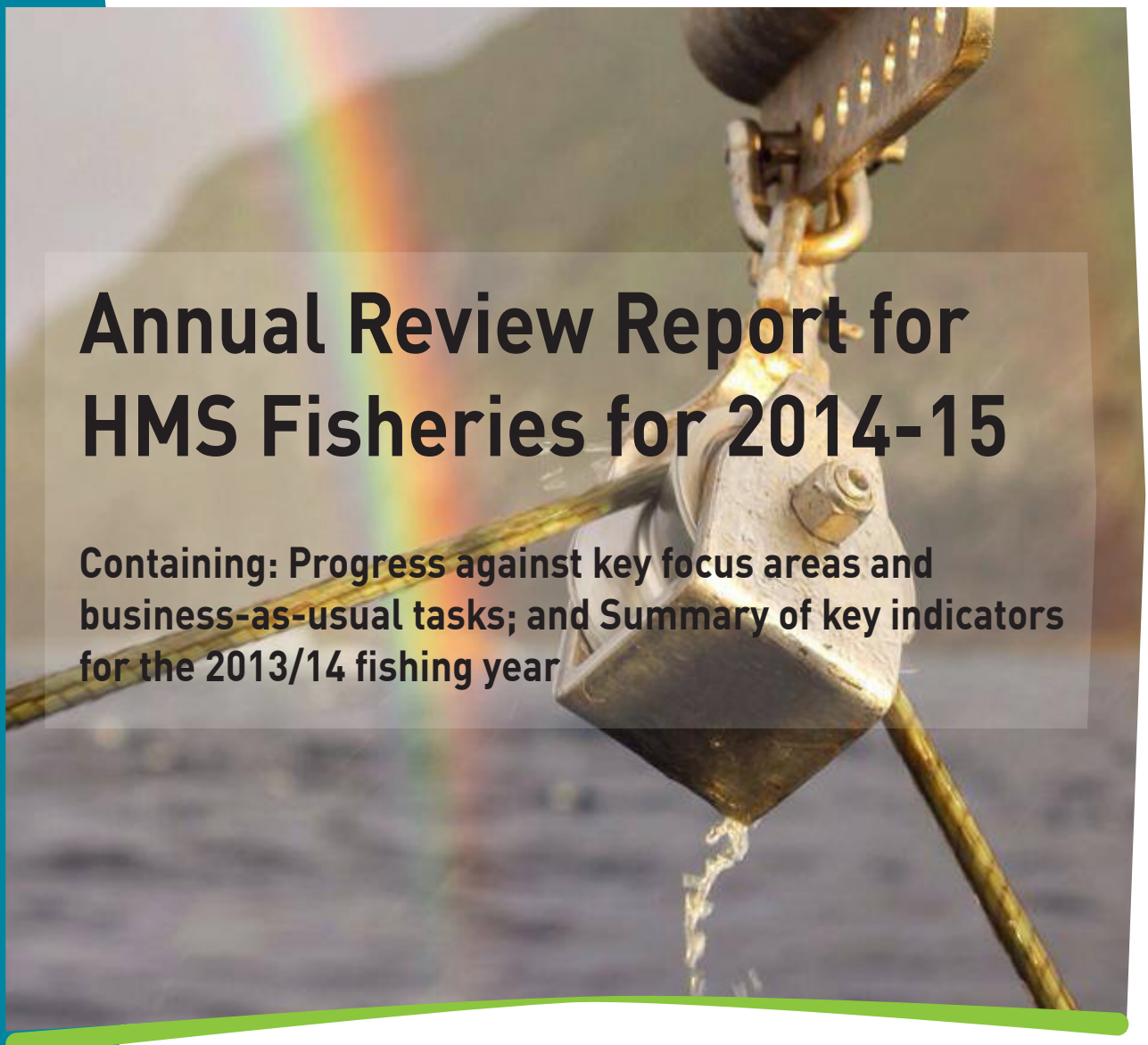
Ministry for Primary Industries
Manatū Ahu Matua



Annual Review Report for HMS Fisheries for 2014-15

Containing: Progress against key focus areas and business-as-usual tasks; and Summary of key indicators for the 2013/14 fishing year

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Prepared by the Highly Migratory Species Team
Ministry for Primary Industries

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Growing and Protecting New Zealand

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Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526
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Part one: Progress against key focus areas and business as usual tasks (powerpoint slides)

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Annual Review Report for HMS fisheries for 2014-15

Part One: progress against key focus areas and business as usual tasks

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KEY FOCUS AREAS (KFAS)

KFA 1 - Manage interactions of HMS fisheries with seabirds

- Updating SLL code of practice
  - Industry-led initiative that is on-going
- Improve compliance with existing mitigation measures
  - On-going focus
  - Direct follow-up with operators following observer reports
- Developing appropriate reduction targets:
  - First meeting of the capture rate reduction target working group convened May 2015 as initial step towards developing targets.

KFA 1 - Manage interactions of HMS fisheries with seabirds

- Analyse and communicate results of line weighting trial
  - DOC report of hook pod trial is available on the DOC website (under conservation services programme / reports)
  - DOC/MPI seabird liaison officers will be able to communicate results to fishers. Two liaison officers will be working in FMA 1 to help fishers reduce seabird captures (with a focus on black petrel and flesh-footed shearwaters)
- Discuss seabird mitigation at SLL workshops
  - Standing agenda item

KFA 1 - Manage interactions of HMS fisheries with seabirds

- Improve spatial and fleet representativeness of observer coverage
  - Liaised with Observer Services and DoC at start of fishing year to allocate resources based on effort in previous fishing year.
  - Discussed fleet representativeness during recent SLL workshop
- Contribute to international management of seabird bycatch
  - Attended CCSBT workshop on effectiveness of mitigation
  - Presented latest risk assessment results at CCSBT and
  - Improved future reporting of seabird mitigation under CCSBT

KFA 2 - Manage the interaction of HMS fisheries with sharks

- Shark finning ban came into place on 1 October 2014
- Associated education and work with fishers to ensure they are aware of rules
- Qualitative risk assessment took place in Nov 2014 and report is being finalised

KFA 2 - Manage the interaction of HMS fisheries with sharks

- Research into mitigating catches of sharks in SLL fisheries reported back (http://fs.fish.govt.nz/Page.aspx?pk=113&dk=23775).
- Indicator analysis for blue, mako and porbeagle sharks reported back to HMS working group Oct 2014
- Worked with DoC and Customs to implement decision of CITES to list porbeagle and hammerhead sharks

KFA 3 – Improve understanding of the impact of out-of zone fisheries on the availability of HMS in New Zealand

- NZ support (among others) to quantify long term risks if spatial dynamics are not factored into management.
- New Zealand continues to advocate for consideration of spatial dynamics in research & management, e.g. when considering adoption of target reference points and harvest control rules

KFA 3 – Improve understanding of the impact of out-of zone fisheries on the availability of HMS in New Zealand

Research Update

- Research presented at scientific committee in August 2014:

1) empirical approach to determine how abundance and spatial distribution are related (period of >50 yrs)

  - seven key tunas and billfish (including YFN and striped marlin)

2) created a simulation model of a spatially structured population to investigate the mechanisms that could drive the patterns observed in the empirical data

KFA 3 – Improve understanding of the impact of out-of zone fisheries on the availability of HMS in New Zealand

- Found positive relationship between abundance and range for all species
- Simulation modelling highlighted that local densities of exploited mobile populations may not be related to local fishing mortalities when habitat quality varies within the stock range
- link between pop.n abundance and range size is accentuated when individuals preferentially migrate to regions of high habitat quality within range, especially if these areas are under heavier fishing pressure than habitats of lesser quality

KFA 3 – Improve understanding of the impact of out-of zone fisheries on the availability of HMS in New Zealand

Management Implications

- Status of stocks often managed by estimating/modelling current population dynamics, deriving indicators, and comparing these to acceptable thresholds e.g. FMSY or spawning biomass at MSY
- Declines in range concurrent with biomass could bias estimates of abundance, as CPUE indices implicitly assume that spatial distribution of stocks is constant
- Differential affect on fleets depending on ability to track stocks and legal access to various parts of the species distribution

KFA 4 – Revise and update the National Fisheries Plan for Highly Migratory Species

- Initial discussion at our previous meeting
- Review of *Fisheries 2030* currently underway
- Action carried forward to coming year, so that high-level objectives are consistent with organisation-level strategy

BUSINESS AS USUAL TASKS 2014/15

BAU 1 – Review catch limits and management settings as required

- No immediate requirement to review TAC from outcomes of CCSBT
- Potential reviews for 2015 included TOR, BIG, and YFN but discussions with stakeholders showed little support
- No immediate requirement to amend regulations

BAU 2 - Contribute to international processes including meetings of CCSBT and WCPFC

- Scientific Committee
  - Stock Assessment Year
    - Small improvement from previous results (9% of unfished spawning stock biomass)
  - Mixed results from indicators
    - Aerial Survey ⬆
    - Japanese CPUE ⬆
    - NZ CPUE ⬇
    - Indonesia mean length – Uncertain
  - Concerns over uncertainty from unallocated mortality but endorsed results from the MP

BAU 2 - CCSBT Updates

- Compliance Committee
  - Australian delays in the implementation of stereo-video monitoring continue to be a source of friction
  - Australia, Indonesia and South Africa exceeded country allocations
  - NZ strong compliance record
  - Difficulties in obtaining access to data

BAU 2 - CCSBT Updates

- Commission Meeting
  - Confirmation of 2016 and 2017 TAC
  - Carry-forward now allowed between 3-year quota blocks (i.e. 2014-15)
  - Common definition of “attributable catch” agreed along with implementation timeline.
  - EU likely to seek full membership in 2015

BAU 2 - CCSBT Updates

2014 Member Allocations	
Japan	3,361t
Australia	5,151t
New Zealand	**910t**
Korea	1,036t
Taiwan	1,036t
Indonesia	750t
2014 Cooperating Non-Member Allocations	
South Africa	150t
Philippines	45t
European Union	10t

2015 Member Allocations	
Japan	4,737t
Australia	5,665t
New Zealand	**1,000t**
Korea	1,140t
Taiwan	1,140t
Indonesia	750t
2015 Cooperating Non-Member Allocations	
South Africa	150t
Philippines	45t
European Union	10t

BAU 2 – WCPFC updates

WCPFC – Scientific Committee (SC10); 6-14th Aug

- New Zealand co-convened Ecosystem & Bycatch Theme
- Three new stock assessments for tropical tunas (**BIG, YFN, SKJ**) (see Part Two of this review report for details)
- Updated **Pacific Bluefin** assessment agreed to and more rigorous management recommendation to Commission

BAU 2 – Contribute to International processes including meetings of CCSBT and WCPFC

WCPFC – SC10 continued

- Research underway for **SWO** to address uncertainty in accuracy of growth & maturity parameters in assessment
- **North Pacific blue shark** assessment repeated and accepted but highly uncertain; precautionary approach, need more data collection, monitoring and overall strengthening of shark management
- Update to the **Shark Research Plan** – revise indicator analysis, suggest candidates for stock assessments, mitigation research, desktop project fin: carcass ratios
- **Mgmt issues** focussed on setting of target reference points and the risk of breaching limit reference points

BAU 2- WCPFC updates

Future planned assessments- WCPFC

Species	Last assessment	Area	2014	2015	2016	2017
Bigeye tuna	2011	WCPO	X			
		Pacific-wide		X		
Skipjack tuna	2011	WCPO	X			
Yellowfin tuna	2011	WCPO	X			
Albacore tuna	2012	South Pacific		X		
Striped marlin	2012	SW Pacific				X
Swordfish	2008	SW Pacific				
Silky shark	2012	WCPO				
Oceanic whitetip shark	2012	WCPO		X		
Blue shark		North Pacific	X			
Mako shark		South Pacific	X[1]			

[1] Uncertain whether this will occur in 2014, but work on 'general' shark mitigation and reference points is likely.

BAU 2 – WCPFC updates

WCPFC10 (01-05 Dec) –

- Disappointing entrenchment of parties with respect to the management of skipjack, yellowfin and bigeye
- Significant advances in some other areas (shark management, compliance monitoring)

BAU 3- Monitor commercial and non-commercial fisheries for HMS

- Improved levels of observer coverage from previous year
- Continued monitoring of recreational fisheries including continued game fish tagging programme (see research plan)

BAU 4 – HMS Compliance

- Domestic Inspections

SLL/Troll Inspections		
	Number of Inspections	Breaches detected
At-sea	6	2
Monitored unloads	12	2
Vessel (port)	90	15
Other	113	1

Purse Seine Inspections		
	Number of Inspections	Breaches detected
At-sea	1	0
Monitored unloads	1	0
Vessel (port)	2	0
Other	4	0

LFR Inspections		
	Number of Inspections	Breaches detected
LFR	50	5

BAU 4 – HMS Compliance

- Activities on the high seas: no out of zone patrol this year

BAU 5 – Implement the HMS research plan

Project code	Title
	New Projects
ALB2015-01	Albacore catch sampling
HMS2015-01	Age, growth and reproduction of HMS sharks – blue sharks
SKJ2015-01	Skipjack fishery characterisation
	Ongoing projects
HMS2013-01	Data reports for New Zealand HMS fisheries for national and international obligations
HMS2014-01	Commercial catch sampling for highly migratory species
HMS2014-02	Age, growth and reproduction of mako sharks
HMS2014-05	Stable isotope analysis of highly migratory species to assess trophic linkages and spatial and temporal movement trends of HMS sharks
STM2013-01	Multi-year stock monitoring of striped marlin including logbook programme implementation
STN2013-01	Catch-at-age of Southern bluefin tuna.
TAG2013-01	Management of data from the gamefish tag recapture programme

BAU 6 – Support environmental certification for the albacore fishery

- MSC certification since16th May 2011
- Annual Audits; most recently 15th June 2015
- International processes impede ability to progress on certain conditions to meet ongoing certification
- Tokelau Arrangement and CMM for Harvest Strategy for key tuna species (ALB as priority)
- Industry are assessing their next steps and whether they will apply for re-certification

BAU 7- Contribute to implementation of the Ministry's MOU on Pacific Capacity

- Ongoing work as advice provider to the Administrator of Tokelau
- 2 x Workshops with Tokelau staff
- Ongoing engagement at regional meetings
- Support to Cook Islands, Niue, Samoa
- Joint planning workshop with the Secretariat of the Pacific Community (SPC) and Forum Fisheries Agency (FFA) for co-operative planning and alignment of strategy for delivering capacity in the Pacific
- New team member in 2015 to focus on inshore capacity work
- Participated in Future of Inshore / Coastal Fisheries Management workshop and Heads of Fisheries meeting

BAU 8 – Engage with fisheries stakeholders

- 2 x longline workshops in 2014 (Mar & Sep) and one in Apr 2015
- Fish plan advisory group meetings November 2014 and May 2015
- WCPFC11 stakeholder meeting November 2014
- CCSBT stakeholder meeting September 2014
- Ongoing targeted engagement as required

Part Two: Summary of key indicators for the 2013-14 fishing year

Contents

1 Stock status

Table 1: Summary stock status information for HMS fisheries

Stock	Last Assessment	Overfishing occurring	Stock overfished
Bigeye tuna	2014	Y	Y
Yellowfin tuna	2014	N	N
Skipjack tuna	2014	N	N
Albacore tuna	2012	N	N
Pacific Bluefin (NC)	2014	Y	Y
Southern Bluefin tuna	2014	N	Y
Swordfish	2013	N	N
Striped Marlin	2012	N	N

*blue shaded cells indicate a change i.e. updated stock assessment and change to overfishing or overfished

1.1 HISTORICAL STOCK STATUS TRAJECTORY AND TUNA STOCKS

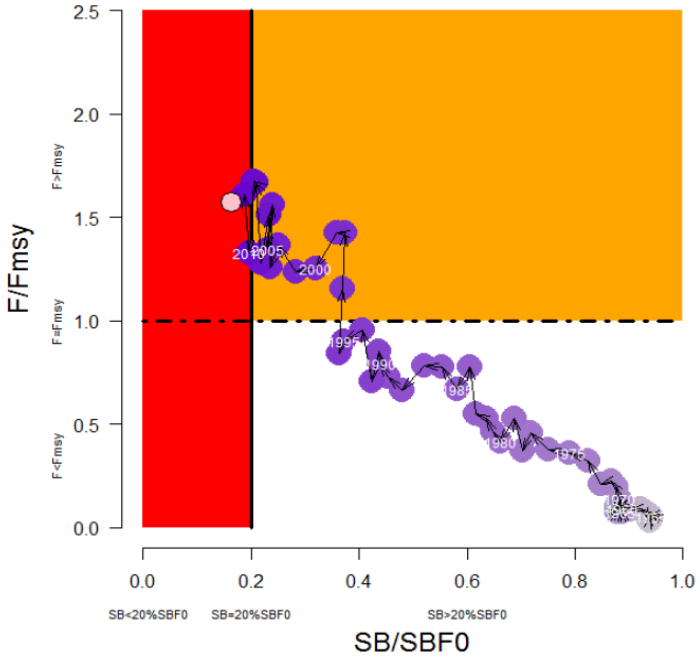
1.1.1 Tropical tuna stock assessment updates

All assessments except southern bluefin tuna are presented to the Scientific Committee of the Western and Central Pacific Fisheries Commission (WCPFC); the dates of the most recent assessment for each key species is shown in the table above. In 2014, stock assessments for the three tropical tunas (BIG, YFN and SKJ) were updated. These were the first tropical tuna assessments undertaken since the adoption of a Limit Reference Point (LRP) for the key tuna species of 20% $SB/SB_{F=0}$; for this reason a slightly modified KOBE-style plot was agreed and used in these assessments that illustrates stock status (fished/not overfished) on the χ-axis using the new biomass indicator $SB/SB_{F=0}$. In 2015 there will be a Pacific-wide (East-West) stock assessment for bigeye and an update to the south Pacific albacore stock assessment, both due for presentation to the WCPFC scientific committee in August 2015.

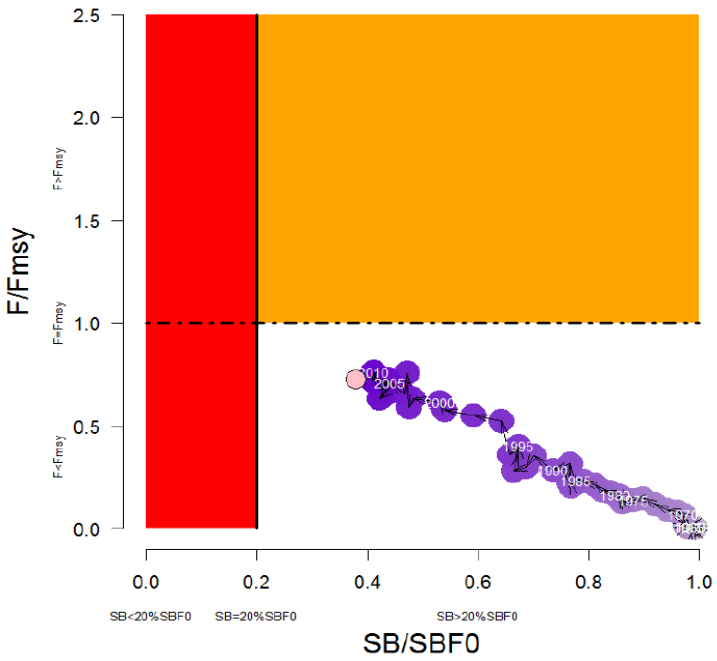
Southern bluefin tuna stock assessments are carried out by the scientific committee of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). The most recent assessment was presented at CCSBT Extended Scientific Committee in September 2014.

1.2 Historical stock status trajectory for tuna stocks

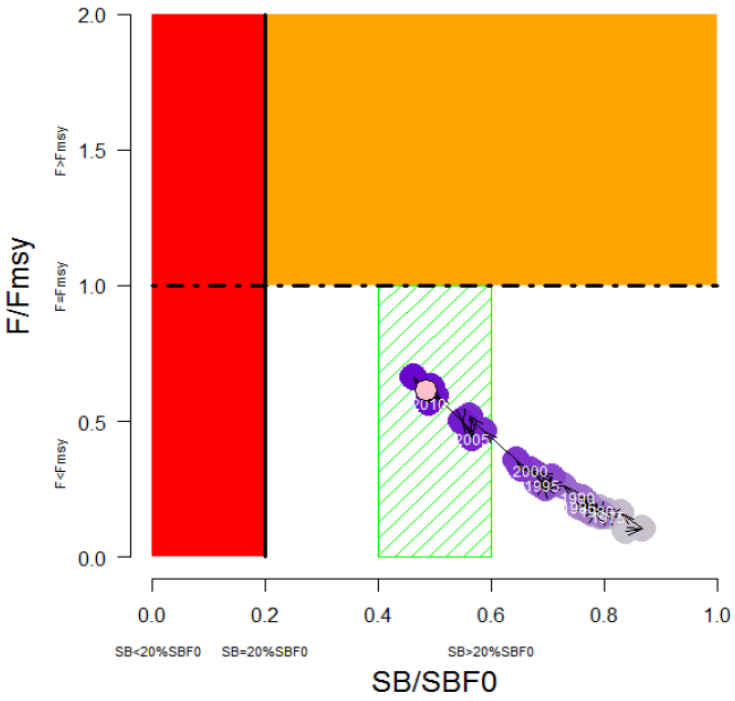
1.2.1 Bigeye tuna



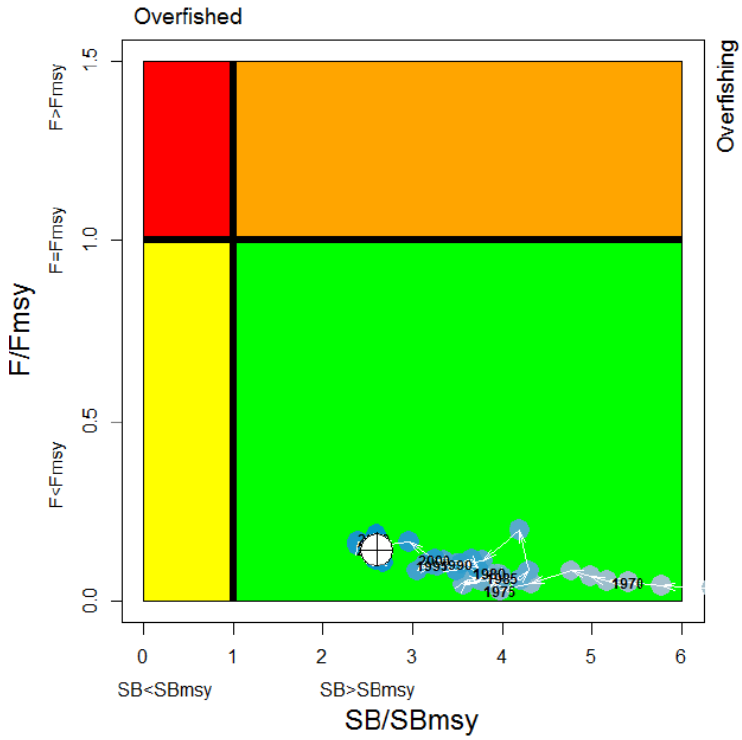
1.2.2 Yellowfin



1.2.3 Skipjack



1.2.4 Albacore

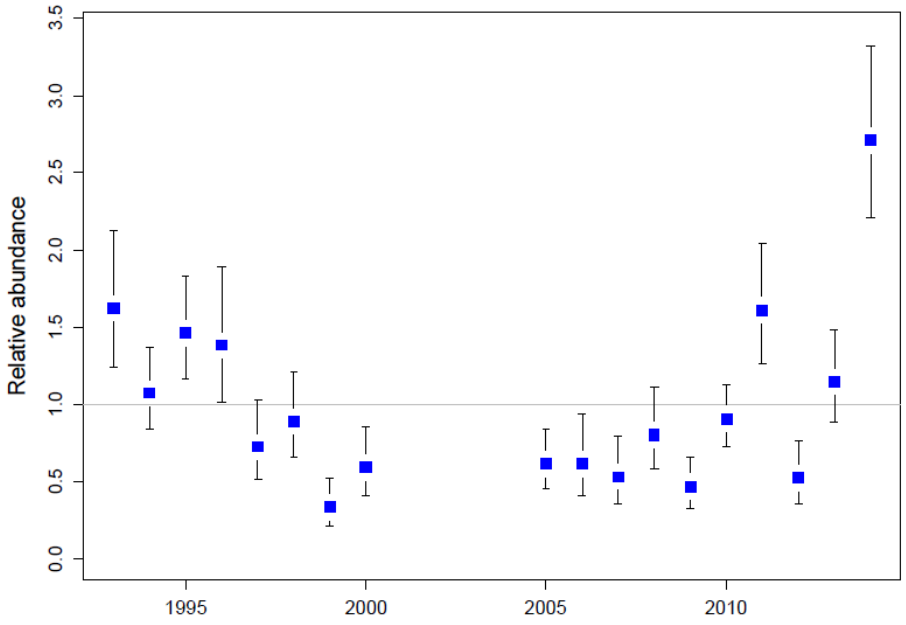


1.2.5 Southern Bluefin Tuna

- Stock assessment done in 2014; previous assessment 2011
- Stock remains at a very low state
- Biomass of fish aged ten and over (B10+) relative to unfished biomass is estimated at 7%, which is up from 5% reported in 2011 assessment
- Spawning stock status has improved - currently benefitting from recent high recruitments
- Concerns regarding sources of mortality are not currently accounted for in design of the management procedure

For southern bluefin tuna, the CCSBT has agreed to a Management Procedure with the following parameters:

- To rebuild the status of stock to an interim building target reference point of 20% of the original spawning stock biomass by 2035;
- The MP shall be tuned to a 70% probability of achieving the interim rebuilding target;
- The minimum increase or decrease TAC change shall be 100 tonnes;
- The maximum increase or decrease TAC change shall be 3000 tonnes;
- The TAC shall be set for three-year periods; and
- The national allocation of the TAC within each three-year period will be apportioned according to the Resolution on the Allocation of the Global Total Allowable Catch.



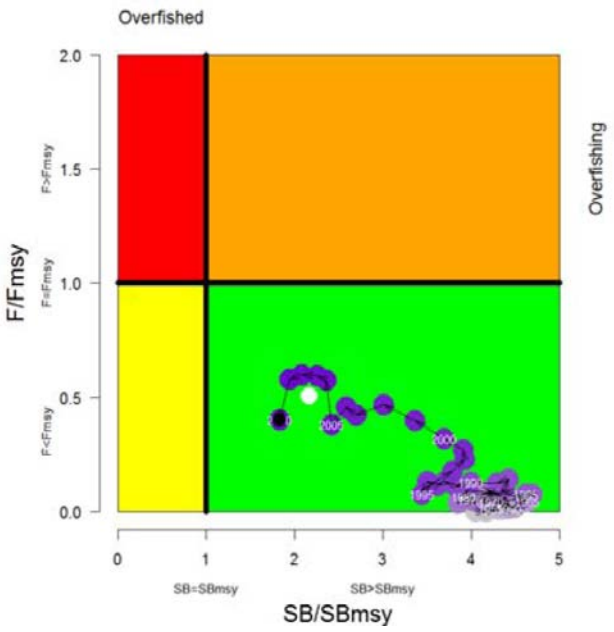
Time series of relative abundance estimates for southern bluefin tuna from Australian Aerial Survey (with 90% confidence intervals

1.2.6 Swordfish

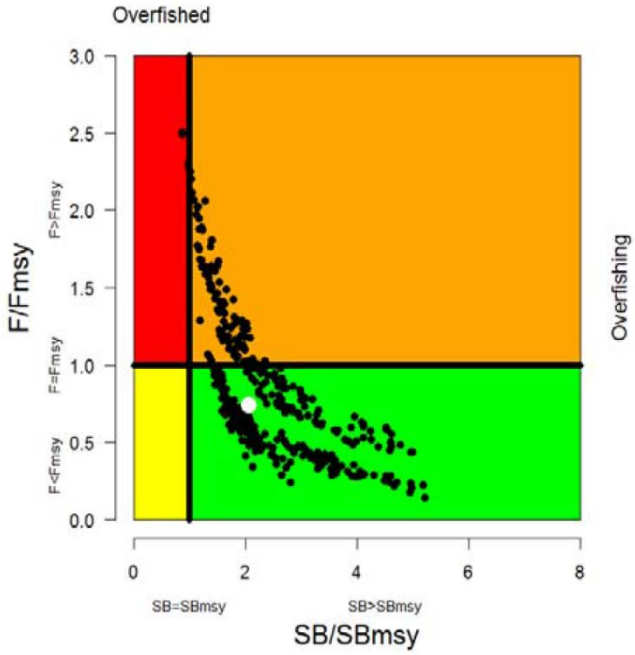
There was no new stock assessment conducted for south Pacific swordfish in 2014.Therefore, the stock status description from the 9th annual meeting of the WCPFC scientific committee (2013 assessment) is still current.

In 2014 a new project to re-examine the age, growth and maturity of broadbill swordfish in the southwest Pacific was presented to the scientific committee. The project was established after concerns about biological assumptions made in the 2013 South Pacific swordfish stock assessment. The stock assessment had a high degree of uncertainty that was attributed to uncertainty in the accuracy of growth and maturity parameters. The scientific committee recommended that additional work on age, growth and age validation be undertaken.

The Australian research agency CSIRO (Commonwealth Scientific and Industrial Research Organisation) submitted a proposal to re-examine swordfish age, growth and maturity in the southwest Pacific. The WCPFC Secretariat supported this proposal financially and suggested an expansion of the research in collaboration with the US National Oceanic and Atmospheric Administration (NOAA)/Pacific Islands Fisheries Science Center to include Hawaiian swordfish data in the study. The research will clarify the degree to which differences in life-history parameters between Hawaiian and Australian studies are methodological or real (i.e. spatial variation in life-history). The project will also provide a description of any unresolved uncertainties and an indication of the stock status implications in the context of the 2013 stock assessment.



Temporal trend in annual stock status, relative to SB_{MSY} (x-axis) and F_{MSY} (y-axis) reference points for the Ref.case



$F_{Current}/F_{MSY}$ and $SB_{current}/SB_{MSY}$ for the median of the selected uncertainty grid (white circle) and the individual uncertainty grid runs (excluding runs where the New Zealand CPUE series was used)

1.2.7 Pacific Bluefin

There was an updated stock assessment for Bluefin tuna in the Pacific Ocean in 2014. Although no Target or Limit Reference Points have been established for the Pacific bluefin stock under the auspices of the WCPFC and IATTC (Inter-American Tropical Tuna Committee), the current F average (average fishing mortality) over 2009-2011 exceeds all target and limit biological reference points commonly used by fisheries managers except for F_{loss} (the fishing mortality corresponding to the lowest observed spawning stock and associated recruitment). The ratio of spawning stock biomass (SSB) in 2012 relative to unfished SSB (depletion ratio) is less than 6%. In summary, based on reference point ratios, **overfishing** is occurring and the stock is **overfished**.

The scientific body responsible for assessing Pacific bluefin, the International Scientific Committee for Tuna and Tuna-like species in the North Pacific Ocean (ISC) provided the following conservation advice:

- The current (2012) Pacific bluefin tuna biomass level is near historically low levels and the stock is experiencing high exploitation rates above all biological reference points except for F_{loss}
- Further, substantial reductions in fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk of SSB falling below its historically lowest level
- Based on projection results, the recently adopted WCPFC conservation and management measure (CMM) (2013-09) and IATTC resolution for 2014 (C-13-02), if continued into the future, are not expected to increase SSB if recent low recruitment continues
- Unless the historical average level (1952-2011) of recruitment is realised, an increase of SSB cannot be expected under the current WCPFC and IATTC conservation and management measures, even under full implementation
- Given the low level of SSB, uncertainty in future recruitment, and importance of recruitment in influencing stock biomass, monitoring of recruitment should be strengthened to allow the trend of recruitment to be understood in a timely manner

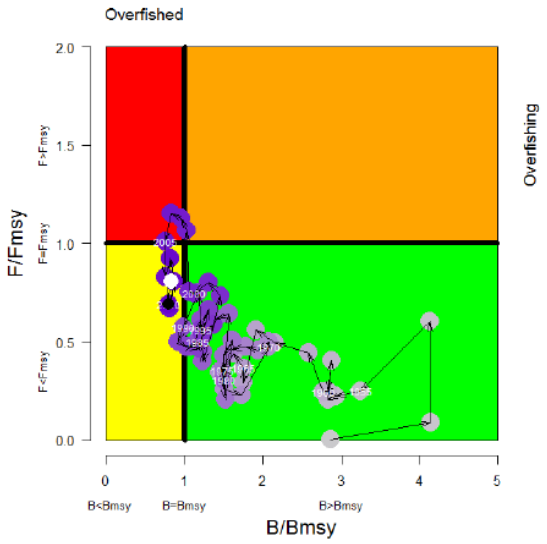
The 10th Regular Session of the Northern Committee (NC) (September 2014) adopted a draft CMM for Pacific bluefin tuna and submitted it to the Commission (WCPFC11) for adoption. WCPFC11 adopted CMM 2014-04: Conservation and Management Measure to establish a multi-annual rebuilding plan for Pacific bluefin tuna.[1]

1.2.8 Striped Marlin

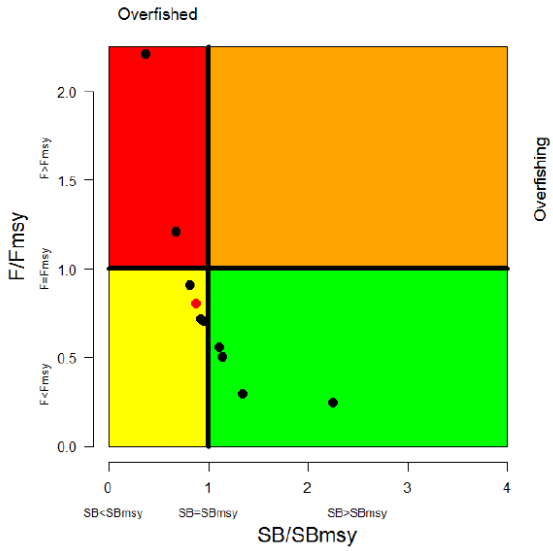
There was no new stock assessment conducted for southwest Pacific striped marlin in 2014. Therefore, the stock status description from SC9 is still current:

- *Overfishing is not occurring* in the striped marlin stock
- Based on recent trend in spawning biomass, striped marlin is *approaching an overfished state*

[1] https://www.wcpfc.int/doc/cmm-2014-04/conservation-and-management-measure-establish-multi-annual-rebuilding-plan-pacific



Temporal trend in annual stock status of south-west Pacific Striped Marlin relative to SBMSY (x-axis) and FMSY (y-axis), for the period 1952–2010 (Ref.case)

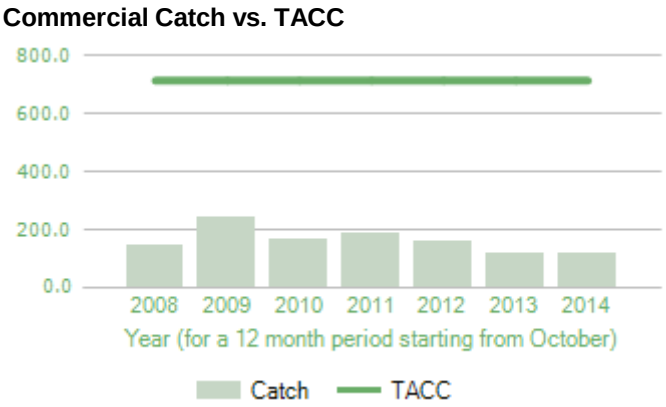


Summary of current stock status of south-west Pacific Striped Marlin (based on 2007-10) for the key model runs. Red circle represents the Ref.case run.

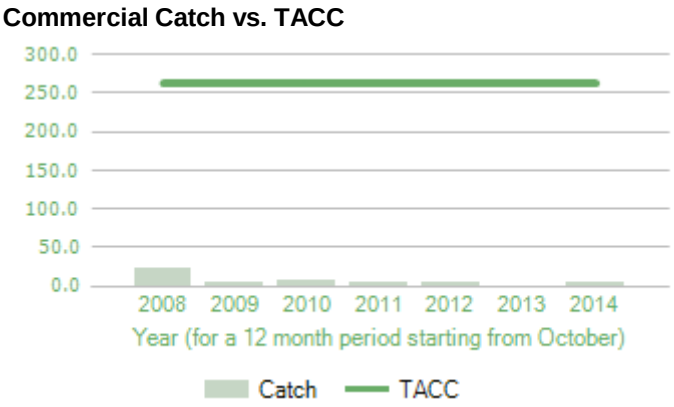
1.3 Catch against Total Allowable Commercial Catch (TACC)

All amounts are shown in tonnes.

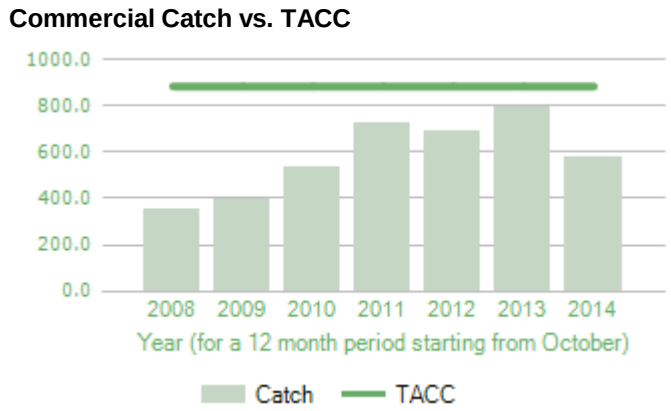
1.3.1 Bigeye (BIG)



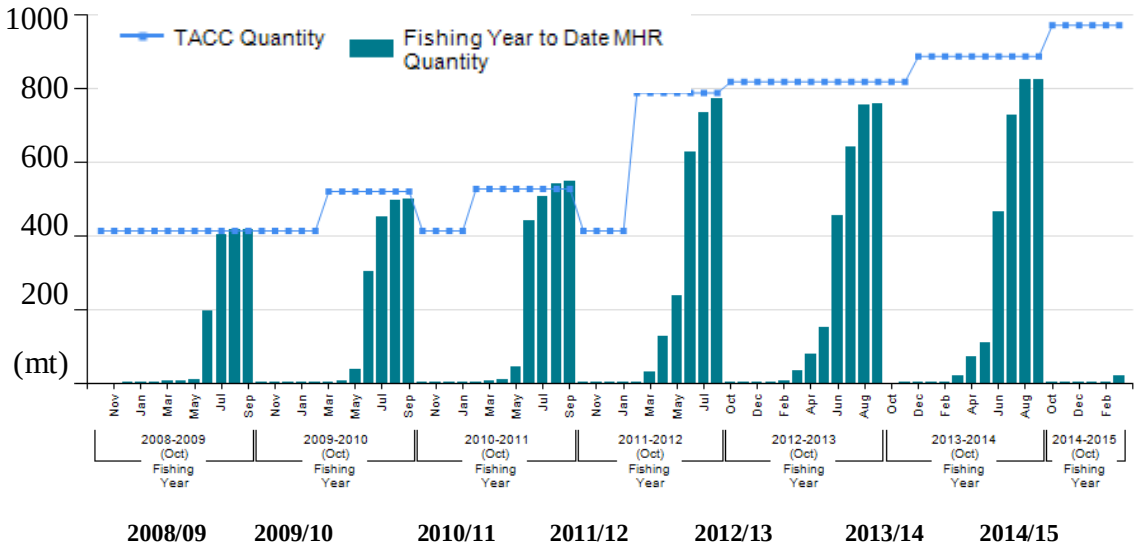
1.3.2 Yellowfin (YFN)



1.3.3 Swordfish (SWO)

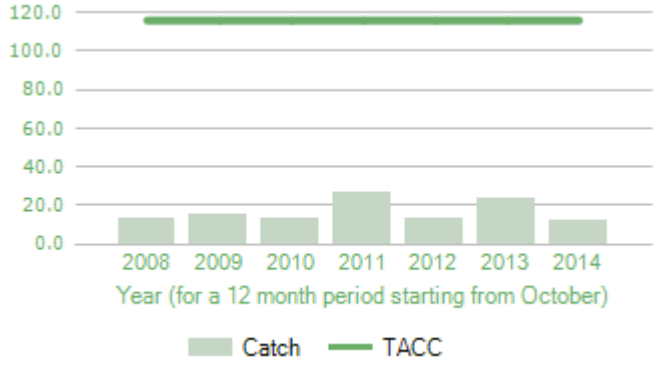


1.3.4 Southern Bluefin Tuna (STN)

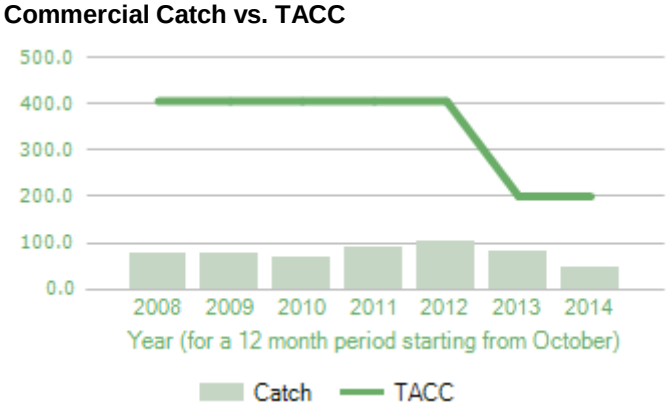


Southern Bluefin tuna is represented here by a different graph that gives monthly cumulative catch against the TACC and thus illustrates in-season increases to the TACC quantity.

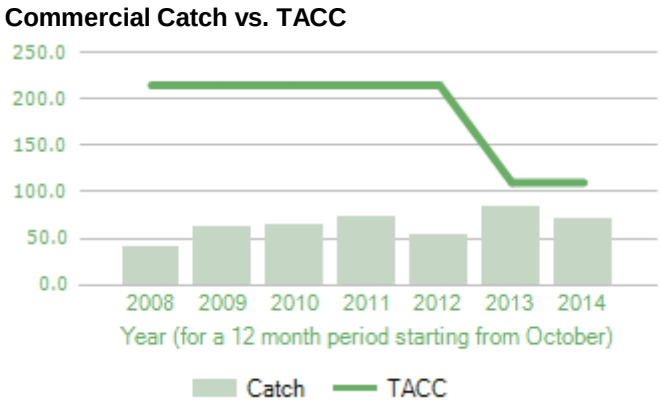
1.3.5 Pacific Bluefin Tuna (TOR)



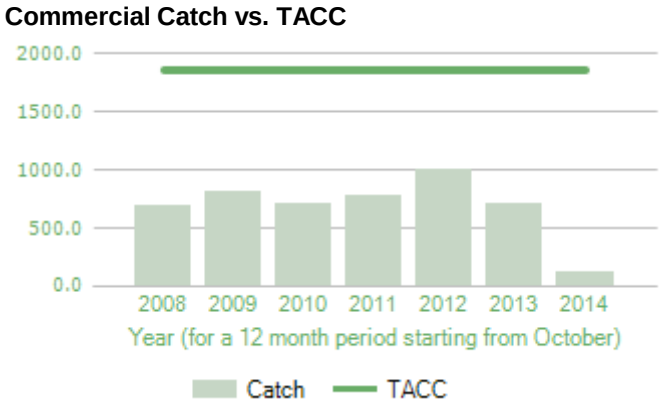
1.3.6 Mako shark (MAK)*



1.3.7 Porbeagle shark (POS)*



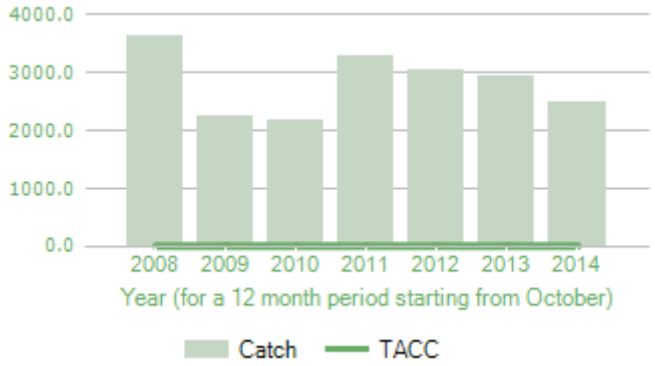
1.3.8 Blue shark (BWS)*



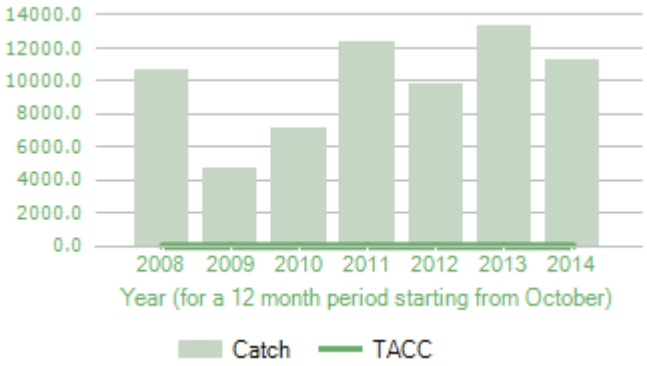
* HMS shark landings generally increased in the 2014 fishing year, in anticipation of a ban on shark finning that became operational on 1 October 2014.

1.4 CATCHES OF NON QUOTA SPECIES

1.4.1 Albacore



1.4.2 Skipjack

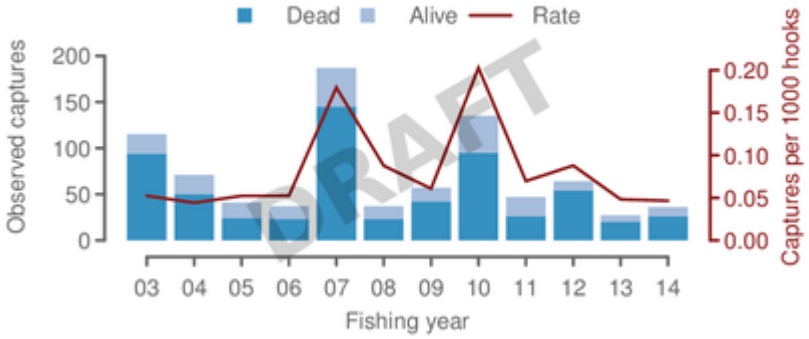


2 Environmental reporting

2.1 Seabirds - surface longline fisheries

Unless otherwise indicated, the source is the database of protected species bycatch compiled by Dragonfly Ltd, see https://data.dragonfly.co.nz/psc-dev/ . Note some data is provisional. For more information on the methods used to prepare the data, see Abraham and Thompson (2011b).

Observed captures of birds in surface longline fisheries – including provisional 2013-14 data



Fishing effort and observations in surface longline fisheries – including provisional 2013-14 data

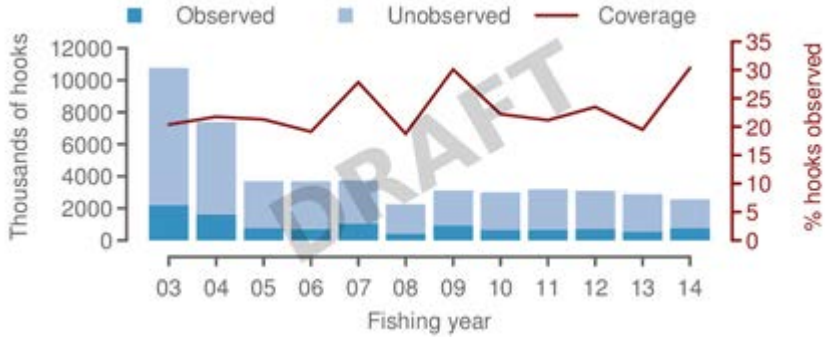
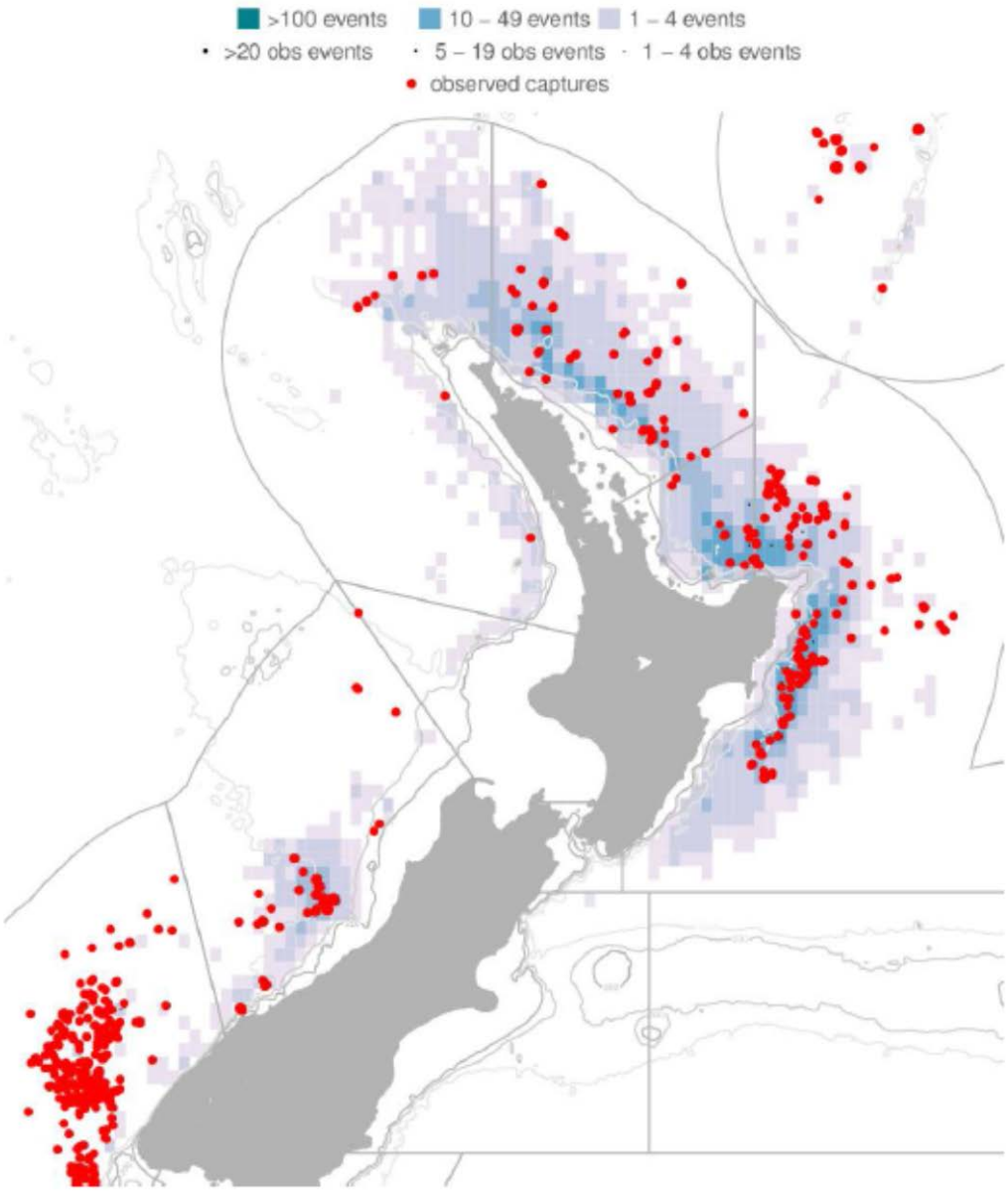


Table 2: Effort and seabird captures in SLL fisheries by fishing year. Due to Ministry for Primary Industries anonymity requirements, fishing effort is only shown if there were three or more vessels and three or more companies or persons fishing in that year - including provisional 2013-14 data

	Fishing effort			Observed captures	
Year	All hooks	Observed hooks	% observed	Number	Rate per 1,000 hooks
2002/03	10,771,398	2,195,152	20.38	115	0.052
2003/04	7,386,424	1,607,304	21.76	71	0.044
2004/05	3,679,765	783,812	21.30	41	0.052
2005/06	3,690,659	705,945	19.13	37	0.052
2006/07	3,739,882	1,040,948	27.83	187	0.180
2007/08	2,246,189	421,900	18.78	37	0.088
2008/09	3,115,633	937,496	30.09	57	0.061
2009/10	2,995,264	665,883	22.23	135	0.203
2010/11	3,188,179	674,572	21.16	47	0.070
2011/12	3,100,027	728,190	23.49	64	0.088
2012/13	2,862,182	560,333	19.58	27	0.048

Map of SLL fishing effort and observed captures, October 2003 – September 2013



Fishing effort is mapped into 0.2-degree cells, with the colour of each cell being related to the amount of effort. Observed fishing events are indicated by black dots, and observed captures are indicated by red dots. Fishing is only shown if the effort could be assigned a latitude and longitude, and if there were three or more vessels fishing within a cell. In this case, 94% of the effort is shown.

Source: Aquatic Environment and Biodiversity Annual Review 2014. A summary of environmental interactions between the seafood sector and the aquatic environment.

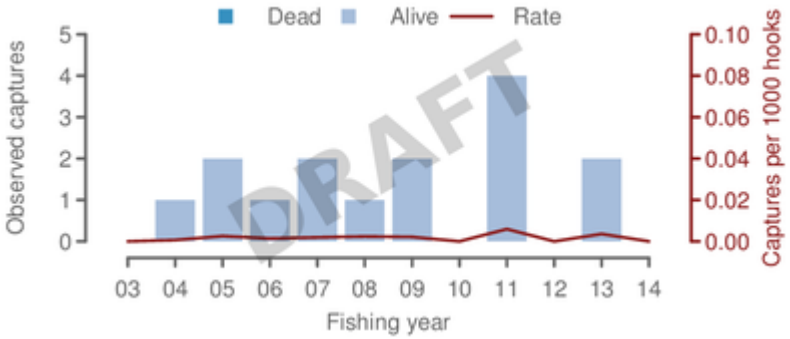
Table 3: Summary of observed captures by species (dead and alive) on SLL vessels during the 2013–14 fishing year

Common name	Scientific name	Number observed
Southern Buller's albatross	*Thalassarche bulleri bulleri*	23
New Zealand white-capped albatross	*Thalassarche cauta steadi*	4
Campbell black-browed albatross	*Thalassarche impavida*	1
Wandering albatrosse	*Diomedea antipodensis gibsoni*	1
Southern royal albatross	*Diomedea epomophora*	1
White-chinned petrel	*Procellaria aequinoctialis steadi*	1
Grey petrel	*Procellaria cinerea*	1
Other		4
Total		36

2.2 Turtles - surface longline fisheries

Unless otherwise specified the source is the database of protected species bycatch compiled by Dragonfly Ltd, see https://data.dragonfly.co.nz/psc-dev/. Note some data is provisional.

Observed captures of turtles in surface longline fisheries – including provisional 2013-14 data



Fishing effort and observations in surface longline fisheries– including provisional 2013-14 data

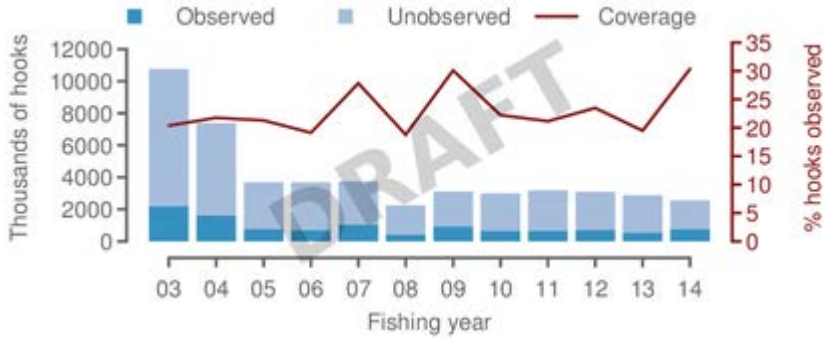


Table 4: Observed captures of turtles in SLL fisheries, by fishing year

All observed turtle captures in this period were alive on capture and were released.

Common name	Scientific name	2008	2009	2010	2011	2012	2013	2014
Green turtle	*Chelonia mydas*	0	0	0	0	0	0	0
Leatherback turtle	*Dermochelys coriacea*	1	2	0	3	0	0	0
Loggerhead turtle	*Caretta caretta*	0	0	0	0	0	0	0
Olive ridley turtle	*Lepidochelys olivacea*	0	0	0	1	0	0	0
Unidentified		0	0	0	0	0	2	0
Total		1	2	0	4	0	2	0

Source: New Zealand Annual Report to the [Western and Central Pacific Fisheries] Commission. Part 1: Information on fisheries, research and statistics: New Zealand. Available at: http://www.wcpfc.int/meetings/11th-regular-session-scientific-committee#

2.3 Other non-target associated and dependent species

Source: New Zealand Annual Report to the [Western and Central Pacific Fisheries] Commission. Part 1: Information on fisheries, research and statistics: New Zealand. Available at: http://www.wcpfc.int/meetings/11th-regular-session-scientific-committee#

Table 5: Landed catch (t) of non-target species currently managed within the QMS that are taken in tuna fisheries within New Zealand fisheries waters. Data are provided by calendar year for 2009 - 2013 and for some species may include catches from non-tuna fisheries.

Species	Scientific name	2009	2010	2011	2012	2013	2014
Blue shark	*Prionace glauca*	810	713	785	985	661	106
Mako shark	*Isurus oxyrinchus*	82	66	97	95	79	49
Moonfish	*Lampris guttatus*	89	112	107	91	65	51
Porbeagle shark	*Lamna nasus*	65	64	75	52	85	74
Ray's bream	*Brama brama*	175	118	144	150	847	658

Table 6: Total estimated catch (numbers of fish) of common bycatch species in the New Zealand longline fishery as estimated from observer data from 2010 to 2014. Also provided is the percentage of these species retained (2014 data only) and the percentage of fish that were alive when discarded, N/A (none discarded).

Species	2011	2012	2013	2014	% retained (2014)	discards % alive (2014)
Blue shark	53 432	132 925	158 736	80 118	16.2	89.2
Lancetfish	37 305	7 866	19 172	21 002	0.3	24.4
Porbeagle shark	9 929	7 019	9 805	5 061	30.6	70.7
Rays bream	18 453	19 918	13 568	4 591	96.1	7.4
Mako shark	9 770	3 902	3 981	4 506	30.3	68.8
Sunfish	3 773	3 265	1 937	1 981	2.4	80.0
Moonfish	3 418	2 363	2 470	1 655	96.6	87.5
Dealfish	223	372	237	910	0.4	24.9
Butterfly tuna	909	713	1 030	699	77.3	3.4
Pelagic stingray	4 090	712	1 199	684	0.0	93.5
Escolar	6 602	2 181	2 088	656	88.6	0.0
Deepwater dogfish	548	647	743	600	1.2	80.9
Oilfish	1 747	509	386	518	82.1	40.0
Rudderfish	338	491	362	327	10.7	83.3
Thresher shark	349	246	256	261	28.6	80.0
Big scale pomfret	139	108	67	164	74.5	75.0
Striped marlin	175	124	182	151	0.0	94.3
School shark	49	477	21	119	72.0	78.6
Skipjack tuna	255	123	240	90	80.0	0.0

3 Cost recovery levies

2014/15 Plan	MPI Departmental		Observers		Research		Under/Over Recovery						
Stock	Compliance	Registry	MPI	DoC	MPI	DoC	MPI	DoC	2011/12 Total	2012/13 Total	2013/14 Total	2014/15 Total	Change
ALB	61,112	22,325			3,213	6,934	-4,442		187,873	219,661	246,303	89,142	-157,161
BIG1	112,398	41,060	93,521	18,983	62,904	54,049	-85,293	-18,446	242,236	295,847	304,996	279,176	-25,820
BWS1	9,104	3,326			479	187	-212	-36	40,721	31,680	126,292	12,846	-113,446
MAK1	719	263			36,172	15	24	-5	5,467	4,084	2,712	37,188	34,476
MOO1	9,949	3,634			523	204	99	-34	23,659	15,838	16,510	14,376	-2,134
POS1	275	100			14	6	29	-4	4,713	3,778	100,406	419	-99,987
RBM1	11,649	4,255			612	239	-176	-37	21,911	17,269	19,206	16,542	-2,664
SKJ	56,081	20,487					-76,568		151,270	360,702	217,213	0	-217,213
STN1	106,333	38,844	233,835	46,805	15,379	37,313	-102,830	-22,227	501,455	405,719	779,006	353,452	-425,554
SWO1	44,641	16,308	40,915	7,537	24,984	14,478	-36,788	-8,064	142,722	42,527	149,527	104,012	-45,515
TOR1	36,278	13,253			1,510	744	307	-122	117,883	38,301	49,081	51,970	2,889
YFN1	16,970	6,199		287	706	-287	-2,447		21,499	7,079	19,620	21,429	1,809
TOTAL	465,508	170,054	368,271	73,612	146,497	113,881	-308,296	-48,975	1,461,409	1,442,485	2,030,872	980,552	-1,050,320
2013/14 Comparatives	735,683	280,260	439,415	85,672	474,768	152,917	-108,380	-28,463					
Change	-270,175	-110,206	-71,144	-12,060	-328,271	-39,036							

The majority of levies in 2014/15 are significantly lower (~50% decrease across the board and an overall reduction of ~ $1,000,000). MPI worked within the context of the current domestic management arrangements to reduce attributable costs by minimising services, thus the biggest reductions are from research costs. The only significant increase is for mako, and relates to specific age and growth research. Lower port prices also contributed to lower MPI departmental costs (compliance and registry).

4 FISCAL YEAR MONITORING – Observer Days

July 2014 to June 2015 – update at end of June with provisional figures.

SLL ECNI STN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned	72	23									24	55	174
Achieved	40	55	8								15	11	129
Days to go	32	-32	-8	0	0	0	0	0	0	0	9	44	45

SLL WCSI STN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned	14	14							21	21	21	21	112
Achieved										11	16	3	30
Days to go	14	14	0	0	0	0	0	0	21	10	5	18	82

SLL EC BIG/SWO	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned	5	15	10	10	15	15	20	30	40	35	25	5	225
Achieved			16	25	0	0	9	9	8	17			84
Days to go	5	15	-6	-15	15	15	11	21	32	18	25	5	141

SLL WC BIG/SWO	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned	5	10	5				5	5	5	5	5		45
Achieved													0
Days to go	5	10	5	0	0	0	5	5	5	5	5	0	45

PS Domestic	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned							25	25	20				70
Achieved							13	35	4				52
Days to go	0	0	0	0	0	0	12	-10	16	0	0	0	18

PS Super Seiner	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned									30				30
Achieved								11	28	23			62
Days to go	0	0	0	0	0	0	0	-11	2	-23	0	0	-32

STN Charter	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	**Total**
Planned													0
Achieved	2									20	124	83	229
Days to go		0	0	0	0	0	0	0	0				

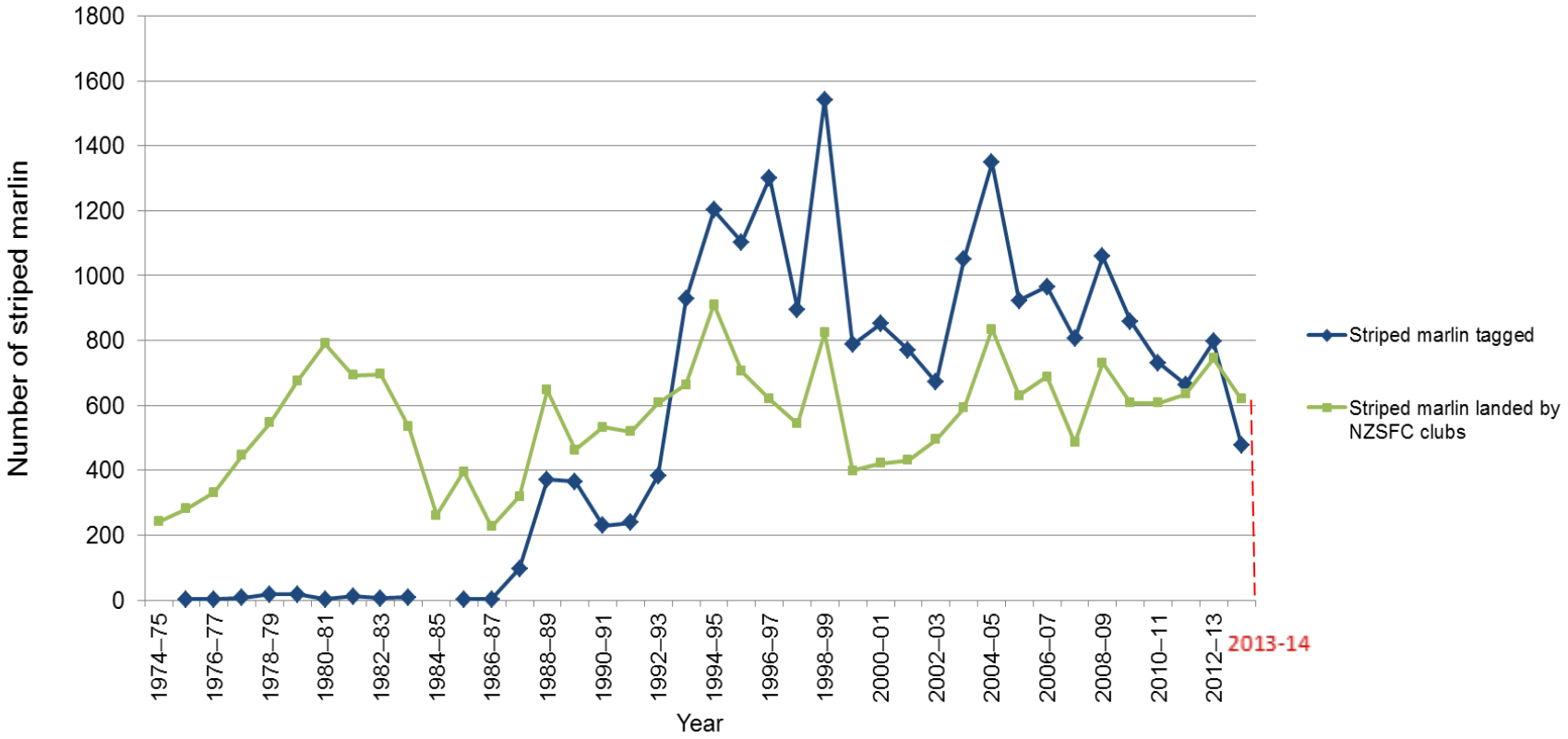
5 Non-commercial monitoring

5.1 Gamefish tagging rates and numbers from the New Zealand Gamefish Tagging Programme

The number of sharks tagged and released in 2013/14 is about average for the last 10 years. NZ Sport Fishing Council (NZSFC) uses a July to June fishing year. There were 468 striped marlin reported as tagged and released inside NZ fisheries waters in the 2013–14 year, well down on the ten year average. Numbers of blue marlin tagged (9) and swordfish were also down. There were 3 striped marlin and 1 swordfish recapture in 2013–14.

											Average
Mako	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2004 to 2014
NZ EEZ	241	193	150	297	285	494	609	488	524	346	363
% tagged	80	81	82	87	87	90	92	92	94.3	93	88
Recaptures	6	3		2	5	7	7	8	11	5	6
Blue shark	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2004 to 2014
NZ EEZ	102	95	157	108	101	73	128	142	148	116	117
% tagged	80	76	91	90	89	92	91	90	93	93	89
Recaptures	2	1	2	3	4	3	3	4	3	3	3
NZGTP	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2004 to 2014
Striped marlin	1348	923	965	806	1058	858	731	663	745	468	857
Blue marlin	29	17	26	29	24	32	78	50	17	9	31
Shortbill spearfish	7	11	14	8	5	15	21	5	0	6	9
Swordfish	6	5	16	25	24	18	37	50	33	27	24
Billfish recaptures	4	2	1	4	3	2	1	1	4	4	3

5.2 Striped Marlin Recreational Catch



Recreational catch of striped marlin from New Zealand Sport Fishing Council and Gamefish Tagging Programme records

Landed catch is down in 2013-14 from around 600 to 800 a year, the average over the last 10 years. The number of fish tagged is variable and declining, and 2013-14 is a 20 year low. This data does not include 267 STM tagged at Wanganella Banks by 3 private vessels.