



Australian Government

Australian Fisheries Management Authority

ANNUAL STATUS REPORT

Small Pelagic Fishery Wildlife Trade

October 2007

This report has been prepared by AFMA for consideration by the Department of the Environment and Water Resources in relation to the exemption of the Small Pelagic Fishery from export controls under the *Environment Protection and Biodiversity Conservation Act 1999*.

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Introduction

The Small Pelagic Fishery (SPF) has been operating under a series of short term Wildlife Trade Operation Declarations (WTO) under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) since 29 November 2004. The current WTO is due to expire on 6 December 2007. This accreditation was subject to number of recommendations the outcomes of which are discussed in Section 8.

The SPF and related Informally Managed Fishing Permits are currently in a transitional phase, as the final drafting stages of the SPF Management Plan (the Plan) are underway. The draft Plan is due for release for public comment in November 2007 and will be implemented in 2008. A draft Strategic Assessment report for the proposed management arrangements has been prepared and will be submitted to the Minister for the Environment and Water Resources with the finalised draft Plan.

This report details how the current management arrangements address the *Guidelines for Assessing the Ecological Sustainability of Commercial Fisheries – 2nd Edition* (the Guidelines). The Guidelines form part of the generic *Terms of Reference – Environmental Assessment of Commonwealth Fisheries* and are a central component of the *Terms of Reference for the Small Pelagic Fishery*.



1. Description of the Fishery

The Small Pelagic Fishery (SPF) was first assessed by Department of the Environment and Water Resources ((DEW), formerly the Department of the Environment and Heritage (DEH)) as an approved WTO in 2004 There have been no changes to the description of the fishery since the last assessment.

1.1. Status of export approval/accreditation under *Environment Protection and Biodiversity Conservation Act 1999*

The SPF has been operating under a series of short term Wildlife Trade Operation Declarations (WTO) under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) since 29 November 2004. The current WTO is due to expire on 6 December 2007. This accreditation was subject to number of recommendations the outcomes of which are discussed under Section 8.

2. Management

2.1. Changes to management arrangements

There have been no changes to the SPF management arrangements since the renewal of the SPF WTO on 1 March 2006.

2.2. Performance of the fishery

The Management Objectives of the SPF are outlined in the SPF Management Policy. How these objectives have been met is outlined below.

Ensuring management arrangements facilitate the Ecologically Sustainable Development of the SPF, and promote the productivity and efficient conduct of the commercial, recreational, and ecological components of the fishery

Management arrangements in the SPF relate only to the commercial sector and are considered precautionary under existing low levels of effort. Entry to the fishery is limited and harvest levels are managed through Trigger Catch Limits (TCL) and Total Allowable Catches (TAC) for target species. Broader ecosystem impacts are monitored and managed in accordance with the fishery's Bycatch Action Plan (BAP) (refer to section 2.7). To ensure the ongoing effectiveness of these arrangements, a monitoring program (refer to section 3.2) and formal consultative framework (refer to sub-section below) has been established for the fishery.

Adopting a strategic approach to management of the SPF, developing and maintaining fisheries management best practice, including recognising and embracing the need for ecosystem based management

AFMA is committed to ecosystem based fishery management (EBFM). This approach is pursued in the SPF through the fishery's BAP. The BAP sets out actions to explicitly minimize the impacts of fishing on non-target species and ecological communities.



To further assist in prioritising and guiding research, data collection, monitoring and management efforts towards EBFM, AFMA is conducting ecological risk assessments (ERAs) in all Commonwealth fisheries. ERAs assess the impact, both direct and indirect, a fishery's or sub-fishery's activities have on five ecological components of the marine ecosystem – target species; byproduct and bycatch species; threatened, endangered and protected (TEP) species; habitats; and ecological communities. From this process an ecological risk management framework will be developed, aimed at ensuring species are managed in a way that will allow for long term sustainable fishing.

Managing the SPF resource on behalf of the Australian community, and in doing so ensuring that management arrangements are consistent with the requirements of key stakeholders, including other management jurisdictions

In 2005 AFMA appointed members to the first Management Advisory Committee (MAC) and Resource Assessment Group (RAG) for the fishery. These committees are responsible for providing expert management and assessment advice on the fishery. MACs and RAGs are comprised of a broad range of stakeholders, including members from industry, environmental groups, recreational fishing and other Government sectors. In addition to this consultative framework, AFMA seeks public comment on significant management policy decisions (for example, the fishery's BAP).

Within the life of this policy, developing a set of performance criteria by which the effectiveness of SPF management arrangements can be measured

Performance measures for the SPF have been developed and are in the draft Management Plan.

2.3. Compliance risks present in the fishery and actions taken to reduce these risks

AFMA has compliance plans in place for all major Commonwealth fisheries. There is currently no compliance plan in place in the SPF due to the generally low levels of effort and observer coverage indicating that there are no issues with compliance. Compliance operations are undertaken as required.

2.4. Consultation processes

There have been no changes to the SPF consultation process since the renewal of the SPF WTO on 1 March 2006.

2.5. Description of cross-jurisdictional management arrangements

There have been no changes to the SPF cross-jurisdictional management arrangements since the renewal of the SPF WTO on 1 March 2006.

2.6. Outcomes of review processes

Not applicable.



2.7. Demonstration of compliance with threat abatement plans (TAPs), recovery plans, etc and also relevant domestic and international agreements

The SPF has a Bycatch Action Plan (BAP) in place which aims to ensure that the impacts of the fishery's bycatch on the ecosystem are sustainable and consistent with legislative requirements.

In pursuit of this objective the BAP aims to:

- provide an understanding of the significant bycatch issues in the fishery
- develop mitigation strategies for the incidental capture of protected species
- commence development of mitigation strategies for other high risk bycatch species

As well as providing strategies for protecting species affected by bycatch, the BAP also implements strategies to protect the broader marine environment. The BAP includes data collection and analysis systems and performance indicators which ensure AFMA is meeting the objectives and management responses outlined in the BAP.

Progress towards meeting the BAP targets is monitored through an internal reporting process requiring six monthly progress reports to be submitted to AFMA's Environment Committee. The latest progress report is detailed at Attachment A.

3. Research and monitoring

3.1. Research completed within the SPF

Many key management improvements have arisen from the fishery's research program.

- Future harvest levels for key target species will, for the first time, be set on the basis of quantitative stock assessment advice
- The fishery's internal boundaries will be reviewed considering all available stock structure information
- Midwater trawl dolphin and seal bycatch mitigation strategies will be reviewed in light of the first quantitative evaluation of mitigation measures trialled in the fishery.

Table 1: Key research projects in the SPF

Research Project	Status	Principle investigator
Enhanced data collection through focused programs (electronic monitoring)	Electronic onboard monitoring trial completed in November 2005	AFMA
Zone A commercial catch sampling (State Government initiative)	Completed end of 2006	TAFI
Development and evaluation of egg-based stock assessment methods for blue mackerel <i>scomber australicus</i> in southern Australia	Draft report completed July 2007.	SARDI
An evaluation of dolphin and seal interactions with midwater trawls in the Commonwealth Small Pelagic Fishery, including an assessment of bycatch mitigation strategies	Draft final report expected in October 2007.	TAFI
Management zones from small pelagic fish species stock structure in southern Australian waters	Final draft report submitted October 2007	CSIRO



Evaluation of egg production as a method of estimating spawning biomass of redbait off the east coast of Tasmania	Final draft report due 24 December 2007	TAFI
Ecological Risk Assessment for Australian Commonwealth Fisheries Project	Draft report completed. Report will be released after the residual risk and ecological risk management process are completed.	CSIRO

3.2. Current monitoring programs within the SPF

Existing data collection tools deployed by AFMA to monitor catch rates and the impact of the SPF and other fisheries on the marine environment in the fishery include:

a) Daily catch and effort logbooks

Logbooks provide a record of the fishing operations undertaken by SPF concession holders. The data recorded in logbooks includes species caught and their weight, discards, operational data and interactions with TEP species. This information provides information for research on the management of the SPF.

b) Independent observer coverage

Observer coverage provides a real-time account of commercial catches, discards and gear interactions with other species, as well as species data including length and weight. Additionally, onboard catch monitoring cameras were trialled in the fishery from 25 April 2005 to 4 June 2005. Currently there is 10% observer coverage for the purse seine sector and 20% coverage for the midwater trawl sector.

c) Catch disposal records

Catch disposal records (CDR) have been designed to record verifier information about fish catches. CDR were introduced on 1 July 2007 and currently monitor and manage catches within the TCL of the SPF. Under the proposed quota management regime, CDR will be used as a fisheries management tool. AFMA will deduct quota from an operator's total quota allocation on receipt of the verified weights from fish receivers (Part C of each CDR).

4. Catch data

4.1. Total catch of target species and species taken in other fisheries

Catches of target species in the SPF in 2006 were: blue mackerel 1972t, jack mackerel 744t and redbait 8344t. These catches continue to be well below current Trigger Catch Levels (TCL) and Total Allowable Quotas (TAC) set for the SPF.

SPF species are incidentally caught in eight other AFMA-managed fisheries. The majority of catches are taken in the South East Trawl (SET) and Great Australian Bight Trawl (GABT) sectors of the Southern and Eastern Scalefish and Shark Fishery (SESSF), and the East Coast Tuna Fishery (ECTF). AFMA logbook data indicates that these catches generally account for less than 50 tonnes in each fishery per year. However, annual catches of yellowtail scad of around 100 tonnes have been recorded in the ECTF. At present it is impossible to ascertain from AFMA logbook data what proportion of the ECTF bait catch is taken in Commonwealth waters. AFMA is working to collect this data through its ECTF observer program.



State catches of SPF species are generally minor (generally less than 6 tonnes annually) in all states adjacent to the fishery, with the exception of NSW. The NSW Ocean Haul Fishery has historically (pre 2004) taken 300-500 tonnes of both blue mackerel and yellow tail scad, and 20-40 tonnes of jack mackerel. Upon request, state catch data is provided by the responsible state agency to AFMA.

Estimates of recreational removals and Indigenous take from the stocks in the SPF are not as reliable as commercial estimates, although there are programs in place to collect regular data from the recreational sector in New South Wales (Charter Boat Monitoring Program - NSW DPI).

In August 2003 the National Recreational and Indigenous Fishing Survey was published. This project was a joint initiative of the Commonwealth and State/Territory Governments to obtain fisheries statistics to support the management of non-commercial fishing in Australia. Data were gathered in three aspects of this survey including the Recreational Fishing Survey (including on-site surveys), the Indigenous Fishing Survey and the Visiting International Fisher Survey.

The survey provided estimates of:

- the catch of small pelagic species (targeted/ caught incidentally)
- where they are mainly caught, and
- what proportion is discarded on a state-by-state basis (Table 2)

Table 2: Summary of recreational fishing effort and catch by state for SPF species. Does not include data from Northern Territory. (Source: National Recreational and Indigenous Fishing Survey 2003).

State of Residence	Number of fishers catching SPF species	Number of fishers surveyed	Percent fishers catching SPF species
NSW	126	2058	6.1
VIC	24	1453	1.7
QLD	19	2222	0.9
SA	64	1740	3.7
WA	176	2182	8.1
TAS	86	1282	6.7
ACT	6	216	2.8
Total	501	11153	4.5

5. Status of target stock

5.1. Resource concerns

According to the Australian Government's Bureau of Rural Sciences 2006 Fishery Status Report: blue mackerel stocks are not overfished and not subject to overfishing; the status of jack mackerel, redbait and yellow tail scad is uncertain; and dramatic declines in historic catches of jack mackerel in Zone A are of concern.



5.2. Stock assessments

The completion of the FRDC Blue Mackerel Project 2002/061 Development and evaluation of egg-based stock assessment methods for blue mackerel *Scomber australasicus* in southern Australia has delivered the first stock assessment model for a small pelagic species managed in this fishery. Egg production methods can provide conservative estimates of spawning biomass within a few years of implementation and facilitate the precautionary development of fisheries for small pelagic species (Ward and Rodgers, 2007). This technique provides estimates of spawning biomass that are calculated from information on daily egg production and daily fecundity.

The Small Pelagic Fishery Harvest Strategy indicates that in a developing fishery such as the SPF, it is appropriate to set conservative exploitation rates that reflect the size of the stock, and the reliability of estimates of spawning biomass. An exploitation rate of up to 30% is generally considered to be sustainable for many species of pelagic fishes internationally. Hence setting exploitation rates at 7.5-15% of the estimate of spawning biomass is a highly precautionary and appropriate approach in a developing fishery such as the SPF.

Egg production studies are currently being conducted on redbait (FRDC project 2004/039) to better gauge an estimate of the productivity of redbait stocks. A study was conducted on the Distribution and Abundance of eggs and larvae of four taxa of pelagic fishes off southern Australia by Neria et al (2007). The four taxa of pelagic fishes studied were yellowtail scad, Peruvian jack mackerel, jack mackerel and Australian Sardine (pilchard).

6. Interactions with Threatened, Endangered and Protected species (TEPs)

6.1. Frequency and nature of interactions

The SPF is known to interact with three main TEP taxa; seals, dolphins and seabirds. The most prevalent type of TEP interaction recorded in the fishery is midwater trawl bycatch of seals and dolphins in Zone A.

Seals and Dolphins

Between October 2004 and May 2005, 25 dolphins were captured by midwater trawl. In response to this, AFMA supported research¹ aimed at monitoring dolphin and seal interactions with mid-water trawls in the SPF and developing by-catch mitigation measures.

Underwater camera footage taken as part of this research revealed no further interaction with dolphins but showed a high level of seal interaction - seals entered the net in 60% of observed shots. In attempt to improve the seal exclusion device (SED) capability, three configurations were progressively used in the study: small, bottom opening; large, bottom opening; and top opening. The small bottom-opening SED resulted in a 21% mortality rate, the large top-opening SED reduced this rate to 6% and no seal deaths were recorded when the top opening SED was installed.

¹ Dolphin and seal interactions with mid-water trawling in the Commonwealth Small Pelagic Fishery, including an assessment of by-catch mitigation strategies (PI: Jeremy Lyle, TAFI)



Since 2004/05, no dolphin and ten seal interactions in the SPF have been recorded by operators in AFMA logbooks..

Birds

Seabirds are known to occur around vessels fishing in the SPF and have been sighted feeding on fish caught and lost from nets. While no interactions have been reported in AFMA logbooks, recent AFMA observer coverage (2005-06) in the fishery has detected a low level of bird interactions with both trawl and purse seine (Table 3). Mortalities have only been observed during midwater trawling.

Table 3: Observed bird interactions in 2005-06 (source: AFMA observer data)

Method	Zone	Species	# birds	Fate	Description
Midwater trawl	A	Prion spp	1	alive	Landed on deck
		Short-tailed shearwater	4	dead	
		Short-tailed shearwater	4	alive	Untangled from net by crew
	B	Flesh-footed shearwater	1	alive	Untangled from net by crew
		Flesh-footed shearwater	3	dead	
Purse seine	B	Storm petrel	1	alive	Landed on deck
		Yellow-nosed albatross	1	alive	Light contact with gear on water

7. Impacts of the fishery on the ecosystem in which it operates

7.1. Results of any Ecological Risk Assessments

AFMA initiated the development of Ecological Risk Assessments (ERAs) for Commonwealth managed fisheries in 2001 to assist in prioritising and guiding research, data collection, monitoring and management. ERAs assess the impact, both direct and indirect, a fishery's or sub-fishery's activities have on five ecological components of the marine ecosystem – target species; byproduct and bycatch species; threatened, endangered and protected (TEP) species; habitats; and ecological communities. The assessments categorise species, habitats and communities into high, medium or low risk on the basis of their susceptibility to fishing activities and their ability to recover from fishing impacts.

ERAs proceed through a scoping stage and three progressive levels of analysis. This hierarchical approach is a cost and time efficient way of screening activities and identifying key ecological priorities for fisheries management. The approach is also precautionary with risks scored high in the absence of information or evidence to the contrary. A Level 2 ERA analysis for the Midwater Trawl and Purse Seine Sub-fisheries in the Small Pelagic Fishery, and all other major Commonwealth managed fisheries, have now been completed.



A residual risk process and Ecological Risk Management (ERM) framework have been developed to further refine and respond to the outcomes of ERAs. The residual risk process will consider additional information - particularly the mitigating effects of management arrangements that were not explicitly included in the ERAs, or were introduced after the ERA process commenced. The ERM framework will provide a consistent and effective process for fisheries managers to apply when responding to ERA and residual risk process outcomes.

The priorities identified in ERAs and through the residual risk process will complement and tie in with other initiatives. These include harvest strategies for target and byproduct species, Bycatch Action Plans, the development of additional bycatch and discarding actions, and ongoing initiatives to minimise any interactions with TEP species. The ERM framework aims to bring all of these initiatives together to deliver more streamlined and focused fisheries management, focusing efforts on the key issues and avoiding duplication.

7.2. Nature of impacts on the ecosystem

The impacts on the ecosystem have not changed since the renewal of the SPF WTO on 1 March 2006.

8. Progress in implementing recommendations and conditions resulting from the DEW assessment of the fishery

8.1. Description of progress in implementing each recommendation and condition

Recommendations - Wildlife Trade Operation, 23 February 2006 to 6 December 2007

Recommendations	Level of Achievement	Deadline
R1. AFMA to continue to actively engage with other relevant jurisdictions in pursuit of collaborative or complementary management and research of shared small pelagic stocks.	Being met AFMA has engaged with State jurisdictions as required. Negotiations are underway with Tasmania to negotiate complimentary management arrangements and preparations are being made to negotiate similar outcomes with NSW and SA.	None specified.
R2. Within 12 months, AFMA to develop a formal data plan which sets out needs, priorities, mechanisms and timelines for data collection.	Ongoing A draft Strategic Ecosystem Based Data Plan has been prepared for the SPF (February 2006). In pursuit of cost-effective management, finalisation of the data plan will be undertaken following completion of the fishery's harvest strategy in January 2008.	Within 12 months.
R3. Within 12 months, AFMA to	Achieved As part of its review of trigger catch levels	Within 12



account for all small pelagic species extractions in setting the TCLs and TAC for the SPF.	(TCLs) for 2006/07, SPF RAG considered catch data from Commonwealth and state fisheries. A fishery report containing the catch information was prepared by BRS.	months.
<p>R4.</p> <p>Within 12 months, AFMA to develop and make publicly available measures and performance criteria (including reference points) for target species, byproduct and bycatch and measures and performance criteria for protected species interactions and ecological impacts of the fishery.</p>	<p>Ongoing</p> <p>Good progress has been made by the SPF RAG and MAC to develop a harvest strategy based on precautionary decision rules and reference points for the fishery. The strategy will be completed by 1 January 2008.</p> <p>The SPF Bycatch Action Plan (BAP) specifies a range of measures and performance indicators for the management of protected species, bycatch and the broader environment.</p> <p>An ERA of the fishery has been initiated to identify any high risk species, habitats and communities.</p> <p>Research is currently underway to develop dolphin and seal midwater trawl bycatch mitigation measures.</p> <p>All management arrangements are made publicly available through AFMA's website and notices to stakeholders.</p>	Within 12 months.
<p>R5.</p> <p>AFMA to report publicly on the status of the fishery on an annual basis, including a review of each of the performance criteria in the management regime for the fishery.</p>	<p>Being met</p> <p>The status of the fishery is published in AFMA's annual report and will be provided at the SPFMAC annual public meeting on 26 October 2007.</p>	Annually
<p>R6.</p> <p>Within 12 months, AFMA to establish a mechanism for collecting reliable information sufficient to identify long term trends in bycatch and interactions with protected species. In the event that bycatch or protected species interaction increase and pose a risk to sustainability, AFMA to investigate suitable bycatch mitigation measures for the fishery.</p>	<p>Being met</p> <p><i>Data collection</i></p> <p>Long term trends in bycatch are being monitored through observer coverage and logbook data.</p> <p>The fishery's data collection program will be reviewed in light of requirements arising from the fishery's harvest strategy response to AFMA's discard policy in 2007-08.</p> <p><i>Mitigation measures</i></p> <p>AFMA has funded research to investigate possible midwater trawl dolphin and seal bycatch mitigation measures. These are the key interactions to occur in the fishery.</p> <p>In accordance with SPF BAP AFMA will develop management strategies for all protected species</p>	Within 12 months.



	identified as high risk through the ERA process.	
<p>R7.</p> <p>AFMA to implement across the fishery mitigation and/or management measures endorsed as appropriate and acceptable by the Cetacean Mitigation Working Group (CMWG) as a matter of priority.</p>	<p>Being met</p> <p>AFMA has consulted with the CMWG on the development and progress of research investigating midwater trawl dolphin and seal bycatch mitigation measures. The CMWG has met four times since 2005 and has considered issues out-of-session.</p> <p>It is a requirement under the SPF BAP to consult with the CMWG on developing midwater trawl mitigation measures for seals and dolphins.</p>	None specified.
<p>R8.</p> <p>AFMA to identify and implement management strategies to address/mitigate any impacts identified through the Ecological Risk Assessment (ERA) with the timeframe for implementation commensurate with the level of risk identified by the ERA or other relevant research on target, byproduct, bycatch or protected species interactions.</p>	<p>Being met</p> <p>The SPF BAP requires AFMA to develop management measures for all protected species identified as high risk within 12 months of the ERA results being available.</p> <p>AFMA has developed an Ecological Risk Management framework that will guide responses to all ERA outcomes.</p> <p>Final results have been received on the SPF ERA. AFMA management will be undertaking a residual risk assessment of the SPF ERA in 2008.</p>	None specified.
<p>R9.</p> <p>In the event of interactions with protected species in the fishery, AFMA, in consultation with DEW, will within 12 months implement long term arrangements to address the interaction of protected species with fishing operations in the whole SPF.</p>	<p>Being met</p> <p>All TEP interactions are reported to DEW in accordance with agreed reporting guidelines between AFMA and DEW. In addition to this reporting all progress reports of research investigate seal and dolphin midwater trawl bycatch mitigation measures are supplied to DEW through their representation on the CMWG.</p>	Within 12 months of event.

Summary

The SPF has made good progress against the recommendations. The recommendations support existing management initiatives and targets set out in the Ministerial Direction and AFMA's commitments. AFMA Management therefore anticipates that all actions identified in the recommendations will be achieved.



Conditions - Wildlife Trade Operation, 23 February 2006 to 6 December 2007

Condition 1. *Operation of the Small Pelagic Fishery (SPF) will be carried out in accordance with the Management Policy for the Commonwealth Small Pelagic Fishery 2002 (SPFMP).*

Since first declaring the Small Pelagic Fishery (SPF) an approved Wildlife Trade Operation on 29 November 2004, management and operation of the fishery has not deviated from the framework defined in the SPF Management Policy (SPFMP). There have been no changes to the SPFMP.

Condition 2. *The Australian Fisheries Management Authority (AFMA) will inform the Department of the Environment and Heritage (DEH) of any changes to the SPFMP or other significant policy documents.*

AFMA Management has informed the Department of the Environment and Water Resources (DEW, formerly Department of the Environment and Heritage) on the development and implementation of management arrangements in the fishery through the inclusion of a DEW observer on the Small Pelagic Fisheries Management Advisory Committee.

Condition 3. *In relation to the accidental catch of dolphins within the SPF, AFMA will:*

- a) *Continue an observer program with a high level of coverage to determine the frequency of any interactions with cetaceans and the adequacy of mitigation measures.*

As directed in the interim management arrangements for Zone A, AFMA has maintained an observer program to determine the frequency of interactions with cetaceans occurring in the fishery. On the basis of scientific advice from the SPF Resource Assessment Group observer coverage is being maintained at 10 and 20 percent for purse seine and mid-water trawl fishing respectively. These levels were recommended on the basis that:

- They will provide a reliable indicator of interaction rates in the long-term
- They are consistent with observer programs in comparable fisheries such as the winter blue grenadier (trawl fishery with 20% coverage) and southern bluefin tuna (purse seine fishery with 10% coverage) fisheries
- It was recognised that purse seine fishing presents a lower mortality risk to TEPs such as dolphins and seals.

- b) *Ensure that all boats operating within the fishery have in place appropriate measures to detect dolphins in the vicinity of operations and implement measures to avoid fishing in areas where dolphins are observed.*

Industry awareness on the need to minimise interactions with dolphins has been raised primarily through direct liaison. AFMA Observers have been deployed and port visits have been conducted by an AFMA liaison officer. Through more broad educational campaigns (for example AFMA newsletters) AFMA continues to reinforce industry understanding of their obligations under the EPBC Act in relation to interactions with protected species.

- c) *Ensure that all fishing operators immediately notify AFMA and DEH of any dolphin captures.*

Conditional to operating in Commonwealth fisheries, operators must complete and return AFMA logbooks within three calendar days of the consignment being unloaded. These logbooks **must** specify any interactions with any TEP species. DEW is then notified of



TEP interactions in accordance with the agreed reporting guidelines between AFMA and DEW. There have been no dolphin interactions in the SPF since 2004/05.

- d) *Ensure that the skippers, crew and observers on all vessels operating in the fishery are thoroughly briefed on the above measures before leaving port.*

It is the responsibility of the concession holder to ensure that all employees are correctly briefed on how to operate in the fishery. AFMA has regularly met with holders of active concessions to ensure that they are aware of current management arrangements.

Condition 4. *Operation of mid-water trawlers in the SPF will be carried out in accordance with the agreed strategy requiring operational protocols to be strictly observed by fishers. In the event of fishing operations using gear types other than mid water trawl interacting with protected and/or listed species, AFMA will develop and implement mitigation measures within 6 months.*

AFMA observer reports indicate that mid-water trawlers have been operating in accordance with the agreed strategy. While no other interaction issues have arisen using purse seine, Industry has acted proactively to develop a purse seine Code of Practise (CoP). The Purse Seine CoP has now been finalized (Attachment B) and it is expected that a similar CoP will be developed for mid-water trawling following the completion of research into appropriate dolphin and seal mid-water trawl bycatch mitigation measures.

Condition 5. *Reports to be produced and presented to DEH annually, and to include: a summary of all protected species interactions reported in the SPF; and information sufficient to allow assessment of the progress of AFMA in implementing the conditions and recommendations specified for the SPF.*

Reports on interactions with protected species are provided quarterly to DEW and reports on progress of recommendations and conditions are provided annually in the AFMA Annual Report.



Six-monthly Bycatch Action Plan (BAP) Progress Report for the Small Pelagic Fishery from 31 March 2007

Issue: Protected species		
Strategy (1) – Take all reasonable steps to ensure that species listed under Part 13 of the EPBC Act 1999 are not killed or injured as a result of fishing.		
Performance Indicator	Actions	Output achieved
BAP communication strategy developed that informs Permit holders on the need for accurate and complete logbook reports within 9 months of the BAP commencement.	<p>Industry awareness on the need for accurate and complete logbook reporting will be raised primarily through direct liaison.</p> <p>Management staff, logbook liaison officers and observers will be responsible for communicating directly with industry. In addition to this network, the Southern Fisheries Ecosystem Based Fisheries Management (EBFM) workshops² will be used to disseminate information on the SPF BAP and its actions.</p>	<p>Yes</p> <p>AFMA Observers have been deployed and port visits have been recently conducted by a liaison officer in SA and VIC.</p> <p>Note: work is ongoing to finalise the EBFM workshops.</p>
Appropriate management measures implemented to reduce and mitigate midwater trawl dolphin and seal bycatch as determined through research within 12 months of the availability of results.	The Board approved AFMA research funding for an investigation into midwater trawl dolphin and seal bycatch mitigation measures at its meeting in October 2005 (meeting # 123).	<p>N/A</p> <p>Research is ongoing. A final draft report is due on 31 July 2007.</p>
Cetacean Mitigation Working Group (CMWG) members informed of any dolphin or seal interactions that occurred in the fishery within 72 hours of AFMA being notified.	<p>Several seal interactions have been recorded by underwater camera monitoring conducted as part of the midwater trawl dolphin and seal bycatch mitigation project.</p> <p>The latest project milestone report outlining all recorded interactions was circulated to CMWG members within 72 hours of AFMA receiving the report.</p>	<p>Yes</p> <p>Achieved so far but it should be noted that this is an ongoing action.</p>
Meeting/s of CMWG convened as soon as practicable following agreement among members to do so.	There has been no call to convene a CMWG meeting.	<p>N/A</p> <p>There has been no call to convene a meeting for this report period.</p>

² The EBFM workshops will be funded through AFMA's Natural Heritage Trust Funded project "Ecosystem Based Fisheries Management" and coordinated by the Communications Section.



<p>Research proposals into potential measures to reduce and mitigate midwater trawl dolphin and seal bycatch developed within 12 months of the BAP commencement.</p>	<p>A research proposal was developed by the Tasmanian Aquaculture and Fisheries Institute and supported by AFMA, DEH and the Whale and Dolphin Conservation Society.</p> <p>The Board approved AFMA research funding for the project at its meeting in October 2005 (meeting # 123).</p>	<p>Yes</p> <p>Board approval given in October 2005.</p>
<p>Management strategies developed and implemented to mitigate fishing impacts on high risk protected species within 12 months of their identification through the ERA project.</p>	<p>Draft SPF ERA results have been considered by SPFMAC/RAG on 29 September 2005 and 2 August 2006.</p>	<p>N/A</p> <p>Final ERA results are not yet available.</p>
<p>'Onboard' protected species information sheets be provided to all Permit Holders within 6 months of the BAP commencement.</p>	<p>AFMA Management, in consultation with SPFMAC intends to evaluate the cost-effectiveness of producing a separate information sheet noting that AFMA is preparing a protected species identification guide and that Industry members have committed to developing an Industry Code of Practice/s (SPFMAC meeting 3, March 2006).</p> <p>As part of the evaluation, an assessment will be first made on the suitability of AFMA's Protected Species Identification Guide and progress made towards developing an Industry Code of Practice/s (CoP/s).</p>	<p>No</p> <p>SPFMAC industry members will be reporting to SPFMAC at its meeting on 4 April 2007 on progress made towards finalising an industry CoP/s for the fishery.</p> <p>AFMA's Protected Species Identification Guide is yet to be assessed.</p>
<p>Logbook and observer data reports reviewed biannually by the SPFMAC and SPFRAG and any high risk protected species identified.</p>	<p>SPFRAG agreed on a reporting process for the fishery's logbook and observer data in March 2006. The RAG agreed for the Chair, James Findlay (BRS) to prepare an annual fishery assessment report and for AFMA to provide observer reports to the RAG.</p>	<p>Yes</p> <p>Two fishery assessment reports containing a summary of AFMA logbook data and an AFMA observer report for 2005-06 were presented to SPFRAG in 2006 (meetings held in March and December 2006).</p>
<p>Logbook reporting reviewed biannually by the SPFMAC and SPFRAG to ensure their effectiveness.</p>	<p>Logbook data will be reviewed against observer data.</p>	<p>No</p> <p>AFMA's observer section is expected to finalise its first analysis of AFMA observer against logbook data for the fishery by April 2007.</p>



Management measures applied within 3 months of any change or addition to a species listing, by AFMA, in consultation with SPFMAC and SPFRAG where appropriate.	No listing changes have occurred.	N/A
Industry midwater trawl and purse seine codes of practice finalised.	SPFMAC Industry members agreed at the third meeting of SPFMAC (28 March 2006) to develop a draft code of practice/s in consultation with the broader industry and to report at the next SPFMAC meeting.	No SPFMAC industry members will be reporting to SPFMAC at its meeting on 4 April 2007 on progress made towards finalising an industry CoP/s for the fishery.
Desired outcome: All reasonable steps taken to ensure that species listed in Part 13 of the EPBC Act are not killed or injured as a result of fishing.		
Outcome achieved: Mostly, some actions are outstanding.		

Issue: High risk and other bycatch species

Strategy (2) – Take all reasonable steps to ensure to reduce the bycatch of high risk and other species.

Performance Indicator	Actions	Output achieved
BAP communication strategy developed that informs Permit holders on the need for accurate and complete logbook reports within 9 months of the BAP commencement.	Industry awareness on the need for accurate and complete logbook reporting will be raised primarily through direct liaison. Management staff, logbook liaison officers and observers will be responsible for communicating directly with industry. In addition to this network, the Southern Fisheries Ecosystem Based Fisheries Management (EBFM) workshops ³ will be used to disseminate information on the SPF BAP and its actions.	Yes AFMA Observers have been deployed and port visits have been recently conducted by a liaison officer in SA and Victoria. Note: work is ongoing to finalise the EBFM workshops.

³ The EBFM workshops will be funded through AFMA's Natural Heritage Trust Funded project "Ecosystem Based Fisheries Management" and coordinated by the Communications Section.



<p>Management strategies developed and implemented to mitigate fishing impacts on high risk and other bycatch species within 12 months of their identification either through the ERA project or other research.</p>	<p>Draft SPF ERA results have been considered by SPFMAC/RAG on 29 September 2005 and 2 August 2006.</p>	<p>N/A Final ERA results are not yet available.</p>
<p>Strategic Ecosystem Based Data Plan developed for the fishery within 6 months of the BAP commencement.</p>	<p>A draft Strategic Ecosystem Based Data Plan has been prepared for the SPF (February 2006). In pursuit of cost-effective management finalisation of the data plan will be undertaken subject to consideration of needs arising from the December 2005 Ministerial Direction, in particular development of a harvest strategy (HS). SPFRAG will be conducting a Management Strategy Evaluation Workshop on 3 April 2007 to finalise its advice on a HS for the fishery.</p>	<p>No The data plan was completed to draft stage but will require revision following the development of a HS for the fishery in 2007.</p>
<p>Logbook and observer data reports reviewed biannually by the SPFMAC and SPFRAG and any high risk and other bycatch species identified.</p>	<p>SPFRAG agreed on a reporting process for the fishery's logbook and observer data in March 2006. The RAG agreed for the Chair, James Findlay (BRS) to prepare an annual fishery assessment report and for AFMA to provide observer reports to the RAG.</p>	<p>Yes Two fishery assessment reports containing a summary of AFMA logbook data and an AFMA observer report for 2005-06 were presented to SPFRAG in 2006 (meetings in March and December 2006).</p>
<p>Logbook reporting reviewed biannually by the SPFMAC and SPFRAG to ensure their effectiveness.</p>	<p>Logbook data will be reviewed against observer data.</p>	<p>No AFMA's observer section is expected to finalise its first analysis of AFMA observer against logbook data for the fishery by April 2007.</p>



<p>A strategic research plan developed within 6 months of the BAP commencement.</p>	<p>SPFRAG agreed at its meeting in March 2006 for James Findlay to develop a strategic research and data collection plan for the fishery out-of-session and report to the RAG.</p> <p>In pursuit of cost-effective management, finalisation of these plans will be undertaken subject to consideration of needs arising from the Ministerial Direction, in particular development of a harvest strategy.</p> <p>SPFRAG will be conducting a Management Strategy Evaluation Workshop on 3 April 2007 to finalise its advice on a HS for the fishery.</p>	<p>No</p> <p>Finalisation has been delayed to incorporate actions arising from the Ministerial Direction. Key research directions for the fishery will be driven the fisheries HS.</p>
<p>Desired outcome: All reasonable steps taken to reduce the bycatch of high risk and other species.</p>		
<p>Outcome achieved: Mostly, some actions are outstanding.</p>		

<p>Issue: Impact of total bycatch on the broader marine ecosystem</p>		
<p>Strategy (3) – Take all reasonable steps to minimise the impact of fishing on the broader marine ecosystem.</p>		
<p>Performance Indicator</p>	<p>Actions</p>	<p>Output achieved</p>
<p>Within 12 months of their identification either through the ERA project or other research, development of management strategies to ensure fishing impacts on the broader ecosystem are sustainable commenced.</p>	<p>Draft SPF ERA results have been considered by SPFMAC/RAG on 29 September 2005 and 2 August 2006.</p>	<p>N/A</p> <p>Final ERA results are not yet available.</p>



<p>Research into marine ecosystem level impacts identified as a priority in the SPF Strategic Research Plan to be developed within 6 months of the BAP commencement.</p>	<p>Two of the four strategic research priorities for fishery relate to marine ecosystem impacts. These are:</p> <ol style="list-style-type: none"> 1. Role of small pelagic species in the ecosystem – links to harvest strategies <ul style="list-style-type: none"> • Determine the proportion of standing SPF stocks that can be harvested annually so as to maintain ecosystem function 2. Cetacean interactions and bycatch <ul style="list-style-type: none"> • Determine the nature and extent of cetacean interaction (and other protected species) occurring in the SPF • Determine the extent of bycatch in the SPF • Develop cost-effective mitigation strategies 	<p>Yes</p> <p>SPFMAC and RAG agreed to the fishery's 2007/08 strategic research in March 2006 and SPFRAG has recommended that the priorities remain unchanged for 2008/09. SPFMAC will consider the RAG's recommendation at its meeting in April 2007.</p>
<p>Desired outcome: All reasonable steps taken to minimise the impact of fishing on the broader marine ecosystem.</p>		
<p>Outcome achieved: Mostly, some actions are outstanding.</p>		

<p>Issue: Communication</p>		
<p>Strategy (4) – Effectively communicate the Bycatch Action Plan to industry and the wider community</p>		
<p>Performance Indicator</p>	<p>Actions</p>	<p>Output achieved</p>
<p>Effective education and awareness program on bycatch established and information distributed to stakeholders commenced within 9 months of the BAP commencement.</p>	<p>The SPF BAP education and awareness program has been developed in line with 'mandatory' actions identified in AFMA's BAP communication strategy.</p> <p>The BAP has been distributed to all Permit Holders and State fisheries management agencies. The BAP is also available on AFMA's website.</p>	<p>Yes – December 2005.</p>
<p>Desired outcome: Stakeholders are aware of and understand the BAP.</p>		
<p>Outcome achieved: Generally yes.</p>		

