




Australian Government

Australian Fisheries Management Authority



Small Pelagic Fishery Resource Assessment Group (SPFRAG)

MEETING RECORD

MEETING 06

31 MARCH 2008

SMALL PELAGIC FISHERY RESOURCE ASSESSMENT GROUP (SPFRAG)

CHAIR James Findlay
Date and time 31 March 2008, 9:00am – 5:30pm
Location AFMA Offices, 73 Northbourne Ave, Canberra, ACT.

Attendance

Members

James Findlay	Chair
Selina Stoute	AFMA member
Kathryn Read	Executive Officer (AFMA)
Denis Brown	Industry
Gerry Geen	Industry
Michael Thomas	Industry
Jon Bryan	Tasmanian Conservation Trust
Graham Pike	Recreational fisher – via phone hook-up
Jeremy Lyle	Tasmanian Aquaculture and Fisheries Institute (TAFI)
Tim Ward	South Australian Research and Development Institute (SARDI)

Observers

Mary Lack	SPFMAC Chair
Nick Rayns	AFMA (Executive Manager, Fisheries) (Stock structure in the Western Zone and Harvest Strategy Items only)
Amanda Parr	AFMA (Harvest Strategy Manager)
Brad Milic	AFMA (Observer coordinator) (2006/07 AFMA observer report Item only)
Garry Collins	AFMA (Observer manager) (2006/07 AFMA observer report Item only)
Grant Pullen	Tasmanian Department of Primary Industries and Water
Kelly Crosthwaite	Primary Industries and Resources, South Australia - South Australian State Government
Rupert Summerson	Bureau of Rural Sciences (BRS)
Patricia Hobsbawn	BRS
Fiona Giannini	BRS

Apologies

Terry Romaro	Industry
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RECOMMENDATIONS AND ACTIONS ARISING

SPFRAG recommends that:

1. The RAG recommended the following improvements to increase the quality, access and usage of the observer program, including for:
 - AFMA to ensure regular observer data reports are provided to SPFRAG, noting that reports have not always been available;
 - relevant TAFI observer coverage to be included in future reports to provide single holistic observer report for the fishery;
 - observer data be incorporated into the BRS data summary for the fishery; and
 - industry members to encourage SPF operators to participate in the observer program, noting the importance of the data to management of the fishery and current funding opportunity provide by the AFMA.
2. In the context of likely stock structures existing in the far west, and potential management options, the RAG agreed:
 - there is potential for separate stocks of SPF species occurring in the far west of the fishery, with some evidence for blue mackerel only;
 - there is less certainty around the probability and location of a stock boundary existing in the far west of the fishery relative to the evidence that led to the adoption of a stock boundary east and west of at 146°30'E;
 - that any delineation is likely to be ephemeral with stock mixing around the separation highly probable noting the potential influence of factors such as the seasonal migration of the Leuwin current and tapering of the continental shelf in the west of the Great Australian Bight;
 - to provide advice for single stocks across the Western Zone for each SPF species; and
 - to convene SPFRAG to discuss potential sustainability risks if a predefined level of catch (to be determined by the MAC) is taken outside of the current fishing area of the fishery, excluding a 60NM buffer zone.
3. SPFRAG welcomed AFMA's support to conduct a review of the SPF Harvest Strategy and agreed:
 - to defer finalising its advice on the draft HS until late May 2008 at which time the outcomes of the independent review may be taken into account; and



- for Gerry Geen to table a draft Terms of Reference for the independent review at SPFMAC's meeting on 1 April 2008 for consideration by members, noting the overlap of membership between the SPFMAC and SPFRAG.
4. The RAG Recommended Biological Catches (RBCs) for each species within the Eastern and Western stock zones of the fishery for the 2008/09 fishing season (see Table 1. below) noting that SPFRAG recommended for:
- Jeremy Lyle to submit a proposal to AFMA to fund an analysis of redbait eggs collected on the east coast as RAG inter-sessional work, and to provide the report on the outcomes to the SPFRAG at its May 2008 meeting;
 - AFMA Management to confirm whether the additional redbait egg analysis could be funded through the current SPFRAG budget; and
 - subject to the project's approval, SPFRAG to review the east coast redbait RBC at its May 2008 meeting in light of new information arising from the analysis.
 - a meta-rule allowing for periodic increases in catch limits contingent on research and monitoring targets defined by SPFRAG be applied in 2008/09.

Table 1. RBCs for the 2008/09 SPF fishing season (tonnes)

Species	Eastern Zone	Western Zone
Blue mackerel	6,000	8,400
Redbait	7000 *	5,000
Jack mackerel	5,000	5,000
Sardines	4,500	-

* To be reviewed subject to further analysis of redbait egg samples collected as part of the blue mackerel project (FRDC 2002/061)

5. In relation to the research needs in the fishery the RAG recommended for:
- Dr Lyle to prepare a research proposal, and that funding for this project should be sought from AFMA's bycatch and discarding program; and
 - a strategic research plan be developed by SPFRAG/MAC once the harvest strategy is finalised.
6. The RAG provided strong support for the Fisheries Resources Research Fund (FRRF) research proposal by BRS, titled: *"Improving the assessment and management of fishing activities for small pelagics in Commonwealth fisheries, with particular emphasis on eastern Australian fisheries"*, and recommended that:
- if possible, that the DEPM component of the project include jack mackerel.



Actions arising

1. AFMA to confirm the status of an actions arising to establish a SPFRAG data working group.
2. AFMA to distribute the SPF observer manual to all SPFRAG and MAC members.



PRELIMINARIES

1. Introduction and apologies

The Chair introduced and welcomed all observers to the meeting and noted an apology from Terry Romaro.

2. Declaration of interest

Pecuniary interests declared by Members are shown in Table 1.

Table 1 Pecuniary interest declared by Members

Participant	Interest declared
James Findlay	General Manager, Fisheries, Land and Social Sciences Branch, Bureau of Rural Science
Selina Stoute	None declared.
Kathryn Read	None declared.
Jon Bryan	Member of the Tasmanian: Scalefish Fishery Advisory Committee; Recreational Advisory Committee; and the Small Pelagic Advisory Committee.
Mary Lack	Fisheries Consultant.
Denis Brown	<ul style="list-style-type: none">- Holder of 2 SPF Zone D SPF Permits; One SPF A,C,D Permit and an Informally Managed (purse seine) Fishing Permit;- Director of corporate entities with holdings of:<ul style="list-style-type: none">• one Zone A, B, C, D purse-seine Permit package; and• one Zone A, C, D purse-seine Permit package and Informally Managed (purse seine) Fishing Permit; and• Pelagic Fish Processors plant at Eden
Gerry Geen	Director of Seafish Tasmania PTY LTD that holds: <ul style="list-style-type: none">- two Zone A, B, C, D midwater trawl; purse-seine Permit packages; four Zone A purse-seine SPF Permits;- four Tasmanian purse-seine Jack Mackerel Permits; and- a Southern and Eastern Scalefish and Shark Trawl Boat SFR.
Michael Thomas	Director of a corporate entity with holdings of: <ul style="list-style-type: none">- one Zone A, B, C, D purse-seine Permit package; one Zone A, B, C, D midwater trawl Permit package; one Zone D midwater trawl Permit; and- Permit holder in the South Australian Pilchard Fishery.
Terry Romaro	Director of a corporate entity with holdings of one Zone A purse-seine and two Zone B, C, D midwater trawl Permits
Graham Pike	None declared.
Jeremy Lyle	None declared.
Tim Ward	None declared.

3. Adoption of agenda

SPFRAG accepted the draft meeting agenda and agreed to consider a BRS research funding proposal under Other Business.



SPFRAG MEETING 4

4. Adoption of record

SPFRAG accepted the draft record of the fifth meeting of SPFRAG (6 February 2008) as true and accurate with the following revisions:

- *Draft Harvest Strategy for finalization, under “Draft Harvest Strategy”, dot point 3.*

As a point of clarification, the wording was changed to:

- “SPFRAG heard from scientific member, Tim Ward, that he strongly supports the existence of separate stocks in the far west of the Western zone. Dr Ward advised that it would be consistent with the precautionary approach to manage the two stocks for blue mackerel in the Western zone as two separate stocks in order to prevent localised depletion in the far west, which may be less productive than the central west stock. The RAG agreed that there was no evidence for separate stocks of redbait and jack mackerel.”
- *Draft Harvest Strategy for finalization, in the table of RAG member comments.*

The following comments were added:

- Gerry Geen: noting that the maximum harvest limit for western zone jack mackerels in the non-DEPM Tier in the draft SPF harvest strategy is more than 3,000 tonnes less than the current Trigger Catch Limits/Total Allowable Catches in place for the Zones B and C and half of A; and
- Denis Brown: 4. the implications of including the Informally Managed Fishing Permit area of waters adjacent to Queensland had not been considered.

5. Actions arising

SPFRAG noted progress made towards actions arising from the second meeting of SPFRAG and that many have now been completed. Members noted that the completion of some actions was contingent on finalising the SPF Harvest Strategy. Some members queried the status of a past action item for the RAG to convene and data working group. To clarify this issues SPFRAG requested:

- AFMA to confirm the status of an actions arising to establish a SPFRAG data working group.

6. Fishery update

Status of industry and fishing conditions

Industry members reported that the fishery continued to remain relatively unchanged. Observed SPF resources in the east were patchy coinciding with the continuing surge of unusually warm water and high daily fluctuations in sea temperature. Jack mackerel and redbait were reported in high abundance near Ulladulla when they were expected to be much further south. In the south west, large blue mackerel were readily available near Port Lincoln.



Industry however had not been capitalising on this. Members advised that the mackerel have been too large to supply the Southern Bluefin Tuna aquaculture industry and that operators were still continuing to develop new processing procedures to satisfy AQIS standards for handling fish for human consumption. As a result Industry were still relying on the bait market.

Industry members recognised that high value of the Australian dollar and high current fuel prices are setting a low benchmark for fish prices domestically, and are therefore significantly threatening profit margins. The exchange rate continues to make exporting virtually unviable.

Other

The Chair tabled the March 2008 draft BRS “Fishery data summary report for the Commonwealth Small Pelagic Fishery” by Dr Patty Hobsbawn and Dr James Findlay. The RAG provided initial editorial feedback on the report to Dr Hobsbawn.

Tim Ward reported that trials of a CUFES (the continuous, underway fish egg sampler) had been undertaken by SARDI. Dr Ward advised that the use of a CUFES can increase the precision of DEPM estimates. However, as the CUFES is constrained to sampling the surface water immediately under the boat, it may not account for the stratification of egg ages that exist at different depths. Other sampling is required to calibrate the CUFES samples to account for egg stratification.

7. 2006/07 AFMA observer report

SPFRAG noted and discussed the 2006/07 AFMA observer report (Attached), which was tabled at the meeting and presented by Brad Milic (Observer Coordinator) and Garry Collins (Observer Manager). Mr Milic reported that the observer program had been operating without incident, but that there were some difficulties in finding boats on which to place observers. Mr Milic confirmed that the following data are currently collected: location and weather; gear deployed; catch composition; length/frequency; and wildlife abundance and interactions.

AFMA reported an additional \$10,000 of NHT funding allocated to the SPF for observer coverage, which must be used by 30 June 2008. SPFRAG welcomed this support. Emphasising the need to take advantage of the funding support, the Chair advised that there will be no NHT funding after this financial year. According to Dr Findlay the Government’s new program, Caring for Country, does not include a marine focus, so will not be a source of observer funding at least in the short term.

The RAG noted that the key objective of the SPF observer program remained on TEP interactions, which has limitations as it does not account for known interactions that occur below the water. Members noted that the role of the observer program will be reviewed as part of an assessment of the fishery’s data collection needs once a harvest strategy is finalised for the fishery. Members agreed that the review will identify options for collecting some data more cost-effectively, for example through a shore-based monitoring program. In the interim SPFRAG made a number of recommendations to improve quality, access and usage of the fishery’s observer program, including for:

- AFMA to ensure regular observer data reports are provided to SPFRAG, noting that reports have not always been available;



- relevant TAFI observer coverage to be included in future reports to provide single holistic observer report for the fishery;
- observer data be incorporated into the BRS data summary for the fishery;
- industry members to encourage SPF operators to participate in the observer program, noting the importance of the data to management of the fishery and current funding opportunity provide by the AFMA; and
- AFMA to distribute the SPF observer manual to all SPFRAG and MAC members.

8. Stock assessment advice for stocks within the proposed Western Zone

SPFRAG discussed the possible existence and extent of further stock delineation in the proposed Western Zone of the SPF with the view to providing advice on the need to introduce additional stock-based management measures.

In the context of likely stock structures existing in the far west, the RAG agreed:

- there is potential for separate stocks of SPF species occurring in the far west of the fishery, with some evidence for blue mackerel only;
- there is less certainty around the probability and location of a stock boundary existing in the far west of the fishery relative to the evidence that led to the adoption of a stock boundary east and west of at 146°30'E;
- that any delineation is likely to be ephemeral with stock mixing around the separation highly probable noting the potential influence of factors such as the seasonal migration of the Leuwin current and tapering of the continental shelf in the west of the Great Australian Bight; and
- to provide advice for single stocks across the Western Zone for each SPF species.

SPFRAG agreed that it is consistent with the precautionary principle to manage for potential separate stocks but that the approach should be developed around the certainty of those structures and likely risks to the stocks. The RAG agreed that in light of the level of uncertainty around the structure of stocks in the far west that it was appropriate to adopt an adaptive management approach. There was little support to establish a permanent management boundary. Industry members in particular argued that such an approach would not be cost-effective and efficient in the long-term noting that an adjusting boundary would attract significant administrative costs.

Members agreed that a range of spatial measures could be introduced to guard against potential sustainability risks arising from a significant transfer of fishing effort into the far west. The RAG also accepted advice from Industry members that under the current fishing fleet structure, the risk of a significant effort transfer was negligible. Taking into account the RAG's understanding of likely stock structures and risk, the RAG recommended the establishment of a catch trigger as a means to be precautionary, while still allowing for expansion of the fishery and improvement in knowledge. Specifically the RAG recommended:



- to convene SPFRAG to discuss potential sustainability risks if a predefined level of catch (to be determined by the MAC) is taken outside of the current fishing area of the fishery, excluding a 60NM buffer zone.

9. Draft Harvest Strategy (HS) for Finalisation

In response to concerns raised by some Industry members, SPFRAG reviewed the process undertaken for developing the SPF's draft HS to determine whether the RAG was in a position to finalise its advice on a preferred framework.

A range of views were expressed by members from general satisfaction and support to concern that the process had been deficient in the depth of analysis undertaken to inform the RAG's deliberations. Industry members considered that a number of technical (eg tier 1 decay rules) and cost-benefit issues remained unresolved. Concern was also raised with the short notice in which scientific advice on possible maximum catch limits for the non-DEPM based tiers was made available for the meeting. While it was agreed that the advice was not provided in a timely manner, it was explained by the AFMA member and the Scientific members that the recommendations were tabled only as starting point for discussion and that they were based on information already familiar to the RAG.

Noting the outstanding concerns held and that the introduction of a HS will be central to the fishery's future development, Industry members identified the need to seek independent advice. Industry members advised that while they had confidence in the expertise base of the RAG, the intent of the review was to provide additional rigor to the HS development process. Dr Nick Rayns accepted this rationale and agreed to grant additional time and some funding to seek an industry-led independent review. Dr Rayns advised that final SPFRAG advice on a preferred HS for fishery must be submitted to the Board no later than Board's 26-27 June 2008 meeting. SPFRAG welcomed AFMA's support to conduct a review and agreed:

- to defer finalising its advice on the draft HS until late May 2008 at which time the outcomes of the independent review may be taken into account; and
- for Gerry Geen to table a draft Terms of Reference for the independent review at SPFMAC's meeting on 1 April 2008 for consideration by members, noting the overlap of membership between the SPFMAC and SPFRAG.

10. Review of Recommended Biological Catches for 2008/09

Taking into account all available fishery information and the fishery's draft HS, SPFRAG developed advice on 2008/09 RBCs for all stocks. Despite earlier concerns raised around the draft HS, the RAG agreed that the draft framework provided an appropriate interim guide to base advice on RBCs for 2008/09.

Consistent with AFMA decisions on stock based management and the incorporation of Informally Managed Fishing Permits (IMFPs) within the fishery, SPFRAG developed its advice taking into account the following:

- species having separate stocks east and west of 146°30'E;



- stocks occurring within Zone A. Historically Zone A arrangements have been developed by the Tasmanian Government; and
- IMFP access to Australian sardines and blue mackerel in waters adjacent to NSW and QLD respectively.

RBC's agreed to by SPFRAG (provided in the table below) were generally considered to be conservative due to the nature of the assessments and/or the decision making framework proposed in the draft HS. In particular, spawning area was considered a key driver for constraining DEPM based biomass estimates. In the absence of a proven methodology for estimating unknown quantities of biomass however, the RAG could not recommend a meaningful or commensurate adjustment to the RBC. The RAG agreed that the only additional information that could be subjected to a quantitative analysis were samples of redbait eggs collected on the east coast as part of the blue mackerel project (FRDC 2002/061). Provided such an analysis could be completed cost-effectively and before the RAG's May 2008 meeting, SPFRAG recommended for:

- Jeremy Lyle to submit a proposal to AFMA to fund an analysis of redbait eggs collected on the east coast as RAG inter-session work, and to provide the report on the outcomes to the SPFRAG at its May 2008 meeting;
- AFMA Management to confirm whether the additional redbait egg analysis could be funded through the current SPFRAG budget; and
- subject to the project's approval, SPFRAG to review the east coast redbait RBC at its May 2008 meeting in light of new information arising from the analysis.

In developing its RBC advice SPFRAG also considered the relevance of a meta-rule proposed for the fishery's HS which would allow periodic increases in catch limits contingent on research and monitoring targets recommended by SPFRAG. The RAG agreed that such an approach could minimise potential cost impediments to expansion in the fishery and, on the basis of industry advice, was a relevant consideration for the 2008/09 season. Industry reported that a proposal to trial a large factory trawler in the fishery was in development and may be submitted to AFMA later in 2008. It was explained that the trial would be designed to explore the potential of fishery and that data collection would be a core objective. Noting this advice and the precautionary nature of the RBC's the RAG recommended for:

- a meta-rule allowing for periodic increases in catch limits contingent on research and monitoring targets defined by SPFRAG be applied in 2008/09.



Species	Stock	Tier *	Assessment results	Decisions rule	RBC
Blue mackerel	East	1	Mid-range best estimate biomass after sensitivity analysis = 40 000 tonnes. Estimate was considered conservative due to conservative spawning area estimates, egg development proxies and adult parameters applied in the assessment.	Biomass estimate is three years old therefore apply maximum harvest rate of 15% (40 000t x 15%).	6 000t
	West	1	Best estimate biomass = 56 000 tonnes. Estimate was considered conservative as opportunistic egg samples taken outside the survey area in 2006 suggests that the assessment did not account for the full spawning area.	Biomass estimate is three years old therefore apply maximum harvest rate of 15% (56 000t x 15%).	8 400t
Redbait	East	1	Best biomass estimate = 35 000 tonnes Estimate was considered conservative as egg abundance data collected by the blue mackerel project (FRDC 2002/061) suggests that additional spawning area exists outside of the survey area.	Two biomass estimates have been achieved in the last three years therefore apply maximum harvest rate of 20% (35 000t x 20%)	7 000t**
	West	2	Aside from recent recorded catch around 4 500 tonnes there was no additional information available to support a higher exploitation level beyond the proposed default Tier 2 maximum.	Apply default Tier Two maximum of 5 000 tonnes.	5 000t
Jack mackerel	East	2	Although historically there have been high catches (>10 000 tonnes), there was no additional information available to support a higher exploitation rate beyond the proposed default Tier 2 maximum.	Apply default Tier Two maximum of 5 000 tonnes.	5 000t
	West	2	Although there has been some catch history there was no information available to support a higher exploitation level beyond the default Tier 2 maximum.	Apply default Tier Two maximum of 5 000 tonnes.	5 000t
Australian sardines	East	1	Mid-range biomass estimate = 30 000 tonnes Estimate considered conservative due to unsurveyed spawning area and other conservation parameters.	Biomass estimate is three years old therefore apply maximum harvest rate of 15% (30 000t x 15%).	4 500t
Yellow tail scad	East/west	n/a	Managed as a byproduct species with very low trigger catch levels. Negligible catches recorded in the fishery.	Apply similar byproduct limits.	200t/stock

* Tier 1 Assessment based on quantitative biomass estimate derived from the Daily Egg Production Method (DEPM).

Tier 2 No quantitative biomass estimate available, assessment based on catch information and expert judgement.

** To be reviewed subject to further analysis of redbait egg samples collected as part of the blue mackerel project (FRDC 2002/061)

11. SPF research program, including future research priorities

SPFRAG discussed potential priorities for tactical research funding in 2008/09 and research funding in 2009/10, and the development of a strategic research program for the fishery.

The RAG agreed that the long-term strategic research needs of the fishery will largely be driven by the fishery's harvest strategy. In the short term however, Members noted the need to continue the dolphin and seal bycatch mitigation project led by Dr Jeremy Lyle, in accordance with the recommendation from SPFRAG's December 2007 meeting. While there was general support to extend the research, Industry members advised that further financial contributions would be difficult to sustain. It was noted that Industry had spent in excess of a hundred thousand dollars supporting the initial project. AFMA Management advised that funding may be available through the AFMA's bycatch and discarding program but that a proposal should be prepared for ComFRAB's consideration as a contingency.

SPFRAG recommended for:

- Dr Lyle to prepare a research proposal, and that funding for this project should be sought from AFMA's bycatch and discarding program.
- a strategic research plan be developed by SPFRAG/MAC once the harvest strategy is finalised.

12. Other Business

The RAG discussed the Fisheries Resources Research Fund (FRRF) research proposal by BRS, titled: *"Improving the assessment and management of fishing activities for small pelagics in Commonwealth fisheries, with particular emphasis on eastern Australian fisheries"*. Co-investigators on the project, Rupert Summerson and Tim Ward sought the RAG's support for the project, which will in part address the research need recommended by the RAG: to establish a low cost industry-based sampling regime (in the order of \$10 000) as a matter of priority to improve estimates of spawning area and of adult parameters for stocks in waters adjacent to NSW. The project has three key objectives including: to develop a system for estimating small pelagic catches and fishing activity levels across all relevant fishery sectors; to describe the temporal and spatial distribution of these fishing activities; and to improve the reliability of DEPM assessments of the spawning stock biomass of blue mackerel and yellowtail scad.

The RAG provided strong support for the project and recommended that:

- if possible, that the DEPM component of the project include jack mackerel.

13. Next meeting

SPFRAG proposed to schedule a combined meeting with SPFMAC for 29 and 30th May 2008. The objective of the meeting will be to consider the outcomes of the harvest strategy review and finalise the harvest strategy prior to its submission to the AFMA Board in June 2008.

