



Australian Government

Australian Fisheries Management Authority



# Small Pelagic Fishery Resource Assessment Group (SPFRAG)

MEETING RECORD

MEETING 15

19 MARCH 2013

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# SMALL PELAGIC FISHERY RESOURCE ASSESSMENT GROUP (SPFRAG) 15

<b>Acting Chair</b>	Mr John Pollock
<b>Date and time</b>	19 March 2013, 9:50am – 5:00pm
<b>Location</b>	AFMA Offices, 73 Northbourne Ave, Canberra, ACT.

## **Attendance**

### ***Members and Permanent Observers***

John Pollock	Chair
Tim Ward	South Australian Research and Development Institute (SARDI)
Jeremy Lyle	Institute of Marine and Antarctic Studies (IMAS)
Andrew Penney	Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) (substituting for Andy Moore)
Denis Brown	Industry member
Gerry Geen	Industry member
Terry Romaro	Industry member
Michael Thomas	Industry member
Graham Pike	Recreational/Charter Fishing member
Jon Bryan	Environment/Conservation member
George Day	AFMA member
Kylie Tonon	Executive Officer (AFMA)

### ***Observers***

Grant Pullen	Tasmanian State Government
Brodie Macdonald	AFMA A/g SPF manager
Giulia Porro	AFMA graduate, SPF
Sally McCarthy	AFMA policy officer
Daniel Corrie	AFMA graduate, policy

### ***Apologies***

Annabel Jones	State Observer (South Australia)
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# RECOMMENDATIONS AND ACTIONS ARISING

## RBC recommendations

1. The SPFRAG recommend the following RBCs apply for 2012-13:

Species	Eastern Zone RBC	Western Zone RBC
Blue Mackerel ( <i>Scomber australasicus</i> )	3,000 tonnes	6,500 tonnes
Redbait ( <i>Emmelichthys nitidus</i> )	5,200 tonnes	5,000 tonnes
Jack Mackerel ( <i>Trachurus declivis</i> , <i>T murphyi</i> )	10,600 tonnes	5,000 tonnes
Australian Sardine ( <i>Sardinops sagax</i> )	3,000 tonnes	n/a

2. All recommendations correspond to an application of the SPF Harvest Strategy. The SPFRAG noted that the RBCs listed under the Tier 2 guidelines are the maximum that can apply to all stocks.
3. The Environment Member strongly opposed the recommendations of Tier 2 RBCs for all species and recommended that the Tier 3 maximum RBCs of 500 tonnes be adopted for all quota species.
4. The Recreational Fishing Member strongly opposed the recommendation for Jack Mackerel east and recommended that the Tier 2 maximum RBC of 5,000 tonnes be adopted.

## Actions arising

1. AFMA to develop a policy statement on the management of meeting audio-recordings.
2. AFMA and ABARES to compile information about abundance of predator species to inform future RBC discussions.
3. AFMA to make a formal request to NSW for a permanent NSW observer on future SPFRAG meetings.
4. The SPFRAG to separate out the catches of Yellowtail Scad and Tim Ward to include an assessment of yellowtail in the annual fishery assessment report.
5. SARDI to assist industry to develop a format to collect survey data to incorporate in the fishery assessment report.
6. Tim Ward to include annual catches by jurisdiction in future Sardine RBC presentations
7. AFMA to progress catch sharing arrangements with NSW and Victoria.

# PRELIMINARIES

## 1. Introduction and apologies

The interim Chair, Mr John Pollock, welcomed members and observers to the meeting. The RAG noted Andrew Penney from ABARES was attending in place of Andy Moore. The Chair emphasised that the key objective of the meeting was to agree SPF RBCs for the 2013-14 season starting on 1 May 2013.

## 2. Declaration of interest

Mr Day explained that Fisheries Administration Paper (FAP) 12 states that only pecuniary interests must be declared but that members may declare any further interests if they wish. The RAG noted that FAP 12 is currently being reviewed.

Conflicts of interests declared by Members are shown in the Appendix. In accordance with FAP 12, industry members who declared a pecuniary conflict of interest left the room one at a time while the RAG discussed whether that member should leave the room for any agenda item based on the conflicts of interest they declared. The RAG did not require any industry members to leave the room for any agenda item. Mr Pike suggested that Mr Geen should consider his conflict of interest in relation to the decisions made on Jack Mackerel (east) and possibly Jack Mackerel (west). The RAG noted that decisions relating to Jack Mackerel would affect the fishery as a whole and that there was no need for Mr Geen to abstain from this discussion or recommendation.

Mr Brown expressed a concern that non-commercial sectors still benefit financially from management of the SPF but are not required to declare any pecuniary interests. Mr Penney stated that there is a distinction between declaring and managing conflicts of interest. He suggested that a conflict of interest in this scientific forum is any interest that may bias the scientific advice. As long as the SPFRAG makes decisions based strictly in accordance with the Harvest Strategy and the science is not being biased by views in the room, then he considers that the conflict is appropriately managed.

## 3. Adoption of agenda

The SPFRAG adopted the draft agenda with the addition of the following items:

- Selection process for the continuing SPFRAG members (to be covered under the AFMA management update).
- Discussion of the letter from Steve Kerr regarding allocations between NSW and the Commonwealth (to be considered under Item 12).
- Agenda Item 4(e) for Yellowtail Scad assessment.

## Audio Recordings

Debate arose about SPFRAG members recording meetings for their own personal records. The SPFRAG Chair requested that for this and future meetings, the AFMA Executive Officer should take an audio recording of all SPFRAG meetings for the exclusive purpose of preparing an accurate meeting record. The SPFRAG agreed there was a need for AFMA to develop a policy statement on how the RAG will manage the use of these audio recordings for reviewing meeting records.

**ACTION ITEM:** AFMA to develop a policy statement on the management of meeting audio-recordings.

## DECISION ITEMS

### 4. SPF stock assessments and Recommended Biological Catches (RBCs) for the 2012-13 fishing season

The SPFRAG noted the results of the annual fishery assessment report provided by A/Prof Ward.

A/Prof Ward advised that the results were provisional at this stage as limited catch and effort data was provided by state agencies. General activity across the SPF was low and therefore the number of samples were low. There was limited additional research available relevant to the fishery with the exception of the CSIRO ecosystem modeling project and Simon Goldsworthy's project on the South Australian Sardine ecological footprint.

Mr Penney suggested that the SPFRAG ensure that the data used to support RBCs is representative of the stock and of the area most fished. Then the SPFRAG can say that the samples are small but representative and not biased. The scientific members on the RAG pointed from the limited information available, the data is unlikely to represent populations but is likely to represent the catches.

Noting the limited amount of fishery and biological data available on which to base an assessment, Mr Penney suggested that future SPF RBC deliberations should include a review of indicators of abundance for predator species such as tuna, seabirds, seals and dolphins. The RAG generally supported this suggestion.

**ACTION ITEM** – AFMA and ABARES to compile information about abundance of predator species to inform future SPFRAG RBC discussions.

### *Blue Mackerel*

In the west, catches increased rapidly after 2004 reaching 2,000 tonnes in 2008-09 and decreasing to approximately 135 tonnes in 2011-12. In the east, catches between 1997-98 and 2010-11 ranged from 350-1,000 tonnes. Approximately 250 tonnes was taken in 2011-12. A/Prof Ward advised that the age structures for Blue Mackerel did not appear to have changed and there has been no apparent contraction in age structures.

Mr Thomas explained that Blue Mackerel off Port Lincoln was primarily caught opportunistically at the end of the SBT season. There has not been any intention to catch it in recent years.

## Blue Mackerel east RBC

In considering the RBC for the east, the RAG noted this was the third year on Tier 2 assessment and that a maximum Tier 2 default RBC of 3,000 tonnes applied. This figure is based on a 7.5% of the best estimate of spawning biomass of 40,000 tonnes.

Mr Bryan suggested that he does not agree with the Tier 2 maximum being applied for the Blue Mackerel East given the paucity of the data available, the uncertainty on stock movements and the possibility of localised depletion. Mr Bryan recommended a Tier 3 RBC of 500t.

A/Prof Ward suggested that the Harvest Strategy is designed to balance risks to the fishery, with catches and costs of assessment. Although recent catches have been at Tier 3 levels, it is up to industry whether they want to drop down to Tier 3 level of assessment, or if they want to operate at Tier 2 level catches and pay for the appropriate level of assessment.

The SPFRAG scientific members acknowledged that localised depletion is a possibility in the SPF, however:

- It is the SPFRAG's role to operate within the Harvest Strategy guidelines to set the RBCs based on the information we have. The Harvest Strategy does have a provision for monitoring and implementing measures to deal with the risk of localised depletion.
- An ecosystem assessment has been completed in the South Australian Sardine Fishery and although localised depletion could occur, it hasn't occurred, but the SASF has still put controls in place to monitor and control this possibility.
- The SPFRAG recommended management controls to put in place, such as trigger levels and move on rules, while the RAG learns more about this issue. A method was determined at the August SPFRAG meeting, however fishing needs to occur in order to learn more.
- The ABARES representative advised that he had contacted researchers in the USA and South Africa, seeking evidence for localised depletion of small pelagic stocks. No evidence of localised depletion has been reported in these regions, and contractions in ranges or local declines in abundance in some of those pelagic fisheries have been shown to be the result of overall depletion, and not localised depletion. All of these species are known to be fairly highly migratory, with annual migrations between feeding and spawning areas being closely related to oceanographic conditions. For example, Chilean jack mackerel in the SE Pacific show east-west annual migrations extending up to 3000km, covering distances of hundreds of kilometres per month.

Mr Bryan maintained the view that the move on rules suggested at the last meeting were inadequate for dealing with localised depletion and that he would agree to disagree.

The SPFRAG reconsidered the results of the Management Strategy Evaluation (MSE) for Blue Mackerel east which, as pointed out by the ABARES representative, suggested there may be some risk to this stock at a harvest level of 3000t. Notwithstanding the MSE outcomes, which had been considered by Scientific Members of the SPFRAG when it was published in 2010, the SPFRAG considered that overall there was not a high risk to the stock at 7.5% harvest rate and adopted this as the basis for the RBC.

Based on the information presented the majority of the SPFRAG recommended a Tier 2 RBC of 3,000 tonnes for Blue Mackerel East based on 7.5% of the best estimate of spawning biomass of 40,000t.

Mr Bryan strongly opposed this recommendation and suggested to drop down to Tier 3 based on a failure to address localised depletion and other concerns raised by Minister Burke. Mr Bryan suggested that the SPFRAG does not have information on fish movements and that using RBCs to deal with localised depletion is a blunt tool. He suggested that this uncertainty is enough to recommend dropping all species back to Tier 3 levels to acknowledge an absence of new information.

### Blue Mackerel west RBC

In considering the RBC for 2013-14, the RAG noted this was the third year on Tier 2 assessment and that a maximum Tier 2 default RBC of 6,500 tonnes applied.

The majority of the SPFRAG agreed with this RBC on the basis that:

- There is no evidence to suggest that recent low catches of Blue Mackerel west are not sustainable, nor is there evidence to suggest a decline in the stock.
- Recent annual catches have been well below the DEPM spawning biomass estimate for each zone and even further below the MSE model calculated estimate.
- MSE testing for Blue Mackerel west showed no risk of falling below biomass limit reference points at the Tier 2 exploitation rate.

Mr Bryan opposed the recommendation of this RBC given the paucity of the data available, uncertainty on stock movements and the possibility of localised depletion. Mr Bryan recommended the Tier 3 maximum RBC of 500 tonnes.

**RECOMMENDATION:** The SPFRAG recommended the following RBCs apply for 2013-14:

Blue Mackerel East: RBC 3,000 tonnes

Blue Mackerel West: RBC 6,500 tonnes

*Note: The Environment Member strongly opposed these recommendations and recommended the Tier 3 maximum RBC of 500 tonnes for both east and west stocks.*

### Jack Mackerel

Catches of Jack Mackerel in the east have been variable with catches off Tasmania peaking at almost 40,000 tonnes in 1986-87, but not exceeding 3,000 tonnes since 1999-2000. In 2011/12 catches in the east were the lowest ever recorded of approximately 2 tonnes. Catches in the west are lower than the east, with less than 500 tonnes taken since 1997.

The MSE results indicate that the default Tier 2 maximum harvest levels for the east and west are conservative and sustainable. The MSE by ABARES did not include the spawning biomass estimates from the Neira report. Mr Penney explained that in the absence of biomass estimate, the MSE assessed the Jack Mackerel stock based on a range of 40,000 to 80,000 tonnes and exploitation at the Tier 2 level would create risks to the stock if the estimate was 40,000 tonnes. It was noted that the results should be treated with caution as these harvest quantities are absolute quantities and that without a DEPM estimate of spawning biomass there is no benchmark to compare them against.

## Jack Mackerel west RBC

The RAG noted that Jack Mackerel west falls under Tier 2 of the Harvest Strategy with a default maximum of 5,000 tonnes as there has been no DEPM survey for this stock.

The majority of the SPFRAG agreed with this RBC on the basis that:

- There is no evidence to suggest that recent low catches of Jack Mackerel west are not sustainable, nor is there evidence to suggest a decline in the stock.
- Recent annual catches have been well below the MSE model calculated estimate.
- MSE testing for Jack Mackerel west showed no risk of falling below biomass limit reference points at the Tier 2 exploitation rate.

Mr Bryan opposed this recommendation given the paucity of the data available, uncertainty on stock movements and the possibility of localised depletion. Mr Bryan recommended the stock move to the Tier 3 maximum RBC of 500 tonnes.

## Jack Mackerel east RBC

The results of a DEPM survey for Jack Mackerel east, *Application of daily egg production to estimate biomass of Jack Mackerel, Trachurus declivis*, (Neira, 2011) suggested the spawning biomass was between 114,000 and 170,000 tonnes with a midrange estimate of around 140,000 tonnes. Several reports since then, including a review by Nancy Lo, a paper by IMAS and ecosystem modeling by Beth Fulton have supported the biomass estimates in the Neira report.

A/Prof Ward explained that the most recent work by Beth Fulton indicates that lower estimates of spawning biomass (~ 20-30,000 tonnes) are not plausible, and that the model did not result in any negative ecosystem impacts if exploiting 15% of the stock.

Mr Penney explained that the western New Zealand Jack Mackerel catches increased rapidly from around 10,000 tonnes to 30,000 tonnes between 1999 and 2012 with no adverse environmental effects that would suggest a decline in the New Zealand in stock. He suggested that the SPFRAG would need to determine how relevant this sort of observation is to its assessment of the Tasmanian stock but that this type of supporting evidence can help the RAG to make informed RBC decisions in the absence of robust age-frequency data.

In discussing the Jack Mackerel East RBC, Mr Pike made a statement outlining the following points:

- The SPF Harvest Strategy Tier 2 default RBC is 5,000 tonnes, however AFMA is proposing to double this to 10,600 tonnes for 2013-14. This RBC was used last year and has been rejected by the Australian government.
- There is no new DEPM assessment, however AFMA has paid “experts” to “shore up” the contentious and old data used last year. The DEPM survey was not targeted for Jack Mackerel and the fish sampled are no longer in the population.
- The Harvest Strategy provides for a decay period over five years for DEPM survey results to justify Tier 1 RBCs. The data for the Neira DEPM estimate is 11 years old and under the HS should be 5,000 tonnes for 2013-14.
- The SPFRAG does not know what the movements of small pelagic species are or how many there are and what effects global warming may have on the population.

- The recreational fishing sector suggests that this may be a way to allow a mini super trawler into the fishery which slips under the Government's fishing ban.

Mr Day stated that the 10,600 tonnes TAC, based on 7.5% of Neira's estimate of biomass (141,500 tonnes), is in line with the Harvest Strategy.

A/Prof Ward mentioned that:

- Under the SPF Harvest Strategy, the default of 5,000 tonnes is used in the absence of a DEPM survey. There is a DEPM survey and supporting information that the SPFRAG should use to inform the RBC.
- The 141,500 tonne estimate of spawning biomass was the mid-range estimate and there have since been various independent reviews, such as those by Nancy Lo and the ecosystem modeling by Beth Fulton, that have suggested that the Neira biomass estimates are credible.
- The ecosystem modeling report does not discount the potential for local depletions at an exploitation rate of 15% however the SPFRAG has measures for managing localised depletion that we should continue to work on.
- The SPFRAG agreed to a 10,600 tonne RBC last year based on the assumption that there would be a DEPM survey in 2012. Although the survey did not occur, we do have further information on which to base a discussion on as to whether we stay at the maximum 7.5% allowed under Tier 2, or drop to a figure like 5% spawning biomass.

Mr Bryan did not agree with the RBC recommendation of 10,600 tonnes in 2012-13 primarily because of the age of the data. He also reiterated his view that based on the Federal Government's position on localised depletion and other issues facing this fishery that the RBCs should be reduced back to Tier 3 levels. Mr Bryan suggested that AFMA to cut and paste his comments and reasons in discussing the RBCs for each species.

Dr Penney suggested that there is no evidence to suggest that the stocks have declined since the eggs were collected in 2002 and in fact SBT biomass has increased and other indicators seem stable. Noting this, Mr Penney suggested that the SPFRAG should ask whether 7.5% is an appropriate exploitation rate or if there is sufficient uncertainty to drop to Tier 3. Dr Penney suggested that under the MSE, an exploitation level of 5,000 tonnes is extremely low. Mr Brown agreed and suggested that Mr Bryan did not have strong grounds to justify a drop to Tier 3.

Noting the dissenting views expressed by Mr Pike and Mr Bryan (outlined below) the Chair recommended the RAG adopt an RBC of 10,600 tonnes for Jack Mackerel East in 2013-14 based on the Tier 2 maximum of 7.5% of 141,500 tonnes on the basis that:

- there is strong supporting evidence for the plausibility of the DEPM estimates,
- there is no evidence of a decline in the stock and
- the age of the egg survey has been managed consistently with the SPF Harvest Strategy.

Mr Pike strongly opposed this recommendation due to the following concerns:

- the old age and decay of the data used to support the recommended RBC of 10,600 tonnes;

- the way the recommended RBC of 10,600 tonnes was originally derived by the SPFRAG in February 2012;
- the absence of new empirical data and DEPM survey to support an RBC of 10,600 tonnes; and
- in the absence of any new data or new DEPM survey, the SPF Harvest Strategy provides for a 2013-14 Jack Mackerel East RBC default of 5,000 tonnes.

Mr Pike supported an RBC of 5,000 tonnes (the default Tier 2 amount under the Harvest Strategy).

Mr Bryan did not support the Jack Mackerel east 2013-14 RBC recommendation due to AFMA's failure to assess localised depletion and a lack of information on fish movements. Mr Bryan supported an RBC of 500 tonnes which aligns with the Tier 3 maximum RBC under SPF Harvest Strategy.

**RECOMMENDATION:** The SPFRAG recommended the following RBCs apply for 2013-14:

Jack Mackerel East: RBC 10,600 tonnes

Jack Mackerel West: RBC 5,000 tonnes

*Note: The Environment Member strongly disagreed with the recommendations for Jack Mackerel East and recommended the Tier 3 RBC maximum of 500 tonnes.*

*The Recreational Fishing Member strongly disagreed the recommendation for Jack Mackerel East and recommended the Tier 2 RBC maximum of 5000 tonnes.*

### **Yellowtail Scad**

The RAG noted that Yellowtail Scad is not a quota species in the SPF. Mr Brown suggested that the SPFRAG should monitor and report on Yellowtail Scad as it is a small pelagic species and the SPF is extracting catch but it doesn't currently sit within the SPF Harvest Strategy.

Mr Brown suggested that industry is catching yellowtail in NSW, as opposed to Jack Mackerel, because they do not find Jack Mackerel in the northern part of NSW and that the Yellowtail catch reported in NSW catch is from both the NSW for-sale fishery and the ETBF baitfish fishery that specifically targets Yellowtail as they are more durable in the tanks.

Mr Brown asked on the progress of an outstanding SPFRAG recommendation of inviting a NSW permanent observer to the RAG and requested that AFMA should undertake to formally request the participation of a NSW state observer in future RAG meetings.

**ACTION ITEM** – AFMA to make a formal request to NSW for a permanent NSW observer on future SPFRAG meetings.

The DEPM for Yellowtail Scad estimated a spawning biomass of between 2,900-5,900 tonnes (Mean = 4,400 tonnes) and reported catches are around 500 tonnes. CPUE data shows an increasing trend, however this is more likely to reflect changes in NSW effort recording processes as opposed to species abundance.

If the SPFRAG were to apply the Harvest Strategy Tier 2 guidelines of 7.5% of the DEPM best estimate, the RBC would be around 60 tonnes. Although an RBC is not set for this species as it is not managed under quota, the SPFRAG agreed that it would continue to keep monitoring and reporting on this species individually as opposed to being combined with the Jack Mackerel Assessment.

**ACTION ITEM** – The SPFRAG to continue to monitor catches of Yellowtail and Tim Ward to separate the assessment of Yellowtail Scad with Jack Mackerel in the annual fishery assessment report presentation.

### **Redbait**

Before 2001-02, catches of Redbait (east and west) were less than 2,000 tonnes. Catches increased to 3,800 tonnes in 2001-02 and peaked at approximately 7,000 tonnes between 2003-04 and 2005-06. Catches have declined since then to approximately 300 tonnes in 2009-10 and no redbait catch was recorded in 2011-12. There are several biological differences between the east and west stocks including that eastern Redbait stocks are a little younger than western stocks. There was no clear change regarding distributions over time.

The DEPM estimate for Redbait in the east suggests a spawning biomass in excess of 50,000 tonnes. All parameters were collected for this DEPM and therefore the SPFRAG is more confident in these results. The MSE for redbait showed no risk to the species at exploitation at the Tier 2 level. There is no evidence to suggest that recent catches of redbait in either region are not sustainable.

Dr Lyle explained that originally the purse seine surface fishery was targeting Jack Mackerel and not redbait. When surface schools were no longer evident, fishing operations switched to midwater trawl and they were catching schools of redbait so redbait become a target species. Mr Geen further explained that there was a high degree of targeting of redbait when the fishery moved to midwater trawl gear because industry could get good money for them as they had secured contracts for redbait with Port Lincoln tuna farmers.

The Chair noted that Redbait east is now on the first year of Tier 2 of the Harvest Strategy with a maximum RBC of 7.5% of the spawning biomass best estimate of 68,900 tonnes of 5,200 tonnes. Redbait west falls under Tier 2 of the Harvest Strategy with a default maximum of 5,000 tonnes as there has been no DEPM survey for this stock.

The majority of the SPFRAG agreed with this RBC on the basis that:

- There is no evidence to suggest that recent low catches of Redbait are not sustainable, nor is there evidence to suggest a decline in the stock.
- Recent annual catches have been well below the DEPM spawning biomass estimate for each zone and even further below the MSE model calculated estimate.
- MSE testing for Redbait showed no risk of falling below biomass limit reference points at the Tier 2 exploitation rate.

Mr Bryan opposed this RBC given the paucity of the data available, uncertainty on stock movements and the possibility of localised depletion. Mr Bryan recommended the stock move to the Tier 3 maximum RBC of 500 tonnes.

**RECOMMENDATION:** The SPFRAG recommended the following RBCs apply for 2013-14:

Redbait East: RBC 5,200 tonnes

Redbait West: RBC 5,000 tonnes

*Note: The Environment Member strongly opposed the recommendations for Redbait East and West and recommended the Tier 3 maximum RBC of 500 tonnes.*

### **Australian Sardines**

Sardine catches are from fisheries managed separately by three jurisdictions (NSW, Victoria and the Commonwealth). Catches have exceeded 2,000 tonnes since 2004-05, reached almost 5,000 tonnes in 2008-09 and have remained at around 3,000 tonnes since 2009-10.

The majority of catches used to come out of NSW, but in 2011-12 there were higher catches seen by a vessel operating out of Lakes Entrance in Victoria. There are only small catches from Commonwealth operators. Mr Brown suggested that catches of Sardine in NSW waters are completely independent from that in Victorian waters. Searching has found large aggregations of small sardines but nothing in the marketable size, therefore there has been limited fishing in most of NSW. There is however commercially marketable sized sardine being caught further north by the operator based in Iluka.

Mr Brown explained that good sardine recruitment requires specific environmental conditions which have not been seen consistently since about 2009, which helps to explain the recent decline in availability in NSW. He also explained that the recent NSW Fisheries department restructures have restricted the capacity to process biological samples to inform the RBC setting process.

Mr Brown highlighted that industry are willing to provide aerial and sonar data to inform the assessment however they have not been provided with an agreed format in which to provide this data so it is usable.

**ACTION ITEM – SARDI** to assist industry to develop a format to collect survey data to incorporate in the fishery assessment report.

A/Prof Ward advised that the DEPM biomass best estimate is approximately 30,000 tonnes and the highest catch levels recorded of 5,000 tonnes. While there is no evidence to suggest that the current catch level of Australian Sardine in the east is not sustainable, there are the most concerns surrounding Sardine than the other SPF species because:

- the exploitation rates are increasing with limited new information or assessments
- marketable sized Sardine from mid-southern NSW have disappeared in recent years, and
- under the MSE modeling, Sardine exploitation is at the top of the acceptable range before the stock is at risk.

Based on this, the SPFRAG suggest it is important that a DEPM is conducted across the entire eastern area of the stock, capturing all spawning events as a priority.

Mr Brown highlighted his concerns that catch by NSW and Victorian operators could reduce the Commonwealth TAC to zero tonnes while Commonwealth operators continue to pay the costs of management. He recommended enforcing a minimum Commonwealth TAC allocation of Tier 3 (500 tonnes). The RAG noted this view and agreed that the issue of catch sharing remains an important one for the SPF, as highlighted by correspondence from Steve Kerr regarding the allocation of catches between the Commonwealth and NSW. The RAG suggested these points be made to the AFMA Commission when recommending TACs.

A/Prof Ward agreed to include tables with the annual catches by jurisdiction in the next SPFRAG RBC presentation. This will allow the SPFRAG to see what the catches are relating to the data that was collected, and we can see what the inferences are of the actual management process. Denis mentioned that the five-year rolling average of catches is an issue as this is not reflective of what was actually caught in the fishery in the previous year.

**ACTION ITEM:** Tim Ward to include annual catches by jurisdiction in future Sardine RBC presentations.

**ACTION ITEM:** AFMA to progress catch sharing arrangements with NSW and Victoria.

The SPFRAG revisited the use of the Harvest Strategy Tier 2 maximum of 3,000 tonnes when the DEPM best estimate of spawning biomass is approximately 29,000 tonnes.

There was confusion as to how the 3,000 tonnes was derived as the default for the Harvest Strategy in the first place. After the meeting AFMA explained that the estimated spawning biomass from the DEPM in 2005 was 28,809 tonnes. However, the RAG considered that this estimate was conservative due to un-surveyed spawning area and other conservation parameters. A spawning estimate of 40,000 tonnes was adopted under the SPF Harvest Strategy recommendations for maximum RBCs as a more appropriate spawning biomass.

The SPFRAG agreed on an RBC for Australian Sardine (east) of 3,000 tonnes as per the maximum Tier 2 RBC under the SPF Harvest Strategy.

Mr Bryan did not agree with this RBC given the paucity of the data available, uncertainty on stock movements and the possibility of localised depletion. Mr Bryan recommended the stock move to the Tier 3 maximum RBC of 500 tonnes.

**RECOMMENDATION:** The SPFRAG recommended the following RBC apply for 2013-14:

Australian Sardines (east): RBC 3,000 tonnes

*Note: The Environment Member strongly disagreed with the recommendation for Australian Sardine East and recommended the Tier 3 RBC maximum of 500 tonnes.*

## 5. SPFRAG Research Needs

The SPFRAG reviewed the SPF research needs and agreed that they were still current.

The SPFRAG generally agreed that DEPM surveys were a high priority for the fishery and that the Environment Department's expert panel should recognize this. Mr Day indicated AFMA have offered the SPFRAG's assistance if required, noting that the panel is looking at separate issues such as bycatch.

Mr Penney highlighted that it is very important to obtain good, representative age-frequency data first, then assess information about abundance indices and the occasional DEPM survey

should only be used as a relative index. A/Prof Ward explained that this is the intention, however samples have been hard to obtain due to limited fishing and jurisdictional difficulties.

## **CLOSURE**

### **6. Meeting Closure**

Due to time restraints the SPFRAG were unable to discuss the remaining agenda items and agreed to hold a teleconference in approximately three weeks to address these issues.

The RAG concluded at approximately 5:00pm.

## Appendix: SPFRAG 15 Declared Conflicts of Interest

Participant	Interest declared
John Pollock	No financial interest in fishery. Participated in the SPF Independent Allocation Advisory Panel.
Tim Ward	Role of science leader for the fisheries science program in SARDI. Conducts research for State fisheries and leads the Pelagic fisheries research team. Member of South Australia Sardine Fishery Industry research / management committee.
Andrew Penney	Employed by ABARES which has done, and may do in future, research under contract on small pelagic fish species. No pecuniary interest
Graham Pike	No direct or indirect financial interest. Interested in the conservation and health of the natural resources on which the recreational and charter fishing industries depend
Jon Bryan	No direct or indirect pecuniary interest.
Grant Pullen	Manager of the wild fisheries management area at DPIPWE. No financial interest.
Jeremy Lyle	Research interests in the SPF fishery. No direct or indirect pecuniary interest.
Denis Brown	Holder of SPF SFRs for Redbait, Blue Mackerel and Jack Mackerel in the Eastern and Western Zones, and Australian Sardine in the Eastern Zone. Director of corporate entities with holdings of SPF SFRs for Redbait, Blue Mackerel and Jack Mackerel in the Eastern and Western Zones, and Australian Sardine in the Eastern Zone; and Pelagic Fish Processors plant at Eden. Peripheral involvement with research on small pelagic fisheries. Member of NSW Research Advisory Working Group and the NSW Ocean Haul Management Advisory Committee. Peripheral interest of financial benefits of activities in the SPF through quota holdings.
Gerry Geen	Director of Seafish Tasmania Pty Ltd that holds SPF SFRs for Jack Mackerel, Redbait and Blue Mackerel in the Eastern and Western Zones. Holds four Tasmanian purse-seine Jack Mackerel Permits; and four zone A purse seine permits.
Terry Romaro	Director of a corporate entity with holdings of SPF SFRs for Redbait, Blue Mackerel and Jack Mackerel in the Eastern and Western Zone. Permit holder in the Western Australian Purse Seine Pilchard Fishery and the Coral Sea Trawl Fishery. Contracted services to AusAsia. Member of TTMAC and participant in SBTMAC.
Michael Thomas	Director of corporate entity with holdings of SPF SFRs for Redbait, Blue Mackerel and Jack Mackerel in the Eastern and Western Zones
George Day	Works for AFMA, no financial interest
Brodie Macdonald	Works for AFMA, no financial interest
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