



Australian Government

Australian Fisheries Management Authority



Tropical Tuna and Billfish Fisheries

Research Assessment Group

(TTRAG)

MINUTES

TTRAG 6

18-20 MARCH 2013

MOOLOOLABA

THE SIXTH MEETING OF THE TROPICAL TUNA AND BILLFISH FISHERIES RESOURCE ASSESSMENT GROUP (TTRAG6)

Mooloolaba 18-20 March 2013

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1 List of Actions

ACTION 1. Rob Campbell to provide bubble plots that show which factors in each year contribute most to changes in the standardisation of the CPUE.¹

ACTION 2. Rob Campbell to investigate changing the season categories for species to determine the best season classes and present the results to the RAG.¹

ACTION 3. Rob Campbell to do the CPUE standardisation combining Broadbill Swordfish areas 7 & 8 in one run and compared to a run with the data from area 8 removed. To be done in terms of all of the data including the size data.¹

ACTION 4. Rob Campbell to investigate the use of sea current direction in the CPUE standardisation to determine if it is a significant factor.¹

ACTION 5. Rob Campbell to investigate the amount of data on branchline length from logbooks.¹

ACTION 6. ROB CAMPBELL to further investigate the discard trends for potential use of observer discard data in the HS.

ACTION 7. Rob Campbell, for Striped Marlin and Broadbill Swordfish, convert the output of the stock assessments to standardised catch rates and present it back to the next RAG meeting in the July.

ACTION 8. MAC to consider if 10% change met rule should be changed.

ACTION 9. CSIRO, to investigate how many times the Harvest Strategy went below B20 under the currently used targets. (note, this work can only be undertaken as part of a larger MSE study. The proposed STM MSE could provide some guidance for this species.)

ACTION 10. Rob Campbell to produce graphs on the proportion of catch at all connectivity scenarios (Region 5, and/or South Pacific and/or South West Pacific, WCPO) for the AFMA commission advice.

¹ Actions 1 – 5 arose out of the Tropical Tuna and Billfish Fisheries CPUE Standardisation Workshop that was held immediately prior to TTRAG 6. Because they also relate to TTRAG business they have been included here for completeness.

ACTION 11. Rob Campbell to produce updated figures on the stock status for the AFMA commission advice.

ACTION 12. AFMA to provide advice to the TTRAG about any new Whole of Government position from DAFF or AFMA on the WCPFC.

2 Preliminaries

2.1 *Welcome and apologies and attendees*

1. The TTRAG Chair, Cathy Dichmont opened the meeting.

2. Attendees

Members

Cathy Dichmont, Chair - CSIRO

Steve Auld – AFMA

Rob Campbell - CSIRO

Garry Heilman - Industry

John Abbott - Industry

James Larcombe - ABARES

Don Bromhead – Independent scientist

Executive Officer

Nigel Abery - AFMA

Invited participant

Paul Williams – Industry

Anne Preece - CSIRO

Observers

Michael Williams – Industry

Parvo Walker – Industry

Stephanie Johnson - AFMA

Apologies

Rich Hillary - CSIRO

Julian Pepperell – Recreational fishing

Angelo Maiorana - Industry

2.2 *Pecuniary interest declarations*

1. TTRAG discussed the declaration of pecuniary interest and how TTRAG will deal with potential conflicts of interest.

2. The attendees were asked to state their pecuniary interests.

a. Cathy Dichmont, employee of CSIRO, no pecuniary interest in Australian tropical tuna fisheries. Paid to Chari the meeting. Cross cutting project on risk cost catch.

b. Rob Campbell, employee of CSIRO, no pecuniary interest in Australian tropical tuna fisheries. Actively engaged in research on the ETBF and WTBF.

PI of the following research project: *“Data management, provision of fishery indicators and implementation of the harvest strategies for Australia's tropical tuna fisheries”*

c. Garry Heilmann, director of several companies that hold 4 ETBF boat SFRs and quota SFRs (less than 5% of quota species except for Albacore Tuna which is greater than 5% of the total ETBF quota), fish receiver's permit, SESS boat SFR, Coral Sea fishery permit.

- d. Nigel Abery, employee of AFMA that includes a salary, no pecuniary interest in Australian tropical tuna fisheries. Has a research project funded by FRDC to investigate “*Line weighting regime for tuna longline fishing using live-baiting to improve crew safety and sea bird bycatch mitigation*”.
- e. Stephanie Johnson, Employee of AFMA, includes salary. No pecuniary interest in tropical tuna fisheries.
- f. Steve Auld, employee of AFMA that includes a salary, manager of the tropical tuna fisheries, no pecuniary interest in Australian tropical tuna fisheries.
- g. Don Bromhead, independent fisheries consultant, paid a sitting fee for participating in TTRAG, currently a consultant to the Secretariat of the Pacific Community, no pecuniary interest in Australian tropical tuna fisheries.
- h. Parvo Walker, director of a company that holds ETBF 4 longline SFRs; 4 Minorline SFRs and approx. 53,000 quota SFRs.
- i. Paul Williams, family owns ETBF boat SFRs and ETBF quota SFRs in the ETBF and a commonwealth fish receiver’s permit.
- j. John Abbott, owns ETBF boat SFR, and ETBF quota SFRs and state licence.
- k. James Larcombe, ABARES employee, ABARES is a research provider, no conflict of interest in Tropical Tuna fisheries. James Larcombe is engaged in Tropical Tuna fisheries research though ABARES does.
- l. Steve Hall, AFMA employee, coordinator of observers involved in the research project funded by FRDC to investigate “*Line weighting regime for tuna longline fishing using live-baiting to improve crew safety and sea bird bycatch mitigation*”.
- m. Anne Preece, Employee of CSIRO, interest in research same as Rob Campbell’s project and other project applications.

2.3 Adoption of agenda

- 3. The agenda was accepted with minor scheduling changes where item 3.1 Application of the Harvest Strategy was moved to after agenda item 2.3.
- 4. The agenda was adopted by TTRAG.

2.4 Acceptance of minutes

- 5. TTRAG agreed to the minutes of the TTRAG5 meeting held on the 4-5 September 2012.
- 6. James Larcombe stated that the species summary should be included as an appendix to the minutes.

7. Members wanting a paper copy of the TTRAG agenda items should request them from AFMA.

3 Harvest Strategy

3.1 Overview of the harvest strategy components

8. Cathy Dichmont gave an overview of the harvest strategy.
9. TTRAG agreed to include in the August meeting agenda an item to make the Harvest Strategy clearer i.e. what is meant by the Level 3 SPR40 – Bmsy proxy.

3.2 RBCC and TACC setting process

3.2.1 Application of the Harvest Strategy

1. The AFMA member, Steve Auld, stated that the AFMA Commission has requested TTRAG to provide advice on the application of the ETBF harvest strategy for each of the quota species. The AFMA member also stated that the AFMA Commission has requested that TTRAG provide more detailed information on the stock status particularly for those species that the Harvest Strategy does not apply.
2. TTRAG discussed the applicability of the Harvest Strategy to the quota species in the ETBF and the types of information on stock status that TTRAG will provide to the AFMA Commission.
3. TTRAG agreed that the Standardised CPUE indexes (that is the input to the harvest strategy) provide a good indication of the relative abundance of fish in the ETBF.
4. TTRAG agreed that the Harvest Strategy could in principal provide information on RBCCs under certain conditions. However, TTRAG agreed that these conditions are not met for all of the quota species in the ETBF. Furthermore, for the species where the conditions are currently met, if these conditions change in the future the Harvest Strategy would no longer be applicable.
5. TTRAG agreed that the conditions under which the harvest strategy can be applied are:
 - a. All sources of fishing mortality are managed as a response to outcomes of the harvest strategy; or
 - b. The ETBF contributes a large proportion of the fishing mortality on the stock of the species, so that any changes in the ETBF mortality in response to the outcome of the Harvest Strategy will have an influence on the stock; and
 - c. The proportion of the ETBF mortality remains large and does not decrease, meaning that any changes (reductions) in fishing mortality undertaken by the ETBF fleet are not offset by changes (increases) in fishing mortality by other fleets.

6. TTRAG discussed the advantages of having a Whole of Government position for species for which the Harvest Strategy is not applied.
7. TTRAG discussed the appropriateness of applying the Harvest Strategy for each quota species in the ETBF.

3.2.2 Albacore Tuna

8. TTRAG unanimously agreed that the harvest strategy cannot apply to Albacore Tuna. This is because information suggests that there is one large South Pacific stock for Albacore Tuna and the ETBF fishing mortality is only a small proportion of the fishing mortality on the stock.
9. TTRAG noted that there is some scientific information that may suggest that Albacore Tuna may not be as highly migratory as previously thought. The TTRAG agreed to review the information on Albacore Tuna movements and stock structure at a future meeting.

3.2.3 Yellowfin Tuna and Bigeye Tuna

10. TTRAG noted that there has previously been differing views about the applicability of the Harvest Strategy due to issues about the level of the connectivity between the Yellowfin Tuna and Bigeye Tuna impacted by the ETBF (region 5 of the WCPFC area) and the broader Western Central Pacific Ocean. The stock assessment and tagging data has suggested that there was limited movement between Region 5 and other areas.
11. TTRAG noted that in 2007 the ETBF contributed about 40% of the Bigeye Tuna catch in Region 5. However, currently the ETBF contributes only about 19% of the Bigeye Tuna catch in Region 5. TTRAG noted that the proportion of ETBF catch of Yellowfin Tuna in Region 5 is even less than that of Bigeye Tuna.
12. TTRAG agreed that the stock connectivity issue has become irrelevant given the lower proportion of the ETBF catch in Region 5. This suggests that regardless if there was or wasn't connectivity to the broader WPO, the Harvest Strategy could not function and should not be applied to Yellowfin Tuna and Bigeye Tuna.

3.2.4 Striped Marlin

13. TTRAG noted that the previous TTRAG position was that the Harvest Strategy should apply to Striped Marlin, but only if any catch reductions are shared by the recreational fishing sector, without which the impact on the stock could not be managed.
14. TTRAG discussed the catch of striped marlin taken by other fisheries (i.e. other commercial fleets, recreational fishing in Australia and recreational fishing in New Zealand) in Region 5. TTRAG noted that the catches of recreational fishers that are not club-affiliated have not been included in the calculations of the ETBF proportion of catch, as records are not available. TTRAG also noted that the post release survivability of recreational tag and release catches remains uncertain. TTRAG noted that the ETBF catch appears to be about 50% of the total fishing mortality in Region 5.

15. TTRAG noted that the new stock assessment suggested that the Striped Marlin stock is not subject to overfishing but is approaching being overfished.
16. TTRAG noted that there is work proposed to undertake a Management Strategy Evaluation (MSE) for Striped Marlin in the ETBF and thus new information will be available in the future. TTRAG further noted that the previous MSE indicated that the Harvest Strategy would be able to respond to changes in the stock abundance as the MSE assumed that the fishery accounted for about 50% of the fishing mortality in Region 5.
17. TTRAG noted that as the previous Striped Marlin MSE was undertaken assuming the ETBF's proportion of fishing mortality in Region 5 was similar to the current situation thus the Harvest Strategy should still apply.
18. TTRAG noted that the ETBF catches have been relatively stable over time.
19. TTRAG agreed that if the proportion of the ETBF catch in Region 5 decreases then the Harvest Strategy will not be effective. The TTRAG agreed to continue to monitor the other catches and ETBF's proportion of the catch and review the use of the Harvest Strategy if the ETBF proportion of the catch is reduced significantly.
20. The AFMA member stated that AFMA has written to DAFF concerning Striped Marlin resource sharing between the Australian commercial and recreational fishing sectors.
21. TTRAG noted that currently in the ETBF, Striped Marlin is predominantly a byproduct species. Industry members stated that they believe that there is no targeted fishing for Striped Marlin in the ETBF. Industry members stated that Striped Marlin is becoming a limiting species in the ETBF, because all quota is consumed from non-targeted byproduct catches and has resulted in changes to fisher behaviour to avoid catching Striped Marlin.

3.2.5 Broadbill Swordfish

22. TTRAG noted that the ETBF is currently the largest source of catches of Broadbill Swordfish (generally over 80% in recent years) in Region 5. However, non-ETBF catches of Broadbill Swordfish have increased in recent years.
23. TTRAG noted that there is very good Broadbill Swordfish availability and catch rates in the high seas areas in Region 5. This means that there is potential for further increases in non-ETBF catches in the future.
24. TTRAG noted that at the current ETBF TACC of 1,396 t, if the Harvest Strategy recommends even a relatively large catch reduction (i.e. 10% reduction), this amount of catch could easily be taken up by a single additional foreign fishing vessel fishing in Region 5, which would make the Harvest Strategy ineffective.
25. TTRAG noted that the Broadbill Swordfish MSE looked at two regions, ETBF and non-ETBF. In the scenario that non-ETBF effort ramped up the MSE suggested that the Harvest Strategy was still effective. Other fleet catches may impact on the Harvest Strategy effectiveness where migration links are seen with the ETBF.

26. TTRAG agreed that the Harvest Strategy applies in principal and should be applied in reality unless the proportion of ETBF catches changes. TTRAG agreed to monitor other fleet catches and review the application of the Harvest Strategy if there are significant increases in other fleet catches in Region 5.
27. TTRAG agreed that of all the ETBF quota species the Harvest Strategy is most applicable to Broadbill Swordfish.
28. TTRAG discussed the movement of Broadbill Swordfish and stock structure between Australia and New Zealand. The current scientific evidence from tagging studies suggests that there was not a large amount of movement between Australia and New Zealand.

3.3 Review of Size limits for the prime fish category

29. TTRAG agreed that because the Harvest Strategy will only be applied to Striped Marlin and Broadbill Swordfish, only the size limits for these species will be reviewed in detail.
30. Rob Campbell gave a presentation on the size distribution and classes of quota species in the ETBF Harvest Strategy.
31. There are three size classes used in the ETBF Harvest Strategy (Recruits, Prime and Old). Using data from 1997 -2008, the 25 percentiles of the upper and lower distribution tails of the fish size distribution have been used for the recruits and old classes leaving the middle 50 percent of the size data as the prime size class of fish. These size classes have been used to ensure that sufficient data is contained in the different size classes. If smaller proportions were used the amount of data would be less. The same values for the size category cut offs are used every year.
32. TTRAG noted that the classes, recruits, prime and old do not necessarily relate to the maturity status of the fish. These relate to different size classes impacted by the fishery to give indications of the impacts on the stock from fishing.
33. TTRAG noted that the Striped Marlin size distribution histograms are very similar over the years.
34. TTRAG discussed the size classes for Yellowfin Tuna. The recruits size category appears to be juvenile fish which approach maturity at the cut-off value. The proportion of mature Yellowfin Tuna increases in the prime class. The old class are all mature fish.
35. TTRAG discussed the size classes for Bigeye Tuna. The recruits size category appear to be mostly juvenile fish. The proportion of mature Bigeye Tuna increases in the prime class but a substantial portion of the old size class are immature.

3.3.1 Broadbill Swordfish

36. Only a small proportion of the recruit fish class are mature. However depending on the scientific publication used for age at maturity, the proportion of mature fish in the prime size class is either 100% or about 26%. Two studies on age at maturity show different ages either 50% mature at age 4 years or 50% mature at age 10 years.

37. TTRAG agreed that the size classes were appropriate for Broadbill Swordfish.

3.3.2 Striped Marlin

38. TTRAG noted that the age of males at recruit size cut-off is 1.75 years this equates to 92% of males being mature at the recruit size cut-off. The age of females at recruit size cut-off is 1.62 years but a smaller proportion (24%) of the females are mature at the recruit size cut-off.
39. TTRAG noted recent research which has indicated that while most female striped marlin (studied) appeared to be physiologically capable of spawning by 2 years of age, the majority of observed reproductive activity was undertaken by females aged 3-4 years of age.
40. TTRAG noted that the industry suggested that the lighter Striped Marlin are the skinny ones that are caught after the spawning run, these are considered recruits in the size class but are not juveniles. Seasonal fluctuation in weight and condition of striped marlin has been demonstrated in the scientific literature. These lighter (skinny) low quality Striped Marlin are also likely to be discarded, particularly now under quota management. This has implications on how the Harvest Strategy operates and may artificially suggest that there are fewer recruits.
41. TTRAG agreed that using the percentiles for the size classes is the appropriate technique and that the currently used lower 25, 50, upper 25 percentiles are the appropriate cut-offs to ensure that enough data is included in the recruits and old classes. It also ensures that the bulk of the data is in the prime class from which is derived the CPUE used to help estimate the RBCC.

3.3.3 Size of discards and use of observer data

42. TTRAG discussed the use of the discard data in the ETBF harvest strategy.
43. TTRAG discussed the discrepancy between the logbook data and observer data discard rates. Logbook data is known to be inaccurate. TTRAG noted that the CPUE used in the Harvest Strategy is calculated from retained and discarded catch (from logbook data).
44. TTRAG noted that AFMA is reviewing the discards policy, and considering if discards should be decremented from quota, this may be causing underreporting of discards in logbooks.
45. Industry participants stated that they believed that the logbook reporting has improved over time.
46. TTRAG agreed that further investigation of any trends in discarding or discarding reporting is needed. TTRAG agreed to review the discards trends and the potential use of observer data on discards in the Harvest Strategy.

47. Rob Campbell presented an analysis of logbook data with the introduction of quota (change between 2010 and 2011). Change from 2010 to 2011 with quota introduction meant that the major changes were in the length of the mainline and the number of lightsticks used. This coincided with the change to targeting of Broadbill Swordfish, possibly due to the lack of Yellowfin Tuna quota and or the holding of Broadbill Swordfish quota.
48. TTRAG noted that the results show that in the 3rd and 4th quarters of 2011 there were fewer small Yellowfin Tuna retained. Industry participants stated that at the start of the season they realised that they were using a lot of quota and not making much money from targeting small Yellowfin Tuna and then changed their practices.
49. TTRAG noted that 2010 was an anomalous year as it was the transition between allocation of hook quota which was then converted to ITQ quota. Because 2010 was an anomalous year it did not make a good comparison to the year when quota was introduced.
50. Industry participants stated that there are often assumptions made about the introduction of quota etc... it may be good to provide information to the Commission about what actually happened.

ACTION 6. ROB CAMPBELL to further investigate the discards trends for potential use of observer discard data in the HS.

3.4 Target Reference Point for Broadbill Swordfish

51. The Target in the Harvest Strategy for Broadbill Swordfish is an average of the first 5 years of the targeted fishing for Broadbill Swordfish in the ETBF. Though there was fishing by the Japanese prior to the ETBF they were not specifically targeting Broadbill Swordfish. Japanese catches in and adjacent to the East Coast Australian Exclusive Economic Zone in 1983-90 had an average catch of about 800 tonnes, the 91-96 average catch was about 400 tonnes. Japanese fishing off the East coast had a maximum of 25 million hooks per year in their longline fishery. However, the Japanese primarily targeted tuna species.
52. TTRAG noted that the target period that is currently used may represent a period of biomass that is above Bmey (i.e. and therefore not consistent with the HSP) and that the target needed to be reviewed.
53. TTRAG agreed to compare the biomass levels from the stock assessment to the CPUE to determine a target level that is consistent with the HSP.
54. An industry participant stated that the current target was chosen as one which the industry would like to get back to (as it was a good economic period of fishing) but this does not necessarily mean it equates to a period of BMEY.

ACTION 7. Rob Campbell, for Striped Marlin and Broadbill Swordfish, convert the output of the stock assessments to standardised catch rates and present it back to the next RAG meeting in the July.

55. TTRAG noted that Broadbill Swordfish show local site fidelity and depletion may be an issue when reconstructing CPUE from the stock assessment.
56. TTRAG noted that the Striped Marlin stock assessment does not give biomass estimates for the different regions (i.e. Region 5). It only gives biomass estimates for the South West stock.
57. TTRAG agreed that the Harvest Strategy with the revised targets would be used for the next RBCC if the targets could be agreed at the next TTRAG meeting.

3.5 Maximum change limit of 10% meta rule

58. TTRAG discussed the rationale for the 10% change meta rule for the ETBF Harvest Strategy. TTRAG noted that the 10% maximum change meta rule was introduced to provide stability for industry. Industry did not want the risk of dramatic reductions in the TACC while the Harvest Strategy issues were being sorted out.
59. TTRAG also agreed that the RBCC minimum change meta rules should also be considered, where the RBCC is left unchanged if the change is only a small amount. TTRAG noted that with the introduction of any minimum change rule, the harvest strategy needs to account for trend if small changes year after year are not considered because they are within the minimum change amount.

ACTION 8. MAC to consider if 10% change met rule should be changed.

60. TTRAG discussed different types of minimum change rules.

3.6 Limit reference point

61. TTRAG noted that the Harvest Strategy does not currently have a Limit Reference Point (LRP). The Harvest strategy is required to have a LRP to be consistent with the Commonwealth Harvest Strategy Policy (CHSP).
62. TTRAG discussed the definition of the LRP. Control rules are needed for when the LRP is reached. The LRP could be a CPUE proxy for B20 of female spawning biomass.
63. TTRAG noted that the ETBF CPUE index has a lot of inter-annual variation, in the Harvest Strategy, this variation has been smoothed with the LOWESS smoother to remove the error and observe the trend. TTRAG agreed to investigate the number of times that the LRP (proposed above) was triggered historically under the Harvest Strategy (using the LOWESS smoothed standardised CPUE).
64. TTRAG noted that the ETBF Harvest Strategy MSE investigated how often the stock biomass went below B20 and the performance was not good (the harvest strategy has since been revised).

65. TTRAG noted that this information may also be able to be obtained from the Broadbill Swordfish and Striped Marlin stock assessments.
66. TTRAG noted that different proxies for the target reference point can be used under the CHSP: $1.2 * B_{msy}$, B48 or Bmey. The default limit reference point is B20.
67. TTRAG noted that in the assessments there is an estimate of Bmsy but that it is highly dependent upon assumptions about the stock-recruitment relationship which remains uncertain.
68. TTRAG discussed proxies, the ratios between Bmsy and Bmey and which proxy for the target reference point to use in the Harvest strategy.
69. TTRAG noted that ABARES recently did a study of the ratio between Bmsy and Bmey.
70. TTRAG agreed to defer the introduction of the LRP until the July TTRAG meeting, after the review of the target reference point.

3.7 Limit reference point control rules

71. TTRAG discussed the use of limit reference point control rules for the ETBF harvest strategy. TTRAG noted that if the Harvest Strategy is working correctly then the Limit Reference Point (LRP) should never be reached. TTRAG noted again that in the event that the LRP is reached unilaterally reducing the ETBF TAC while other sources (other fleets) of mortality continue is unlikely to recover the stock and is not equitable for the ETBF.
72. TTRAG agreed in the previous agenda item to investigate the number of times that the Harvest Strategy would breach the LRP (now that the Harvest Strategy has the LOWESS smoother). The TTRAG will review the control rules for the LRP after this information is known.

ACTION 9. CSIRO, to investigate how many times the Harvest Strategy went below B20 under the currently used targets. (note, this work can only be undertaken as part of a larger MSE study. The proposed STM MSE could provide some guidance for this species.)

3.8 Stock Status Advice to the AFMA Commission

73. TTRAG discussed what stock status advice the TTRAG would provide to the AFMA commission for species that the TTRAG will and will not provide RBCC advice.
74. TTRAG agreed to provide the types of advice pertaining to stock status as currently listed in the *TTRAG Advice Regarding Recommended Biological Commercial Catches (RBCCs) for the Easter Tuna and Billfish Fishery* summary (see Attachment 1).

75. TTRAG noted that the Albacore Tuna stock may not be as connected with the South Pacific as previously thought. If the balance of evidence suggests that this is the case the Advice to the AFMA Commission should be updated to reflect this change.
76. TTRAG noted that the Region 5 Stock assessment for Yellowfin Tuna and Bigeye Tuna would be useful on a stock status basis but not on an RBCC basis (due to the ETBF catch being only a small component of the total Region 5 catch). TTRAG noted that the model is complex and SPC may need to investigate further if a Region 5 Yellowfin Tuna and Bigeye Tuna assessment would be useful.
77. TTRAG noted that cost for any stock assessment would come from the TTRAG budget 80% industry and 20% government funded. Any additional expenditure would need consultation through TTRAG and TTMAC.
78. TTRAG noted that as TTRAG provides advice on the resource, issues such as equity in resource sharing have not been included in the advice. These issues are to be taken into consideration by the TTMAC.
79. TTRAG agreed The CPUE indicators will be produced for all species but the Harvest Strategy will only be run for the Billfish species (Broadbill Swordfish and Striped Marlin).

ACTION 10. Rob Campbell to produce graphs on the proportion of catch at all connectivity scenarios (Region 5, and/or South Pacific and/or South West Pacific, WCPO) for the AFMA commission advice.

ACTION 11. Rob Campbell to produce updated figures on the stock status for the AFMA commission advice.

ACTION 12. AFMA to provide advice to the TTRAG about any new Whole of Government position from DAFF or AFMA on the WCPFC.

3.9 MICE Project

80. Cathy Dichmont, on behalf of Rich Hillary (an apology), gave a description of the MICE project.
81. Models of Intermediate Complexity Ecosystems (MICE) is a project that is being undertaken by CSIRO. The model is based on parameters of the data rather than user input. Built species by species, the model has/will have trophic interactions.

4 Comment on the Commonwealth Harvest Strategy Policy Review

82. James Larcombe (ABARES) gave an overview of the review of the CHSP and bycatch policy by DAFF. TTRAG noted that it is likely that there will be changes to the policies that will require additional work by TTRAG.
83. TTRAG noted that a key issue raised was about fleets fishing on multi-jurisdictional stocks and allocation of resource between the jurisdictions.

5 The Borthwick review of AFMA.

84. TTRAG discussed the Review of Commonwealth Fisheries: Legislation, Policy and Management by Mr David Borthwick AO PSM. As of the TTRAG meeting the report had not been publically released.

6 Other Business

6.1 Major byproduct species

85. The major byproduct species catches will be presented to the next TTRAG.

6.2 MPA impact on the Harvest Strategy

86. AFMA still does not know the outcome of the funding for the project on the impact of the MPA on the operation of the Harvest Strategy.

7 Date and venue for next meeting

87. TTRAG7 will be 2 days to be held at Mooloolaba on 9-10 July. Review the changes proposed to the Harvest Strategy (Broadbill Swordfish Target, LRF etc...).
88. TTRAG8 will be 2 days to be held at Mooloolaba on 27-28 Aug 2013 to produce RBCCs.

The Chair closed the meeting.