



Australian Government
Australian Fisheries Management Authority



Tropical Tuna Management Advisory Committee (TTMAC)

**MINUTES
TTMAC 9
10 OCTOBER 2013
CANBERRA**



**NINTH MEETING OF THE TROPICAL TUNA MANAGEMENT ADVISORY
COMMITTEE (TTMAC)**

10 OCTOBER 2013

CANBERRA

Agenda Item 1: Preliminaries/matters arising

1.1: Welcome and apologies

1. The TTMAC Chair, Ms Catherine Barnett, opened the meeting at 9.30am and welcomed members and observers to the 9th meeting of TTMAC. In particular, Ms Barnett welcomed the attendance of Mr Brett Cleary at his first TTMAC meeting as a recreational/charter fishing invited participant.

Apologies

2. Apologies were received from; the industry member; Mr Joe Basile, the industry invited participant; Mr Brian Jeffriess AM, the State Government invited participant; Ms Veronica Silberschneider, the environment/conservation member; Mr Peter Trott, and the recreational/charter fishing invited participant; Mr Grahame Williams.

3. Participants at TTMAC 9 were:

Chair

Ms Catherine Barnett

Members

Mr Trent Timmiss (AFMA member)
Dr Cathy Dichmont (research member)
Mr Gary Heilmann (industry member)
Mr Terry Romaro OAM (industry member)
Mr Paul Williams (industry member)
Mr Bill Edwards (recreational/charter fishing member)

Invited Participants

Mr Cathal Farrell (industry)
Mr Angelo Maiorana (industry)
Mr Brett Cleary (recreational/charter fishing)

Executive Officer

Ms Stephanie Johnson

Observers

Mr Steve Auld (AFMA)

Guests

Howard McElderry¹ (AMR)
Dawn Mann¹ (AMR)
Dr Steve Kennelly¹ (AMR)

¹ attended for agenda item 4.3 only

1.2: Adoption of agenda

4. The agenda was adopted (Attachment A) with the addition of the underwater line setter item under section 4.6.

1.3: Pecuniary interest declarations

5. The Chair stated that as outlined in the *Fisheries Administrations Act 1991* and Fisheries Management Paper No. 1, all members of TTMAC must declare any pecuniary interest in the Fishery at the commencement of the meeting (Table 1) and also at the commencement of each agenda item. The Committee noted that if a member discloses an interest in an item, the member must absent themselves from the meeting before the item is considered. The MAC must make a decision as to whether the member can participate in the discussion and in the making of a recommendation, or remain absent from the meeting for the item.

6. TTMAC noted the requirement to declare an interest at the beginning of each agenda item. It was agreed that members would declare interests at the beginning of each main agenda item, that is, at the beginning of discussion on agenda items numbered 1 through 5.

Table 1: TTMAC members/permanent observers' declarations of interest

Member	Declared interests
Catherine Barnett	Chair, South Australia Rock Lobster Advisory Council, Member Fisheries Council of SA, CEO Food SA, Member of Agribusiness Council (SA) and board member Food Innovation Australia Limited, no pecuniary interest in Tropical tuna fisheries
Trent Timmiss	Employee of AFMA, no pecuniary interest in Tropical Tuna Fisheries.
Cathy Dichmont	CSIRO scientist, Stream leader managing a project portfolio, which includes many fisheries projects including; Tropical Tuna, PI of risk-cost-catch FRDC project, which is a cross-cutting project looking at cost-catch-risk trade-offs in Commonwealth fisheries, Independent Science member on South Australian Rock Lobster MAC, CSIRO member on Northern research hub, Steering committee member on International Fisheries WIKI and other international non-tuna projects and conferences, member of TTRAG and member of Harvest Strategy policy technical review group.
Terry Romaro OAM	Director of a company that owns ETBF boat SFR's, minor line SFR's, ETBF longline SFR's, WTBF boat

	SFR's, WTBF longline SFR's, Coral Sea Trawl permit, Western Skipjack purse seine permit, SPF purse seine, mid-water trawl SFR's, and SPF quota SFR's. Works with company that has a consultancy with Aus Asia Group, member of SPFRAG and invited participant SBTMAC.
Paul Williams	Owner of an ETBF boat SFR and ETBF longline SFR's, minor line SFR's and a Commonwealth fish receiver permit. Member of TTRAG.
Gary Heilmann	Director of companies that hold; ETBF quota SFR's, ETBF boat SFR's, a fish receiver permit, a Coral Sea Fishery permit and a SESS boat SFR. Member of TTRAG.
Bill Edwards	Retired charter boat operator, member of Moreton Bay Game Fishing club, member of Broadwater Tower Body Corporate Committee and retired pharmacist.
Stephanie Johnson	Employee of AFMA, no pecuniary interest in Tropical Tuna fisheries
Permanent observer/invited participant	Declared interests
Cathal Farrell	Manager of fish receiving business.
Angelo Maiorana	An SFR holder/owner/skipper. Operates two longline vessels in the East Coast Tuna Fishery and Southern and Eastern Scalefish and Shark Fishery. Holder of a fish receiver permit.
Steve Auld	Employee of AFMA, no pecuniary interest in the Tropical Tuna fisheries.
Brett Cleary	The Vice President Game Fishing Association of Australia, the Chair Tasmanian Association for Recreational Fishing Inc, a member of Sustainable Marine Research Collaboration Agreement with the Institute for Marine and Antarctic Studies (IMAS). Has no pecuniary interest in the SBT Fishery.

1.4: Acceptance of minutes from TTMAC 8

7. TTMAC adopted the provisional minutes as a true and accurate account of the discussions from TTMAC 8.

1.5: Status of actions arising from TTMAC 8

8. The Tropical Tuna Fisheries Manager outlined progress on the 6 action items identified at TTMAC 8 (Table 2).

Table 2: Status of actions arising since TTMAC 8

#	ACTION ARISING	STATUS
1	Complete report on conversion factors in the ETBF and provide the report to TTRAG for consideration.	Ongoing. AFMA is still collecting the necessary data from skippers. Whole fish of various sizes are required.
2	Inform ETBF fishers of NSW review of bait fishing arrangements.	Ongoing. Members noted that AFMA is only an observer in this process. The review is being conducted by NSW Fisheries and a report has not yet been finalised.
3	Examine implications of setting TACCs over a longer time-frame	Ongoing. AFMA is still in discussions regarding multi-year TACCs, but there are no major issues expected with this.
4	Implementation of e-logs	Completed. AFMA has implemented e-logs into the tuna fisheries and an information package has been distributed. Paper logbooks are still available, however these are now charged at \$8.50 per fishing day.
5	TAP Review progress	Ongoing. Members noted that this review is still continuing and has not yet been finalised.
6	Northern Bluefin Tuna	Ongoing. Mr Farrell indicated that this item is still in progress.

1.6: Correspondence/intersessional work arising between TTMAC8 and TTMAC9

9. TTMAC noted that the following issues were addressed out-of-session since the previous meeting in June 2013:

- i. August 2013, AFMA distributed the final 2013-14 budget explanation for the Tropical Tuna fisheries;
- ii. August 2013, AFMA sent a letter to all MAC members advising that annual catch data (from CDRs) for some Commonwealth fisheries would be published on the internet in early September 2013;
- iii. August 2013, AFMA advised members that SEWPac was seeking written comment on the consultation paper on varying the Threat Abatement Plan 2006 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations;
- iv. July 2013, a TTMAC TAP sub-committee teleconference was suggested to discuss the revised TAP once it was released for public comment, however no meeting was held;

- v. July 2013, the minutes from TTMAC 8 were sent to all members and comments were received from Mr Peter Trott;
- vi. June 2013, the draft Chair's summary for TTMAC 8 was distributed to the MAC.

Agenda Item 2: Background Information/Discussion Items

No conflicts of interest were declared under this agenda item. TTMAC noted that no recommendations were being made and that members were just providing information reports.

2.1: AFMA Management report on the ETBF and WTBF fisheries

10. TTMAC noted that fishing in the ETBF is currently quiet and catches have been lower than previous years. Industry members also stated that this has been an unusual season in terms of fish movement and availability. They expressed further concern over the inconsistency of the weather patterns and the scientific member confirmed that TTRAG is considering the inclusion of weather and oceanographic variables in the harvest strategy for next year.

11. The AFMA member informed TTMAC that the global tuna stocks are under increased pressure, Bigeye Tuna in particular is currently considered subject to overfishing in the Pacific Ocean.

12. TTMAC also noted that this year, there was a large amount of SBT quota available to ETBF operators and consequently, there was a large amount of fish caught. All reports suggested that the SBT management zones continued to be successful in minimising the risk of SBT capture without quota and the subsequent discarding. The ETBF Manager stated that these zones will be reviewed again before the beginning of the 2014/15 fishing season.

13. Industry members expressed appreciation at the high amount of available SBT quota, the reduction in observer costs and the way in which the management arrangements were changed this year. They felt that the system was simplified and it worked well.

2.2: Western and Central Pacific Fisheries Commission (WCPFC) Scientific Committee meeting update

14. The AFMA member provided an update to TTMAC on the outcomes from the Western and Central Pacific Fisheries Commission (WCPFC) Scientific Committee meeting held in Pohnpei, Federated States of Micronesia, in August 2013.

15. TTMAC noted that there has been a new stock assessment for Swordfish, however there was some uncertainty about which growth model used in the assessment was most accurate – Australian or Hawaiian model. Both models indicated that the South-West Pacific stock of Swordfish is above the WCPFC reference point of Maximum Sustainable Yield (MSY).

16. It was noted by TTMAC that the Striped Marlin assessment was less positive, with the current stock level sitting around Maximum Sustainable Yield (MSY). The WCPFC Scientific Committee advice was to not increase the fishing mortality of Striped Marlin.

17. TTMAC acknowledged that the WCPFC held a one week workshop in Tokyo during August this year, in an attempt to develop a draft Conservation and Management Measure for

reducing the mortality of the tropical tuna species. Various proposals were presented, however no agreement was reached on an effective measure.

18. The AFMA member stated that Australia has been assessed as fully compliant with all WCPFC conservation and management measures, however the vessel register is not yet complete and this must be done over the next 8-10 months.

19. TTMAC members noted that the 10th Annual WCPF Commission Meeting is to be held on 2-6 December in Cairns. The AFMA member encouraged any interested members/invited participants to attend if available.

Agenda Item 3: Consideration/Decision Items

The following members declared their interest under Consideration/Decision items:

Mr Paul Williams: agenda items 3.1, 3.2, 3.3, 3.4, 3.5

Mr Terry Romaro OAM: agenda item 3.1, 3.2, 3.3, 3.4, 3.5

Mr Gary Heilmann: agenda items 3.1, 3.2, 3.3, 3.4, 3.5

Mr Angelo Maiorana: agenda items 3.1, 3.2, 3.3, 3.4, 3.5

Dr Cathy Dichmont: agenda item 3.1 and 3.5

In line with the requirements as a MAC industry member who has declared interests under an agenda item, Mr Williams left the room. The remaining members of TTMAC agreed that Mr Williams should be allowed to return for all discussions and recommendations made under Agenda item 3.

In line with the requirements as a MAC industry member who has declared interests under an agenda item, Mr Romaro left the room. The remaining members of TTMAC agreed that Mr Romaro should be allowed to return for all discussions and recommendations made under Agenda item 3.

In line with the requirements as a MAC industry member who has declared interests under an agenda item, Mr Heilmann left the room. The remaining members of TTMAC agreed that Mr Heilmann should be allowed to return for all discussions and recommendations made under Agenda item 3.

In line with the requirements as a MAC invited participant who has declared interests under an agenda item, Mr Maiorana left the room. The remaining members of TTMAC agreed that Mr Maiorana should be allowed to return for all discussions and recommendations made under Agenda item 3.

In line with the requirements as the MAC scientific member who has declared an interest under an agenda item, Dr Dichmont left the room. The remaining members of TTMAC agreed that Dr Dichmont should be allowed to return for all discussions and recommendations made under Agenda item 3.

3.1: Harvest Strategy Target and Limit Reference Points

20. The Tropical Tuna RAG (TTRAG) recommended revising the Target and Limit Reference points for Striped Marlin and Broadbill Swordfish. The TTRAG method was endorsed by TTMAC. The new reference points use the updated assessment models to standardise the reference points to be consistent with the Commonwealth Harvest Strategy Policy.

3.2 Western Tuna and Billfish Fishery Total Allowable Commercial Catches

21. TTMAC recommended that the TACC for each target species in the WTBF should be as follows:

Quota species	2013 TACCs	Recommended 2014 TACCs
Yellowfin Tuna	5,000t	5,000t
Bigeye Tuna	2,000t	2,000t
Broadbill Swordfish	3,000t	3,000t
Striped Marlin	125t	125t

22. In the absence of an agreed whole of government position on TACCs in the WTBF and sufficient catch data to operate the domestic harvest strategy, TTMAC agreed to recommend that the TACCs be set consistent with the proportion of waters in the Australian Fishing Zone, compared to the area assessed by the Indian Ocean Tuna Commission Scientific Committee.

23. TTMAC considered that the existing TACCs are unlikely to cause sustainability concerns in the short term and recommended that they remain the same until a new whole of government position is developed, or the Indian Ocean Tuna Commission adopts binding catch limits.

3.3: Eastern Tuna and Billfish Fishery Total Allowable Commercial Catches

24. TTMAC noted the TTRAG advice on the Recommended Biological Commercial Catches (Attachment B) and had a lengthy discussion on the ETBF TACC levels for 2014. Based on this discussion, TTMAC recommended the following TACCs for the ETBF for 2014 (Table 1):

Table 1: TTMAC recommendations for ETBF TACC levels for 2014

Quota species	2013 TACCs	Recommended 2014 TACCs
Yellowfin Tuna	2,200t	2,200t
Bigeye Tuna	1,056t	1,056t
Albacore Tuna	2,500t	2,500t
Broadbill Swordfish ²	1,396t	<i>no agreement</i>
Striped Marlin ³	370t	<i>no agreement</i>

² The AFMA and Research members supported the TTRAG advice based on the application of the revised Harvest Strategy, however the industry position was not to change the existing TACC for such a small reduction of 18t.

Broadbill Swordfish

25. Significant discussion was held by TTMAC regarding the potential investor and market confidence in relation to such small reductions in TACCs and whether it is warranted.

26. The MAC noted the RAG RBCC advice of 1,378t for Broadbill Swordfish. It was also noted that it is desirable to follow process; however stability of TACCs is also considered important. This led to a discussion about recommending that the RAG investigate options in relation to the minimum change rule. The different positions of MAC members were as follows:

Industry position:

Not to change the existing TACC of 1,396t.

AFMA and Research member position:

Supported the RAG advice, given the application of the harvest strategy was reviewed in line with MAC requests in 2012. These members supported a 2014 TACC of 1,378t, which is a reduction of 18t from the previous year.

Striped Marlin

27. TTMAC accepted the RBCC recommendation for this year.

28. Industry members expressed concern about the continued reductions in the TACC for Striped Marlin, while the recreational catch of this species remains unmanaged. They emphasised the need for formalised resource-sharing arrangements. Industry members reiterated their long-held view that any required catch reductions in the Striped Marlin TACC should be borne by both the commercial and recreational sectors.

29. TTMAC agreed that the position taken on the issue of resource-sharing had not changed from the previous year, and therefore could not support another reduction in the Striped Marlin TACC. However, the AFMA member reserved his position in favour of the AFMA Management recommendation that half of the required 37t reduction be applied to the commercial sector, consistent with the outcome of the Harvest Strategy.

30. The AFMA Management recommendation would result in a TACC of 351t, with the remaining reduction in mortality needing to be taken by the recreational sector. However, there still remains the concern over how the reduction is split between the commercial and recreational sectors, given that there is limited management of Striped Marlin in the recreational sector.

31. The stated positions on the 2014 Striped Marlin TACC recommendation were therefore as follows:

Industry and recreational sector position:

Not to change the existing TACC of 370t.

AFMA member position:

To decrease the TACC by half of the required 37t reduction. This would result in a new Striped Marlin TACC of 351t.

Albacore, Bigeye and Yellowfin Tuna

³ TTMAC accepted the RBCC recommendation for 2014, but did not formally agree on a TACC for Striped Marlin. This was due to the continuing concern over how the reduction in the TACC is split between the commercial and recreational sectors.

32. TTMAC considered all available information supplied by TTRAG and recommended that the TACCs remain the same for 2014. This recommendation is consistent with the AFMA Commission's request to not apply the harvest strategy for Albacore, Bigeye and Yellowfin Tuna, as the proportion of the ETBF catch of these species in the south-west Pacific Ocean is not high enough to allow the harvest strategy to function effectively.

33. An industry member expressed the opinion that the TACC for BET should be increased to 2000t, consistent with the WCPFC maximum catch allowance. Even if the amount is not caught, it is about the principle of the matter and securing Australia's catch of BET. However, the AFMA member stated that there have only been two years where industry has caught more than 2000t of BET. This, combined with the global stock of BET being overfished, means that it would be highly unlikely that Australia would be permitted any increase in the TACC for BET. It is also not the Australian Government position to increase the BET TACC to 2000t.

3.4: 2013/14 Levies

34. TTMAC noted the information provided on levies.

35. TTMAC noted that for the 2012-13 financial year, there was an underspend of \$134,000 and AFMA stated that this underspend will be returned to Industry in the 2014-15 financial year. The budget is also likely to be underspent in the 2013-14 financial year.

Action Item 1: The ETBF Manager to distribute 2013/14 levy information as soon as available.

3.5: Annual Research Statement

36. TTMAC noted and endorsed the Annual Research Statement completed by TTRAG. There were no additional comments (Attachment C).

Agenda Item 4: Other Information/Discussion Items

No pecuniary interests were declared under agenda item 4.

4.1: E-Business update

37. The AFMA member gave an update of the progress with e-logs and e-CDRs. E-logs are now operational; however there are still some useability issues with the third party software. Industry members were reminded that paper logbook charges apply per shot. The development of e-CDRs is still being investigated. There are some concerns with traceability of fish with this system.

4.2: Environment update

38. TTMAC noted the update on the environmental processes for the tropical tuna fisheries, presented by the AFMA Environment Manager – Paul Ryan.

4.3: Electronic monitoring presentation

39. TTMAC acknowledged the current progress of the e-monitoring implementation in the ETBF, and noted the presentation from Mr Howard McElderry, Archipelago Marine Research (AMR).

40. Members raised some queries regarding the rules and costings of e-monitoring, and whether there will be an incentive-based system for potential savings. Industry members stated that they would like to see a system developed where the more compliant boats are rewarded with higher cost savings. The AFMA member outlined that this may only be achieved through a fee-for-service system.

41. An industry member stated that EM should only be implemented in the ETBF if there is a significant cost saving achieved with a reduction in observers.

42. The AFMA member emphasised the importance of industry co-operation with the e-monitoring installation team.

4.4: Fishery Catch Data – 2012/13 Season to date

43. TTMAC noted the current ETBF and WTBF catch data as information. No additional comments were received from members.

4.5: Line Weighting Trial for Live Bait

44. The AFMA member provided an update to TTMAC on the results of the line weighting trial for live bait that was conducted in the ETBF between 18 October 2012 and 23 December 2012. The results concluded that 60g lead weights located 1-1.5m away from the hook for live bait was the best scenario, in comparison to weights situated directly next to, or 3.5m away from, the hook.

4.6: TAP Review

45. The AFMA Environment Manager provided an update and summary of the TAP review for seabirds. There seems to be two different mitigation issues—one on the set and one on the haul. A redefinition of “seabird” is currently being considered, as the mortality impact concern for a species is likely to be less for a Shearwater than an Albatross.

46. The scientific member suggested the need for a clear definition of “bycatch” as there is often confusion between terms.

47. TTMAC accepted the update on the review and did not provide any additional comments.

4.7: Underwater Line Setter

48. TTMAC noted the brief summary of the function of the underwater line setter, presented by the industry member, Mr Gary Heilmann. It was a system developed in Australia and is currently being trialled here.

Agenda Item 5: Other Items

No pecuniary interests were declared under agenda item 5.

5.1: Review of the Commonwealth Fisheries Harvest Strategy Policy and Guidelines and Commonwealth Policy on Fisheries Bycatch

49. It was noted by TTMAC that there is currently no new information regarding the new government position on the Commonwealth Harvest Strategy Policy and Guidelines, and the Commonwealth Policy on Fisheries Bycatch.

5.2: MAC Self-assessment

50. TTMAC noted that members are required to complete a MAC self-assessment form.

Action Item 2: The TTMAC EO to distribute the MAC self-assessment form to members out of session.

Agenda Item 6: Next meeting

51. TTMAC agreed to schedule the next meeting in April 2014, subject to availability.

Catherine Barnett

TTMAC Chair, October 2013

ATTACHMENT A

Tropical Tuna Fisheries Management Advisory Committee (TTMAC) 9

**Aquarium Room Level 6 AFMA,
73 Northbourne Avenue, Canberra
10-11 October 2013 (commencing at 9:30am)**

DRAFT AGENDA

- 1. Preliminaries/Matters Arising**
 - 1.1. Welcome and apologies
 - 1.2. Adoption of agenda
 - 1.3. Declaration of interest
 - 1.4. Acceptance of Minutes from TTMAC 8
 - 1.5. Actions Arising from TTMAC 8
 - 1.6. Intersessional correspondence between TTMAC 8 and TTMAC 9
- 2. Background Information/Discussion Items**
 - 2.1. AFMA Management report on the ETBF and WTBF fisheries
 - 2.2. WCPFC Scientific Committee update
 - 2.3. WCPFC Technical Compliance Committee update
 - 2.4. Forthcoming WCPFC Commission Meeting
- 3. Consideration/Decision Items**
 - 3.1 Harvest Strategy Target and Limit Reference Points
 - 3.2 WTBF TACCs
 - 3.3 ETBF TACCs
 - 3.4 2012/13 Levies
 - 3.5 Annual Research Statement
- 4. Other Information/Discussion Items**
 - 4.1. E-Business Update
 - 4.2. Environment update
 - 4.3. E-Monitoring Presentation
 - 4.4. Fishery Catch Data – 2012/13 Season to date
 - 4.5. Line Weighting Trial for Live Bait.
 - 4.6. TAP Review
- 5. Other Items**
 - 5.1. Review of the Commonwealth Fisheries Harvest Strategy Policy and Guidelines and the Commonwealth Policy on Fisheries Bycatch
 - 5.2. MAC Self-Assessment
- 6. Date and venue for next meeting**

ATTACHMENT B

TTRAG Advice For The Eastern Tuna and Billfish Fishery In The 2014/15 Season

August 2013

Overview

TTRAG is providing RBCC advice using the Harvest Strategy with caveats for both SWO and STM. For BET, YFT and ALB, TTRAG is providing stock status advice based on fishery indicators.

In providing this advice TTRAG took into consideration the information about the ETBF catch relative to the catch of other fleets in Region 5. The proportion of the ETBF catch in Region 5 (south of 10°S and west of 170°E as shown in Figure 1) is different for each species – SWO (59.1%), STM (41.5%), BET (17.8%), YFT (9.9%) and ALB (2.5%) in 2012 respectively.

For YFT, BET and ALB the proportion of the ETBF catch is not high enough to allow the harvest strategy to function and hence the objectives of the Harvest Strategy policy will not be achieved. TTRAG has provided a range of fishery indicators based on the most recent stock assessments, catches in Region 5 and a suite of indicators from the ETBF.

TTRAG applied the HS and identified a RBCC for SWO and has high confidence in the use of the harvest strategy for the provision of management advice for SWO. TTRAG concluded that, if the recent proportion of the SWO catch within Region 5 taken by the ETBF is maintained, then the harvest strategy can achieve its objectives. TTRAG is uncertain at what proportion the harvest strategy will become ineffective in achieving the objectives of the Commonwealth HS Policy. If changes made to catches for SWO in the ETBF are offset by increases in the catches by other commercial and recreational fleets, then these changes need to be taken into consideration.

TTRAG applied the HS and identified a RBCC for STM but had low confidence in the use of the harvest strategy for the provision of management advice for STM. TTRAG is seeking advice from the recently commenced MSE project on striped marlin on how effective the HS will be at recent levels of catch proportion. If changes made to catches for STM in the ETBF are offset by increases in the catches by other commercial and recreational fleets, then these changes need to be taken into consideration.

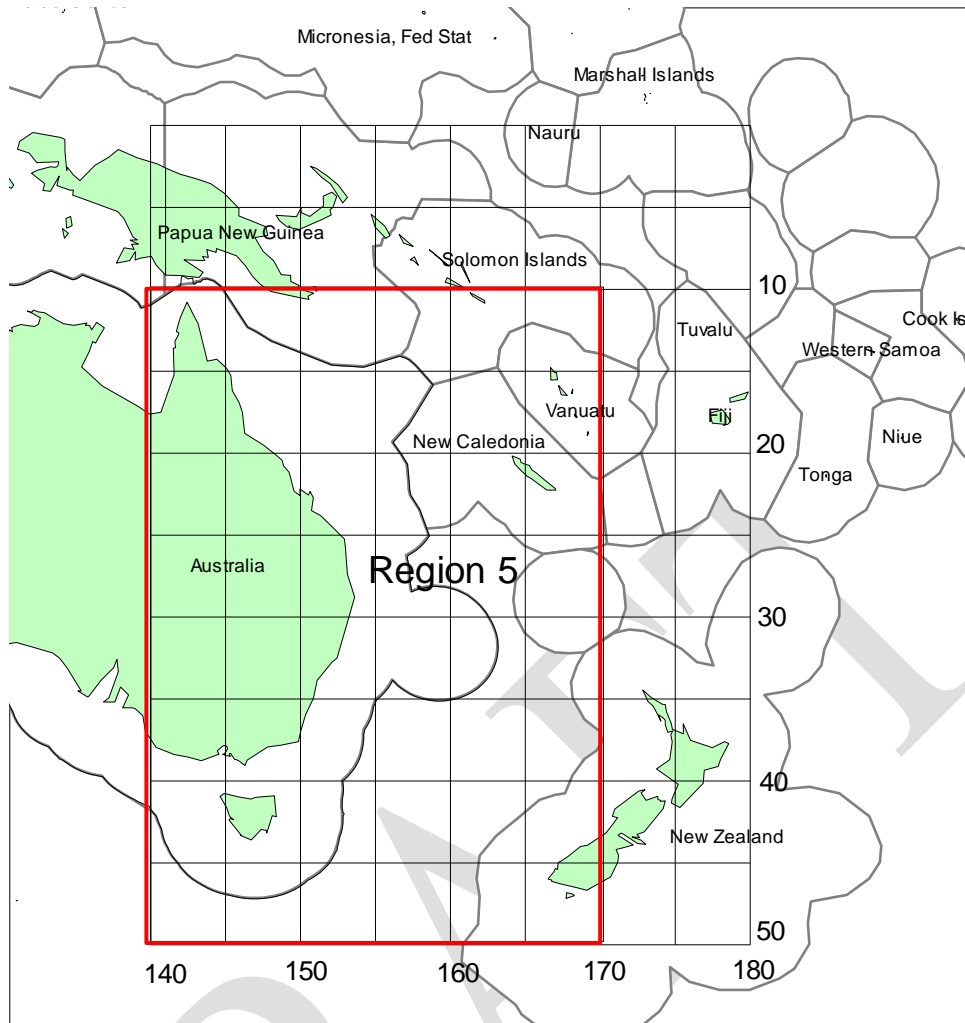


Figure 1. Map of the southwest Pacific Ocean showing the area known as Region 5 used in the provision of management advice.

Yellowfin Tuna

Current TACC: 2,200t

Actual ETBF 2012/13 quota year catch: 1,361t (30.4% lower than 1,956t catch in 2011/12 quota year).

2012 Western and Central Pacific Fisheries Commission (WCPFC) convention area catch: 655,672t (provisional, and 25.7% higher than the 521,448t catch in 2011). This was a record high, though may be influenced by improved reporting of the 2012 catch in Indonesia.

2012 catch within Region 5 (south of 10°S and west of 170°E) of the WCPFC stock assessment: 12,906t (provisional). The ETBF catch was 8.5% of this total and has averaged 9.2% over the past 5 years (based on logbook data supplied by SPC).

In response to the AFMA Commission's request to not provide RBCC advice based on the HS, TTRAG is providing stock status advice based on fishery indicators.

Indicators

A summary of the main indicators is found in the table below. Additional information can be found in Attachments A and B.

Indicator	Comment	
Stock	Considered a single stock in the WCPO – connectivity between ETBF and equatorial regions uncertain but may be small.	
WCPO Stock Assessment	<p>Last assessment 2011.</p> <p>The base case selected by SC7 indicates $B_{current}/B_{MSY}=1.33$ and $SB_{current}/SB_{MSY}=1.47$. The range across the six sensitivity models selected by SC7 was 1.14–1.92. Therefore, yellowfin tuna is not considered to be in an overfished state.</p> <p>For the base case selected by SC7 indicates $F_{current}/F_{MSY}=0.77$. However, one of the alternate models found that $F_{current}/F_{MSY} > 1.0$, with a range across the six models considered of 0.54–1.15. Therefore, there is a possibility that overfishing is occurring for yellowfin tuna.</p> <p>Next assessment due 2014.</p>	
Indicator	Trend	Comment
Region 5 Catch	Stable	Total catch stable over past 4 years, though slight increase in longline catch.
ETBF Proportion of Region 5 Catch	Decreasing	In 2012 9.9% of longline catch and 8.5% of total catch.
Region 5 depletion	84.7% $B_{F=0}$ ¹ 10.6% B_{1952} ²	Averaged over 2007-2009 and based on 2011 WCPO assessment. The SC has adopted $B_{F=0}$ as the preferred depletion indicator. The B_{1952} indicator is considered to be implausible as the stock assessment estimates a large biomass decline within Region 5 even in the absence of fishing.
ETBF Catch	Stable	High catch in 2011 and 2012 catch slightly below 5-year average
ETBF Standardised CPUE	Stable	CPUE of prime-sized fish over past 5 years same as mean over past 13 years
ETBF Weights	Stable	Mean and lower 5 th and upper 95 th of weight distributions show no long term trends.
State catches	Negligible	
Recreational catches	Unknown	About 500 fish tagged per year in last few years. The catch is likely to be reasonably large but the mortality is unknown.
Status of stock in relation to the CHSP		If the CHSP interpretation to stock status is applied to the yellowfin tuna stock within the WCPO, the stock is estimated to be depleted to ~44% $B_{F=0}$

1. Indicator $B_{F=0}$ is the average annual total biomass over a recent period in the absence of fishing.
2. Indicator B_{1952} is the equilibrium unexploited total biomass.

SC7 determined that the WCPO yellowfin appears to be capable of producing MSY. The stock is not experiencing overfishing and is not in an overfished state. Projections to 2021 indicate that fishing mortality is projected to remain below F_{MSY} and the spawning biomass will remain above SB_{MSY} .

However, SC7 noted that levels of fishing mortality, exploitation rates and depletion differ between regions, and that exploitation rates were highest in the western equatorial region (Region 3 in the stock assessment model), which accounts for ~81% of the total yellowfin tuna catch, and that the spawning biomass in this region is estimated to have declined to about 31% of the unexploited level ($SB_{2010, F=0}$).

SC7 recommended that there be no increase in fishing mortality in the western equatorial region

Whole of government position

Not available.

Bigeye Tuna

Current TACC: 1,056t
 Actual ETBF 2012/13 quota year catch: 553t (20.7% higher than 458t catch in 2011/12 quota year)
 2012 WCPFC convention area catch: 161,679t (provisional, and 1.2% higher than the 159,810t catch in 2011 and the highest since 2004).
 2012 catch within Region 5 (south of 10°S and west of 170°E) was 2,668t (provisional). The ETBF catch was 17.5% of this total and has averaged 20.3% over the past 5 years (based on logbook data supplied by SPC)
 In response to the AFMA Commission’s request to not provide RBCC advice based on the HS, TTRAG is providing stock status advice based on fishery indicators.

Indicators

A summary of the main indicators is found in the table below. Additional information can be found in Attachments A and B.

Indicator	Comment
Stock	Considered q single stock in the WCPO – connectivity between ETBF and equatorial regions uncertain but may be small.
WCPO Stock Assessment	Last assessment 2011. The base case selected by SC7 indicates $B_{current}/B_{MSY}=1.25$ and $SB_{current}/SB_{MSY}=1.19$. The range across the six sensitivity models selected by SC7 was 1.14–1.92. Therefore, there is a possibility that bigeye tuna is currently in an overfished state. For the base case selected by SC7 indicates $F_{current}/F_{MSY}=1.46$ with a range across the six models considered of 1.16–2.10. This indicates that overfishing is occurring for WCPO bigeye tuna Next assessment due 2014.

Indicator	Trend	Comment
Region 5 Catch	Increasing	After peak in 2008 total catch has increased over past 4 years.
ETBF Proportion of Region 5 Catch	Decreasing	In 2012 17.8% of longline catch and 17.5% of total catch.
Region 5 depletion	41.1% $B_{F=0}$ ¹ 17.7% B_{1952} ²	Averaged over 2007-2009 and based on the 2011 WCPO assessment. The SC has adopted $B_{F=0}$ as preferred depletion indicator. The B_{1952} indicator is considered to be implausible as the stock assessment estimates a large biomass decline within Region 5 even in the absence of fishing. Expert review of stock assessment indicated structural problems associated with tagging data within Region 5. Assessment currently under review.
ETBF Catch	Decline since 2008	High catches in 2007 and 2008. The 2012 catch was below 2008-2012 average corresponding to reduced effort.
ETBF Standardised CPUE	Stable	High inter-annual variability. CPUE of prime-sized fish over past 5-years slightly below mean over past 13 years.
ETBF Weights	Stable	Mean and lower 5 th and upper 95 th of weight distributions show no long term trends.
State catches	Negligible	
Recreational catches	Unknown	Likely to be extremely low with less than 10 fish tagged per year over the past few years.
Status of stock in relation to the CHSP		If the CHSP interpretation to stock status is applied to the bigeye tuna stock within the WCPO, the stock is estimated to be depleted to ~35% $B_{F=0}$

1. Indicator $B_{F=0}$ is the average annual total biomass over a recent period in the absence of fishing.

2. Indicator B_{1952} is the equilibrium unexploited total biomass.

SC Management Advice

SC7 recommended a minimum of 32% reduction in fishing mortality from the average levels for 2006–2009 to return the fishing mortality rate to *FMSY*. This recommended level of reduction is equivalent to a minimum 39% reduction of the 2004 level in fishing mortality, and a 28% reduction of the average 2001–2004 levels.

Overfishing and the increase in juvenile bigeye catches have resulted in a considerable reduction in the potential yield of the WCPO bigeye stock. SC7 concluded that MSY levels would increase if the mortality of juvenile bigeye was reduced.

SC7 noted that levels of fishing mortality, exploitation rates and depletion differ between regions, and that exploitation and depletion rates were highest in equatorial regions (Regions 3 and 4 in the stock assessment model), which accounts for 88% of the total bigeye tuna catch

(2001–2010), and that the spawning biomass in these regions is estimated to have declined to about 17% of the level that is estimated to occur in the absence of fishing ($SB_{2010}, F=0$). The Commission may consider measures that utilize a spatial management approach.

Whole of government position

Not available.

Albacore Tuna

Current TACC: 2,500t
 Actual ETBF 2012/13 quota year catch: 736t (0.1% lower than 737t catch in 2011/12 quota year).
 2012 South Pacific catch: 87,012 (provisional; 20.5% higher than the 72,234t catch in 2011 and the second highest on record).
 2012 catch within Region 5 (south of 10°S and west of 170°E): 23,144t (provisional). The ETBF catch was 2.4% of this total and has averaged 5.2% over the past 5 years (based on logbook data supplied by SPC).
 In response to the AFMA Commission’s request to not provide RBCC advice based on the HS, TTRAG is providing stock status advice based on fishery indicators.

Indicators

A summary of the main indicators is found in the table below. Additional information can be found in Attachments A and B.

Indicator	Comment	
Stock	Considered single stock in the south Pacific.	
WCPO Stock Assessment	Last assessment 2012. The key conclusions, based on the median of the grid, are that overfishing is not occurring and the stock is not in an overfished state. Spawning potential depletion levels ($SB_{current}/SB_{curr,F=0}$) of albacore were moderate at ~37%. However, SC8 noted that depletion levels of the exploitable biomass is estimated between about 10% and 60%, depending on the fishery, having increased sharply in recent years. Next assessment due 2015.	
Indicator	Trend	Comment
Region 5 Catch	Variable	The 2012 catch was the highest over the past 7 years.
ETBF Proportion of Region 5 Catch	Decreasing	In 2012 2.5% of longline catch and 2.4% of total catch.
Stock depletion	63% $B_{F=0}$ ¹ 59% B_{1960} ²	Averaged over 2007-2010 - based on 2012 assessment. SC has adopted $B_{F=0}$ as preferred depletion indicator.
ETBF Catch	Declining	Catch in 2012 the lowest since 2003 due

		to decrease in effort and change in targeting practices.
ETBF Standardised CPUE	Stable	CPUE of all-sized fish over past 5-years similar to mean over past 13 years
ETBF Weights	Stable	Mean and lower 5 th and upper 95 th of weight distributions show no long term trends.
State catches	Negligible	
Recreational catches	Unknown	About 1200 fish tagged per year in last few years. This is an important fishery for recreational fishers.
Status of stock in relation to the CHSP		If the CHSP interpretation to stock status is applied to the albacore tuna stock within the WCPO, the stock is estimated to be depleted to ~63% $B_{F=0}$

1. Indicator $B_{F=0}$ is the average annual total biomass over a recent period in the absence of fishing.
2. Indicator B_{1960} is the equilibrium unexploited total biomass.

SC Management Advice

SC8 determined that the South Pacific albacore stock is currently not overfished and overfishing is not occurring. Current biomass is sufficient to support current levels of catch. However, for several years the SC has noted that any increases in catch or effort are likely to lead to declines in catch rates in some regions, especially for longline catches of adult albacore, with associated impacts on vessel profitability. SC8 further noted that vessel activity must be managed, as per the requirements of CMM 2010-05. Given the recent expansion of the fishery and recent declines in exploitable biomass available to longline fisheries, and given the importance of maintaining catch rates, the SC recommends that longline fishing mortality be reduced if the Commission wishes to maintain economically viable catch rates.

Whole of government position

Not available.

Broadbill Swordfish

Current TACC: 1,396t

Actual ETBF 2012/13 quota year catch: 1,064t (10.4% lower than 1,187t catch in 2011/12 quota year)

2012 WCPFC convention area catch south of the equator: 9,656t (provisional; and 6.7% higher than the 9,053t catch in 2011).

2012 catch within the Region 5 (south of 10°S and west of 170°E): 1,721t (provisional). The ETBF catch was 59.1% of this total and has averaged 68.3% over the past 5 years (based on logbook data supplied by SPC).

Level of confidence with the current harvest strategy for the provision of management advice for the Australian fishery: High, following TTRAG's revision of both the target reference point and the CPUE standardisation.

The outcome from the harvest strategy is 1,378t (-1.3%).

TTRAG endorsed using a domestic harvest strategy to recommend an RBCC for Broadbill Swordfish based on:

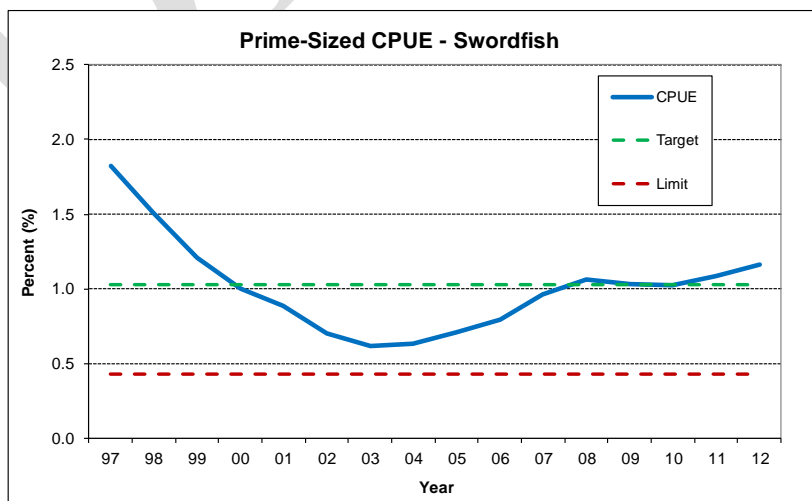
- i) scientific advice that there is a separate south-western Pacific stock;
- ii) Australia being a major player in the Broadbill Swordfish fishery targeting that stock;
- iii) results from archival tagging suggesting movements are predominantly north-south (up and down the coast) as opposed to east-west;
- iv) results from the Management Strategy Evaluation (MSE) report indicating management actions by Australia have the potential to impact on the status of the stock; and
- v) industry members' recognition that the level of the domestic catch does impact on the stock, as evidenced by past local depletion by the Australian fleet.

TTRAG agreed that the revised CPUE standardisations adequately reflect changes in fishing practices in the fishery. TTRAG also noted the use of the updated target reference point adopted at TTRAG7.

The TTRAG further noted there had been a significant decline in standardised prime sized catch rates between 1997 and 2003, followed by a recovery to 2008 after the application of a 1400t catch limit in 2006 (c.f. Figure SWO-1). TTRAG noted that the LOWESS-smoothed standardised CPUE of both prime-sized and large-sized Broadbill Swordfish have both shown a slight increase since 2008. TTRAG also noted that the CPUE indicator prime-sized fish is above the harvest strategy target, and the CPUE indicator for large-sized fish is just above its respective harvest strategy target. However, the proportion of large fish indicator used in the harvest strategy is just below its corresponding reference level of 20%. TTRAG noted that the indicator may be biased due to changes in fishing practices.

Based on the average processed weight of Broadbill Swordfish and the number of fish recorded in logbooks from 1997 to 2005 and CDR weights since 2006, the average annual Broadbill Swordfish catch during the period 1998 to 2012 was 1,789t. The smallest catch over this period was 1,064t (in 2012) and the highest 2,823t (in 1999). The average CDR catch between 2006 and 2008, a period of rebuilding of the resource, was 1,324t. The average CDR catch over the past 5 years has been 1,239t.

Figure SWO-1. LOWESS-smoothed CPUE for prime-sized Broadbill Swordfish (scaled so that the mean of the each index over the period shown is 1). The target and limit CPUE reference values are also shown.



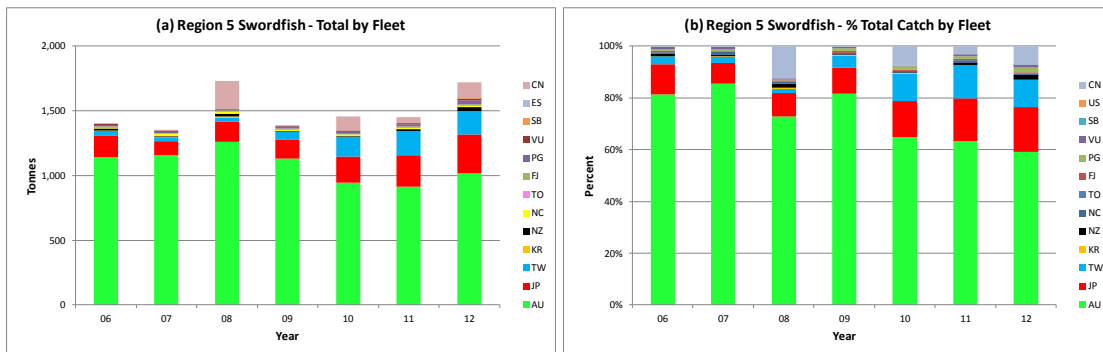
Stock structure

The RAG considered that SWO is a single stock within the south-west Pacific.

ETBF catch proportions

South-west Pacific scenario: the ETBF catch is 59.1% of the catch within Region 5.

Figure SWO-2. (a) Total annual catch of SWO by fleet within Region 5, and (b) the percentage of the total annual catch of SWO by fleet within Region 5



Conclusion

The current proportion of the ETBF catch compared with the total catch in both Region 5 and the broader south-west Pacific highlights that the harvest strategy for SWO should be effective in achieving the objectives of the Commonwealth Harvest Strategy Policy. The TTRAG can provide advice on the RBCC under the harvest strategy with caveats. TTRAG noted that the proportion of the ETBF catch has changed from around 80% to 60% over the past 5 years. If this trend continues then this could negate the future ability of the HS to effectively manage total fishing mortality in Region 5, particularly if changes made to catches in the ETBF are offset by increases in the catches by other fleets.

Stock status

The last stock assessment for Southwest Pacific Broadbill Swordfish was undertaken in 2013. The 2013 WCPFC Scientific Committee meeting (SC9) concluded that the assessment was highly sensitive to growth assumptions. Two different growth models, one from Australia and the other from Hawaii, were included in alternative model runs. The Scientific Committee could not decide which of these two assumptions was more reliable. Although the median of the uncertainty grid indicates that overfishing ($F_{\text{current}}/F_{\text{MSY}} = 0.74$) was not occurring those sensitivity runs that used the Australian growth and maturity schedule indicate that overfishing may be occurring (grid range 5th–95th percentiles: 0.51–2.02). Recent preliminary findings from tagging data indicate that this growth schedule warrants further consideration. Estimates of stock status are highly uncertain with respect to this assumption. The equivalent grid range of $F_{\text{current}}/F_{\text{MSY}}$ for the Hawaii schedule is 0.25 – 0.97. Across the uncertainty grid of 378 runs, where the Hawaii schedule was assumed, the probability of $F_{\text{current}}/F_{\text{MSY}}$ being greater than 1.0 was less than 3%, while when the slower Australian schedule was assumed, 54% of runs estimated the stock to be experiencing overfishing.

State catches

Negligible based on advice from industry members.

Recreational catches

Currently very small.

Management advice from the WCPFC SC

The 2013 WCPFC Scientific Committee meeting (SC9) recommended that given the current uncertainty in the assessment that the Commission adopt a precautionary approach when considering future management arrangements. Given this, SC9 recommends that there be no increase in fishing mortality over current (2007-2010) levels. Noting that recent catches between the equator and 20°S now represent the largest component of the catch in Region 2 (equator to 50°S, 165°E to 130°W), SC9 recommends that the Commission consider developing appropriate management measures for this Region which is not covered by CMM 2009-03.

Whole of government position

Not available.

Status of stock in relation to the CHSP

If the CHSP interpretation to stock status is applied to the Southwest Pacific Broadbill Swordfish stock, the spawning biomass in 2011 within Area 1 (adjacent to Australia) was estimated to be depleted to ~60% of the biomass that would exist in the absence of fishing. This estimate is based on the Hawaiian growth and maturity life histories.

Striped Marlin

Current TACC: 370t

Actual ETBF 2012/13 quota year catch: 254t (21.6% lower than the 324t catch in 2011/12 quota year)

2012 WCPFC statistical area catch south of the equator: 1,740t (provisional, and 0.9% lower than the 1,755t catch in 2011)

2012 commercial catch within Region 5 (south of 10°S and west of 170°E): 559t (provisional). The ETBF catch was 41.5% of this total and has averaged 46.9% over the past 5 years (based on logbook data supplied by SPC).

Level of confidence with the current harvest strategy for the provision of management advice: Low

The outcome from the harvest strategy is 333t (-10%).

TTRAG was uncertain on the use of the domestic harvest strategy to recommend a Striped Marlin RBCC, based on:

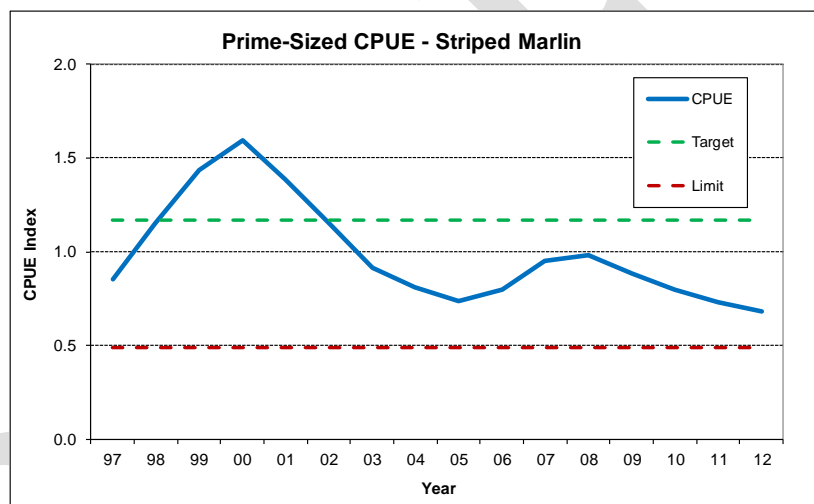
- i) Updated data provided to TTRAG indicates that the ETBF catch as a proportion of the total catch in Region 5 is significantly lower (41.5% in 2012 and 46.9% of total Region 5 commercial catch over the past 5 years) than previously indicated;
- ii) These catch proportions are below the levels tested in the previous MSE analyses making it uncertain whether management actions taken by Australia have the potential to impact on the status of the stock;
- iii) Given the above points TTRAG is seeking advice from the recently commenced MSE project on striped marlin on how effective the HS will be at these recent levels of catch proportion;
- iv) There is additional uncertainty pertaining to the level of mortality from the significant catch in the recreational sector which is currently not accounted for.

TTRAG noted the number of Striped Marlin tagged and released in the New Zealand and Australian recreational fisheries is a significant proportion of the total catch in the SW Pacific. The 2012 WCPFC stock assessment for SW Pacific Striped Marlin indicated that the impact of these fisheries on the stock of Striped Marlin is small. However, this impact will have been under-estimated as this assessment assumed that a zero mortality for tagged and released fish.

TTRAG recommended that the existing Striped Marlin harvest strategy can be used to provide management advice pending the revision of the Striped Marlin MSE in the context of the new stock assessment.

Based on the trend since 1998 in the standardised catch rate (CPUE) index for prime sized fish indicates that during the period 2003 to 2009 catch rates remained reasonably stable but have declined in recent years (c.f. Figure STM-1). However, there has been a significant decline in the CPUE of small-sized fish (<54 kg) since 2001. Based on the average processed weight of Striped Marlin and the number of fish recorded in logbooks for the period 1997-2005 and CDR recorded total catch weights since 2006, the average annual catch of Striped Marlin during the period 1997 to 2012 was 518t. The minimum catch over this period was 254t (in 2012) and the maximum was 859t (2001).

Figure STM-1. LOWESS-smoothed CPUE for prime-sized Striped Marlin (scaled so that the mean of the each index over the period shown is 1). The target and limit CPUE reference values are also shown.



Applicability of harvest strategy

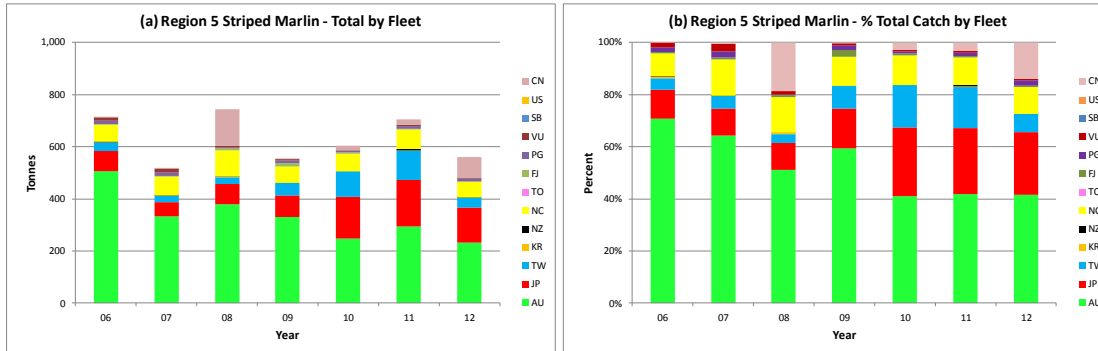
Stock structure

TTRAG considered that STM is a single stock within the south-west Pacific.

ETBF catch proportions

South-west Pacific scenario: the ETBF catch in 2012 was 41.5% of the total catch within Region 5 (c.f. Figure STM-2).

Figure STM-2. (a) Total annual catch of STM by fleet within Region 5, and (b) the percentage of the total annual catch of STM by fleet within Region 5.



Conclusion

TTRAG noted that over the past three years the ETBF catch has been around 40% of the total commercial catch within Region 5. TTRAG is seeking advice from the recently commenced MSE project on striped marlin on how effective the HS will be in managing fishing mortality within Region 5 at these levels of catch proportion.

Stock status

The updated 2012 stock assessment for SW Pacific Striped Marlin indicates that the stock is fully exploited, is not experiencing overfishing but may be overfished. The WCPFC SC8 noted that recent catches are close to MSY , and that recent fishing mortality is slightly below F_{MSY} , and that recent spawning biomass is slightly below SB_{MSY} . The recent catch increase is driven in part by increases in catch in the northern area of the stock that is not subject to the current CMM for this stock.

State catches

Negligible, based on advice from industry members.

Recreational catches

Unknown, but about 1100 fish tagged per year in Australia over the last four years. In New Zealand, about 1000 fish are tagged per year. Unknown mortality but there is probably a substantial landed catch by non-club recreational fishers. The Australian club landed catches are about 100 fish per year.

Management advice from the WCPFC

SC8 recommends measures to reduce overall catch of this stock, through the expansion of the geographical scope of CMM 2006-04 to cover the distribution range of this stock.

SC8 also recommended that in designing such a measure the Commission may need to consider the historic trends in the fishery, including the catch declines in the traditional central and southern areas and the recent catch increases in the northern areas.

SC8 recognised that Striped Marlin is often caught as a non-target species. SC8 therefore recommended that data analyses be conducted to identify areas of high catch concentration that could be subject to targeted management.

Whole of government position

Not available.

Status of stock in relation to the CHSP

If the CHSP interpretation to stock status is applied to the southwest Pacific Striped Marlin stock, the average spawning biomass between 2006 and 2009 is depleted to ~24% of the initial unexploited level.

Degree of connectivity

The results of genetic studies support a separate south-western Pacific stock of Striped Marlin.

DRAFT

ATTACHMENT C



Australian Tuna and Billfish Fisheries



ANNUAL RESEARCH STATEMENT



2014 - 2015

Version 1.0

Annual Research Statement for 2014/15

The Tropical Tuna Resource Assessment Group (TTRAG) and Tropical Tuna Management Advisory Committee (TTMAC) have identified the following projects as high priorities for the Australian Tuna and Billfish Fisheries for the 2014/15 financial year:

1. Data management, standardisation of CPUE and size data, development of fishery indicators, application of the ETBF harvest strategy, and provision of stock assessment advice to TTRAG.
2. Determination of the spatial dynamics and movement rates of the principal target species within the ETBF and connectivity with the broader WCPO – beyond tagging. This may include but is not limited to: Stable isotope analysis, otolith micro-chemistry or novel genetic techniques.
3. Determination of SWO growth and maturity relevant to the southwest Pacific stock.

Project 1 is considered the highest priority.

These projects are consistent with AFMA's corporate research goals and fishery management objectives, and should form the focus of research funding proposals.