previous knowledge of where schools

of fish were sighted on previous days' flights and proximity to the fleet. As a result of this, if an assessment of skipjack abundance in New Zealand is required, a fishery independent survey would be most appropriate.

Doonan and Taylor (*in press*) undertook an assessment of the potential methodologies and costs and effort involved in undertaking a fishery independent aerial survey of surface dwelling pelagic species in the Bay of Plenty. This work proposed that in order to get acceptable CV for assessing biomass, 10 or more replicates of 7 transects would be required for annual biomass estimates. A scientific aerial survey in the Great Australian Bight is undertaken annually for southern bluefin tuna and it is one of the few fishery-independent indices available for monitoring that stock (Cowling *et al*. 2002; Eveson *et al*. 2006, 2009, 2011). That survey has 15 north south transect lines covering seven degrees of longitude that are surveyed seven times over a three month period.

This research is necessary because:

- New Zealand has international obligations to report annually on our tuna fisheries;
- These species support valuable commercial fisheries;
- The project contributes to achieving Objectives 1 and 6 of the National Fisheries Plan for Highly Migratory Species (Promote a viable and profitable tuna fishery in New Zealand; Maintain a sustainable fishery for HMS within environmental standards); and
- The project has been identified as integral to Medium Term Research Plan for Highly Migratory Species.

Within this context, this research project is considered a **high** priority.

*Objective 1, 2, 3 and 4*
Under these objectives the research provider is expected to undertake a fishery independent aerial survey to assess the spatial extent and abundance of skipjack tuna in New Zealand. The intent is for the survey to cover the main fishing areas outlined in Langley (2011) and should record skipjack tuna school abundance and size. The survey design will be presented to the Highly Migratory Species working group for approval prior to the survey beginning. Simultaneous measurements of other relevant variables such as *Chlorophyll* and sea surface temperature must be recorded either directly or obtained from remote sensing systems for further analysis, to assess factors effecting the distribution of the stock in New Zealand fishery waters.

It is expected that all surveys will be digitally recorded so that the abundance estimate and species identification can be made post flight. This will allow for more detailed and precise recording of biomass, greater replicability of the survey and training of observers. Note that digital video/photography that continuously records (and stamps the footage with) time, date, height, latitude and longitude would be a minimum requirement.

**References**

Doonan and Taylor (in press). A multi-purpose aerial method for surveying inshore pelagic finfish species.

Cowling A., Hobday, A., and Gunn, J. 2002. Development of a fishery independent index of abundance for juvenile southern bluefin tuna and improvement of the index through integration of environmental, archival tag and aerial survey data. FRDC Final Report 96/111 and 99/105.

Eveson, P., Bravington, M. and Farley, J. 2006. The aerial survey index of abundance: updated analysis methods and results. CCSBT-ESC/0609/16.

Eveson, P., Farley, J., and Bravington, M. 2009. The aerial survey index of abundance: updated analysis methods and results. CCSBT-ESC/0909/12.

Eveson, P., Farley, J., and Bravington, M. 2010. The aerial survey index of abundance: updated analysis methods and results for the 2009/10 fishing season. CCSBT-ESC/1009/14.

Langley, A. 2011. Characterisation of the New Zealand fisheries for skipjack tuna *Katsuwonus pelamis* from 2000 to 2009. Unpublished New Zealand Fisheries Assessment Report 2011/43. Available from the Ministry of Fisheries New Zealand.

**Cost Recovery Information:**
The percentage allocation for this project will be attributed to the following Fishstocks according to rule 9 (1) of the Fisheries (Cost Recovery) Rules 2001:

- SKJ 1 x% Crown funding y%.

The project is estimated to cost $200,000–500,000

**Project:** Rapid assessment of iwi fish utilisation
**Project Code:** HMS2012-04
**Start Date:** 1 August 2012
**Completion Date:** 30 September 2013

**Management Objective**
Take into account the unique differences between individual iwi and hapū in management of New Zealand fish stocks

**Overall Objectives:**
Undertake a preliminary investigation into how best to collect information that will allow the Ministry to understand the unique differences between individual iwi and hapū in the management of HMS.
**Specific Objectives:**
1. Identify what fish and shellfish species are important to iwi and hapū for commercial and non-commercial purposes and an understanding of why these species are important.
2. Identify relationships of specific iwi and hapū with highly migratory, inshore, shellfish and deepwater species as well as identifying species of importance common to all iwi within a region.
3. Develop a guideline that outlines how to collect the information regionally and the best approach for a project that enables all iwi to participate in the future.

**Note:**
This project is intended to be undertaken as a test case in two regions with willing iwi participants. Once this work is complete, the second stage will enable iwi elsewhere to undertake similar work with a view to compiling nationwide analysis. It is anticipated that the science provider will work closely with iwi to develop an appropriate methodology and where iwi are interested support them to complete the information collection. The science provider will then complete the analysis to assist with developing the guidelines and in making recommendation for future work. The results and electronic copies of the data will be provided to both the Ministry, and the iwi from which the information was gathered. The information submitted to the Ministry will be held in confidence by the Ministry.

**Rationale:**
*General*
The highly migratory species (HMS) fisheries plan sets an objective of enhancing Māori interests (including customary, commercial, recreational and environmental) in HMS fisheries. In particular Objective 5.1 intends to identify specific relationships of iwi and hapū with HMS both through a specific project in the short-term and through iwi fisheries plans in the longer-term.

Specific Treaty obligations contained in the Fisheries Act provide for the commercial elements of the settlement (through 20% of quota as new species enter the QMS) and the non-commercial elements (through regulations providing for customary use). The more general obligation to provide for tangata whenua participation and have particular regard to Kaitiakitanga requires the development of processes which allow:

a. tangata whenua to express Kaitiakitanga, particularly as it is related to fisheries management, and then

b. tangata whenua expressions of Kaitiakitanga to be given particular regard when determining what issues should be on the fisheries management agenda, and what the response to those issues should be.

The Ministry has agreed to support tangata whenua to develop iwi fisheries plans as a vehicle for them to express their Kaitiakitanga aspirations and objectives relating to fisheries (the first point above). These iwi fisheries plans would then be given regard in fisheries management decisions (the second point). This

research is aimed at quantifying and qualifying use and value of aquatic resources by iwi as a first step towards facilitating this process.

This research is necessary because:

- The project contributes to achieving Objective 5 of the National Fisheries Plan for Highly Migratory Species

*Objectives 1, 2 and 3*

Under these objectives the research provider would be expected to work with Te Ohu Kaimoana and willing iwi to develop a questionnaire to collect all the information required under Objectives 1 and 2. The draft questionnaire and approach will be presented to the relevant Working Group(s) and once approved the research provider would be expected to work with or support iwi to undertake interviews to determine which species are important to the iwi, identify what the top species of importance are and identify which species are taonga and why they are classified as such. Using this information the research provider is expected to identify the relationships of specific iwi and hapū with highly migratory, inshore, shellfish and deepwater species as well as identifying species of importance common to all iwi within the region under investigation.

Using the experience gained through this process, the research provider must make recommendations on the best approach to enable all iwi to participate throughout New Zealand in the future.

**Cost Recovery Information:**

This project is 100% Crown funded.
The project is estimated to cost $50,000–$100,000.

**Project:** Longline seabird mitigation – trials of line weighting
**Project Code:** HMS2012-05
**Start Date:** 1 August 2012
**Completion Date:** 30 September 2013
**Vessel Use:** As required

**Management objective**

Objective 7.2 – Minimise unwanted bycatch and maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach
Objective 7.6 – Ensure through regular review and update that effective mitigation measures are in place

**Overall Objectives:**

1. To test the safe use and effectiveness of line weighting as a seabird mitigation tool.

**Specific Objectives:**

1. To test the safe use and effectiveness of line weighting using "Safe Leads" as a seabird mitigation tool.
2. Assess the difference in catch rates of target and bycatch species between snoods with and without Safe Leads?

**Rationale:**

*General*

While baited hooks may potentially be accessible to birds for the duration of the soak period of some surface longline fisheries. It is widely recognized that increasing the sink rate of the baited hook is one of the most effective means of reducing seabird bycatch in longline fisheries.

Line weighting in pelagic longline fisheries has involved the use of weighted swivels. However, many fishers are reluctant to use weighted swivels due to safety concerns. Conventional leaded swivels can be dangerous when the swivels fly-back at the vessel after a bite-off event or when the hook is pulled from the fish's mouth.

In response to these safety concerns, Fishtek (U.K) and BirdLife International developed the "Safe Lead". The Safe Lead rather than being crimped into the line, slides along the monofilament down or off the line in the event of a bite-off. Thereby reducing the likelihood of injury to the crew. These have been tested and the findings of research into the use of Safe Leans was that both at-sea trials in South Africa and on-shore trials in Australia indicated that Safe Leads significantly reduced the potential danger to crew posed by fly-back events.

*Objectives 1 and 2*

Identify vessels that are willing to participate in the experiment. The snoods will need to be made up with the Safe Leads in place and the crew briefed on how to re-set them prior o re-deployment. Ideally a vessel that sets two lines should be chosen one with standard snoods and the other with Safe Leads. If a single line is used then half the snoods should be "standard" and the other half rigged with Safe Leads. It would be preferable to run the experiment off two or more vessels one that uses weighted swivels as standard gear and the other that does not.

Observers will be expected to collect and record all the catch information on target and bycatch landed and provide detailed descriptions of any bite-off and fly-back events. The crew and observers will need to be provided with safety gear such as helmets and visors.

**Cost Recovery Information:**

This project is 100% crown funded.
The project is estimated to cost up to $50,000.

**Project:** Evaluation of ecotrophic and environmental factors affecting the distribution and abundance of highly migratory species in NZ waters

**Project Code:** ZBD2011-10

**Start Date:** 1 May 2012

**Completion Date:** 30 November 2013

**Vessel Use:** None

**Management Objective**

Objective 7 of the HMS Fisheries plan –Implement an ecosystem approach to fisheries management, taking into account associated and dependent species

Objective 8.1 of the HMS Fisheries plan –Identify and where appropriate protect habitats of particular significance to HMS, especially within New Zealand waters

**Overall Objectives:**

Fisheries 2030 Environmental Outcome: "biodiversity and the function of ecological systems, including trophic linkages are conserved"

**Specific Objectives:**

1. Assess the dietary composition of highly migratory teleosts and elasmobranches using the data collected by the Observer Services.

2. Assess spatio-temporal patterns in dietary composition and changes in food utilisation with fish size.

3. Identify biological and physical environmental forces that can be used to explain highly migratory species distribution.

4. *Develop an ecosystem model for the pelagic environment in New Zealand waters.*

**Note**: Objective 4 is contingent on the success of objectives 1-3. The BRAG and HMS Working Groups will, after assessing the preliminary analysis of Objectives 1-3, determine whether or not to proceed with Objective 4. Proposals should therefore cost Objective 4 separately in Schedule 1**.**

**REPORTING REQUIREMENTS:**

1. To submit to MPI Contract Monitoring a Research Progress Report for Objectives 1-3 as specified in Research Reporting form 4 by 30 March 2013. Electronic and hard copy formats of reports are required.

2. To present the report in 1 above to meetings of the HMS Working Group in April 2013 in Wellington and/or Auckland. Presentations to more than one meeting may be required.

3. To submit to MPI Contract Monitoring a Research Progress Report for Objectives 4 as specified in Research Reporting form 4 by 30 August 2013. Electronic and hard copy formats of reports are required.

4. To present the report in 3 above to meetings of the HMS Working Group in September 2013 in Wellington and/or Auckland. Presentations to more than one meeting may be required.

5. To submit to the Chief Scientist MPI a Final Research Report as specified in Research Reporting form 5 or a draft Fishery Assessment Research Document as specified in Research Reporting form 7 by 30 September 2013.

6. To submit to the Chief Scientist, MPI a draft revised Working Group Report as specified in Fishery Assessment Document form 2 for all species concerned by 30 September 2013.

*Project Update Reports*
No Project Update Reports are required for this project.

*Work In Progress Reports*

Monthly Work In Progress Reporting is required for this project in accordance with the Conducting Research with the Ministry document.

*Data Reporting*

To submit any data generated, collected or modified during the course of this project to the Research Data Manager, MPI by 31 October 2012.

**Rationale:**
*General*
The New Zealand highly migratory species fisheries plan has identified the importance of using an ecosystem approach to fisheries management. In particular Objective 7 of the fisheries plan aims to implement an ecosystem approach to fisheries management and aims to maintain food chain relationships and conserve trophic linkages.

The first step in attempting to maintain food chain relationships and conserve trophic linkages is determining what they are. On longline vessels the observers collect detailed data on all fish and non-fish catch. Length or weight is collected for all specimens and most have additional data collected, e.g. sex, maturity stage, and stomach contents. To date we have recorded the stomach content information from 84,298 highly migratory fish (38,498 tuna; 5,049 billfish; 26,317 sharks and 14,434 other species). These data are of varying quality and are mostly in the form of presence absence data, but most are geo-referenced and they should be sufficient to address Objectives 1 and 2. Remote sensing data assessing ocean colour and sea surface temperature along with any other relevant information that is collected remotely and MPI catch information should also be combined with these data to increase our understanding of the inter species relationships, the physical forces driving them and the fishery that is acting on these resources.
This research is necessary because:

- New Zealand has international obligations to report annually on our tuna fisheries;
- These species support valuable commercial fisheries;
- The project contributes to achieving Objective 7 of the National Fisheries Plan for Highly Migratory Species (Implement an ecosystem approach to fisheries management, taking into account associated and dependent species); and
- The project has been identified as integral to the 5-year Research Plan for HMS.

Within this context, this research project is considered a high priority.

The project also meets Theme the Biodiversity Medium Term Research Programme.

*Objective 1, 2, 3 and 4*
Under these objectives the research provider is required to analyse the data collected by the Observer Services and assess the spatio-temporal trends in predator-prey relationships. This must include seasonal, inter annual and spatial trends in dietary composition of the highly migratory species and how these change as the fish grow. To the extent possible this should include information on depth of capture and summarise published information on depth information from fish that have been tagged and released with data logging tags.

Noting the limitations of the data collected by the observers the research provider must provide recommendations on how to improve any aspects of data recording that should be improved.

Using the information above and available remote sensing or other information as well as the catch information from the fishery the research provider will be required to develop an ecosystem model for the pelagic environment in New Zealand waters to integrate the predator-prey relationships and physical environmental forces that influence them.

**Cost Recovery Information:**

This project is 100% Crown funded.

The project is estimated to cost $50,000–$100,000.

## Appendix 4: planned observer coverage by fishery

**Table 2: Planned observer sea days planned for 2012/13 fishing year. These allocations include DOC days.**

| | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Domestic tuna longline - EC STN | 78 | 14 | | | | | | | | | | 65 | 156 |
| Domestic tuna longline - WC STN | | | | | | | | | | 15 | 12 | 9 | 36 |
| Domestic tuna longline - EC BIG/SWO | | 42 | 12 | 10 | 10 | 12 | 12 | 16 | 36 | 25 | | | 175 |
| Domestic tuna longline - WC BIG/SWO | | | | | | | | | 7 | 4 | | | 11 |
| Domestic tuna longline - ET/ WCPFC | | | | | | | | | | 10 | | | 10 |
| Tuna Charter (STN) | 66 | | | | | | | | | 120 | 124 | 120 | 430 |
| Albacore troll | | | | | | 0 | 14 | 28 | 11 | 0 | | | 53 |
| (no of vessels) | | | | | | 0 | 2 | 4 | 2 | 0 | | | |
| Domestic purse seine - SKJ | | | | | | | 20 | 20 | 16 | | | | 56 |
| Domestic purse seine - SKJ Super Seiner | | | | | | | | | 24 | | | | 24 |