OCEAN TRAP & LINE MANAGEMENT ADVISORY COMMITTEE MEETING
DRAFT AGENDA
Meeting 5 November 2007
9:00 am to 5:00 pm
2nd meeting for 2007
Cronulla Fisheries Research Centre
Cronulla, NSW 2230

Chairperson
Dr Julian Amos

Management Advisory Committee Representatives

Allen Filep	Spanner crab
Vacant	Line fishing (eastern zone) north
Matthew Creek	Line fishing (eastern zone) south
John Garven	Demersal fish trap north
Paul Sullivan	Demersal fish trap south
John Joblin	Line fishing (western zone) north
Garry Braithwaite	Line fishing (western zone) south
Oliver Wady	Recreational representative
Vacant	Conservation
Veronica Silberschneider	Director-General's nominee

Observers

Dianna Watkins	Department of Primary Industries, Manager, Commercial Fisheries
Kevin Rowling	Department of Primary Industries, Science and Research
Peter Gallagher	Department of Primary Industries, Senior Conservation Manager – Threatened Species
Warren Winter	Department of Primary Industries, Compliance
Robert Gale	Department of Primary Industries, Principal Policy Economist
Ray Blake	Commercial fishing industry
Eddi Barbaric	Commercial fishing industry
Darren Ward	Commercial fishing industry

OTLMAC DRAFT AGENDA
5 November 2007

Welcome and Apologies	Chairperson
Agreement on agenda for 5 November	Chairperson
Confirmation of draft minutes of 24 July 2007	Chairperson
Correspondence sent and received	Chairperson
1. Business arising from the minutes	Chairperson/ NSW DPI
2. AAT decision on grey nurse shark: NCC vs Commonwealth	NSW DPI & Industry
3. Shark discussion paper – update on comments	NSW DPI & Industry
4. Review of the South East Trawl Fishery trip limits – Section 8 closure	NSW DPI & Industry
5. Depth-related mortality of snapper from fish trapping	NSW DPI
6. Consideration of the report entitled "A biological and economic assessment of the 2001 change in the Minimum Legal Length (MLL) of snapper in NSW".	NSW DPI
7. Development of closures to protect aggregations of undersized snapper	NSW DPI
8. Updates – Research, Compliance, Management Planning, SIAC and Commonwealth update	NSW DPI
9. Black Cod recovery plan	NSW DPI
10. Increasing the length of netting able to extend beneath the frame of spanner crab nets from 10cm to 15cm	Industry
11. Wobbegong shark management arrangements	NSW DPI
12. OCS negotiations	Industry
13. Imported fish	Industry
14. Other business	Chairperson
15. Chairperson's summary and next meeting date	Chairperson

Chairperson

Issue
Welcome and Apologies

Background

Chairperson

Issue
Agreement on Agenda

Background
A notice of the meeting and call for agenda items was circulated to Committee members, co-operatives and coastal fisheries offices on 8 October 2007.

A draft agenda has been circulated to all Committee members, co-operatives and coastal fisheries offices. Additional items may be proposed for discussion during other business, subject to approval by the Chairperson.

Chairperson

Issue
Confirmation of draft minutes from the previous meeting

Background
Draft minutes were prepared 'live' during the last meeting and sent to Committee members following the meeting.

Chairperson

Issue
Correspondence received and sent

OTLMAC CORRESPONDENCE LIST

Date	*From*	*Issue*	*To*	*Action*
03/08/2007	NSW DPI	Copy of the FMS for the NSW Lobster Fishery provided	Chair	FYI
13/08/2007	NSW DPI	Copy of the FMS for the NSW Abalone Fishery provided	Chair	FYI
16/08/2007	NSW DPI	OTLMAC draft meeting outcomes for 24 July 2007	OTLMAC	FYI
29/08/2007	NSW DPI	Out of session item – renewal of Woody Bay fishing closure	OTLMAC	Comment
12/10/2007	NSW DPI	Community update on the Sydney Desalination project	Chair, Paul Sullivan	FYI

Agenda Item 1 **NSW DPI**

Issue
Business arising from the minutes

Background
Update on new and outstanding action items.

Outcomes
For information

NEW ACTION ITEMS
OTLMAC Meeting 24 July 2007

Agenda Item	Topic	Action	Responsibility	Status
	OTLMAC membership	Letter to previous line fishing (eastern zone) north member from chairperson to thank him for his contribution.	Chairperson / NSW DPI	Drafted
	Agenda Items	Where similar agenda items are raised by both DPI and industry, the agenda item is to be marked as such	NSW DPI	Ongoing – delete from Actions list?
4	Development of closures to protect aggregations of undersized snapper	DPI to identify key OTL fish trappers and organise meetings to develop areas for closure	NSW DPI	Complete – see Agenda Item 7
		OTLMAC to write a letter to Ocean Trawl MAC with respect to complementary closures for undersized snapper	NSW DPI	Pending - Awaiting nomination of areas by OTL fish trappers
5	Interim arrangements for sharks caught in the OTLF	DPI to identify species to be excluded e.g. wobbegongs	NSW DPI	Pending – see Agenda Item 3
		DPI to further consider the issue of landing sharks with heads attached	NSW DPI	Pending – see Agenda Item 3
6	Reporting of shark species caught in the OTLF	This item was deferred until there is more refined catch information	NSW DPI	Deferred until better catch info available
7	Compliance	DPI to provide further advice regarding who is liable if a Compliance Officer injures the skipper or crew when aboard a commercial vessel.	NSW DPI	Complete – see Agenda Item 8
8	OTL FMS – closures for grey nurse shark protection	DPI to continue to develop and implement closures, including consulting with industry.	NSW DPI	Ongoing – see Agenda Item 2
9	Share Management Plan – escape panels in fish traps	OTLMAC to write to the Estuary General and Lobster MACs expressing concern that escape panels are not currently required in their traps	OTLMAC	Pending
	Share Management Plan – new gear regulation in spanner crab fishery	DPI to investigate the case for allowing an increase in the amount of netting allowed to extend beneath the frame of spanner crab nets from 10cm to 15cm	NSW DPI	Complete – see Agenda Item 10
10	Proposal for 2 protection zones over submarine cables off Narrabeen and Tamarama / Clovelly beaches	DPI to include, with the meeting outcomes, the media release by ACMA relating to their decision as to the fishing operations permitted within the protection zones	NSW DPI	Complete – attached to previous outcomes
11	Marine Park buy-out calculations	DPI to provide numbers of OTL entitlements bought out	NSW DPI	Complete - attached to previous outcomes

OUTSTANDING ACTION ITEMS
OTLMAC Meeting 28 & 29 August 2006

Agenda Item	Topic	Action	Responsibility	Status
2	OTL Share Management Plan	Chairperson to write to the Minister regarding the maximum allocation of shares and the Committee's request to re-issue shares allocating 50 shares to those fishers whom originally met the criteria for 40 shares.	Chair	Complete

OUTSTANDING ACTION ITEMS
OTLMAC Meeting 5 April 2006

Agenda Item	Topic	Action	Responsibility	Status
2	Quota Management for the Spanner Crab Fishery	Spanner crab sub-committee to meet to discuss options for quota management.	NSW DPI	Pending

OUTSTANDING ACTION ITEMS
OTLMAC Meeting 11 October 2004

Agenda Item	Topic	Action	Responsibility	Status
2	The Snapper report is currently in draft form and is pending internal review by the research and economics groups, prior to circulation to the MAC. A delay in recruiting a fisheries economist was noted.	Draft report to be circulated to MAC after review has been completed.	NSW DPI	Complete – see Agenda Item 6
	Size Limits	Discuss the implementation of complementary size limits with the Commonwealth.	NSW DPI	Ongoing – Delete from Actions list?

Agenda Item 2 **NSW DPI & Industry**

Issue
AAT decision on grey nurse shark: NCC vs Commonwealth

Background
The Nature Conservation Council of NSW appealed the decision by the Commonwealth Department of the Environment and Heritage (now the Department of the Environment and Water Resources - DEW) to approve the NSW Ocean Trap and Line Fishery as a Wildlife Trade Operation.

The AAT proceedings concluded on 10 July 2007. The decision was handed down on 18 October 2007. The full decision can be viewed at www.aat.gov.au.

The AAT ruled that the original decision by the Minister for the Environment and Water Resources to declare the NSW Ocean Trap and Line Fishery as a wildlife trade operation (WTO) is affirmed. That is, the existing WTO remains with the same conditions attached. Condition 6 of the current WTO requires that:
NSW DPI to develop and implement, by 16 November 2007:
a) fishing closures of appropriate area for grey nurse sharks as required under the Preferred Strategy Report; and
b) a targeted monitoring program to help evaluate the effectiveness of the grey nurse shark fishing closures.

This WTO is to expire on 14 December 2007 with a report to be sent to DEW by 16 November 2007. This report will outline the progress made on the conditions attached to the WTO. An urgent out-of-session item relating to this matter was sent to OTLMAC members for comment by 31 October 2007.

DEW has been invited to attend the meeting and provide an update.

Outcomes
For discussion

Agenda Item 3 **NSW DPI & Industry**

Issue
Shark discussion paper – update on comments

On 12 October 2007 a discussion paper entitled "Proposed arrangements for the landing of large sharks in the Ocean Trap and Line Fishery" was mailed to all Ocean Trap and Line Fishing Business owners. The paper outlines a number of proposals and options for managing the harvest of sharks.

A number of the options outlined in the discussion paper were discussed at the last OTLMAC meeting held on 24 July 2007, including the species to be included on the list (refer draft meeting outcomes). NSW DPI has asked interested parties to provide written submissions on the discussion paper by 5 November 2007.

A verbal summary of the submissions received to date will be provided to the MAC.

Industry submission:
Garry Braithwaite advises that school and gummy sharks should be excluded from the list of species for which the new arrangements are to apply since there is a separate School and Gummy Shark endorsement.

Outcomes
For discussion

Agenda Item 4 **NSW DPI & Industry**

Issue
Review of the South East Trawl Fishery trip limits – Section 8 closure

Background
The South East Trawl Fishery trip limits apply to the Ocean Trawl Fishery and/or the Ocean Trap and Line Fishery. The closure is due to expire on 30 April 2008.

At the previous MAC meeting, industry proposed that the South East Trawl Fishery trip limits be reviewed. The MAC was advised that the limits were already under review.

NSW DPI is considering the need to retain the complex set of trip limits in light of the recent changes to Commonwealth management, the recent environmental assessments for the Ocean Trawl and Ocean Trap and Line Fisheries, the status of each stock, levels or risk of discard mortality, level of harvest in NSW and the Commonwealth and whether the trip limits are the most appropriate tool to manage any issues identified with respect to a stock. It appears that there may be scope to adjust trip limits for some species, subject to ongoing monitoring of the status of stocks and implementation of appropriate management arrangements on an as needs basis.

Note that the extent and timing of any changes to the trip limits is likely to be influenced by the extent and timing of the action being taken by NSW DPI to prevent the displacement of excessive fishing effort into NSW fisheries resulting from some Fishing businesses splitting their business through the recent Commonwealth buy-out.

Eastern Gemfish
This species has been nominated for listing as an endangered species under the Fisheries Management Act 1994 (the Act) and Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and all NSW commercial fishers are currently subject to a 50 kg trip limit for eastern gemfish, to discourage targeted fishing for the species. Additionally, The Ocean Trap and Line Fishery Management Strategy requires the development and implementation of a recovery program for eastern gemfish in the short term. It is therefore not proposed to include Gemfish in the above mentioned review.

Outcomes
For discussion

Agenda Item 5 **NSW DPI**

Issue
Depth-related mortality of snapper from fish trapping

Background
Discarding of fish from Ocean Trap and Line fishing operations was assessed as being a high risk to the primary and key secondary species in the fishery. This risk rating was due partly to the unknown discard mortality of most species.

A pilot study was done to assess the discard mortality of snapper from fish trapping at various depths. A presentation of the results from that study will be provided by Dr John Stewart.

Outcomes
For information

Agenda Item 6 **NSW DPI**

Issue
Consideration of the report entitled "A biological and economic assessment of the 2001 change in the Minimum Legal Length (MLL) of snapper in NSW".

Background
In 1999, NSW Fisheries scientists recommended a 4 cm increase in the Minimum Legal Length (MLL) of snapper from 28 to 32 cm to reduce the problem of 'growth overfishing' and reduce the risk of 'recruitment overfishing' (with the latter being a serious stock problem). Given concerns about the financial impacts of a 4 cm size increase for some commercial fishers, the previous Minister for Fisheries committed to implementing two separate increases of 2 cm. The first increase from 28 to 30 cm took effect on 1 July 2001; the second increase was to occur after a study of the biological and economic effects of the first increment.

The approved Ocean Trap and Line Fishery Management Strategy commits to a review of the economic impacts of increasing the MLL for snapper to 32 cm and to implementing the outcomes of the review (management response 2.1g).

"A biological and economic assessment of the 2001 change in the Minimum Legal Length (MLL) of snapper in NSW" has been prepared for consideration by OTLMAC. The Executive Summary is attached at Attachment 1 and the full report has been provided to the MAC.

Outcomes
For discussion

Agenda Item 7 **NSW DPI**

Issue

Development of closures to protect aggregations of undersized snapper

Background

An approach for the development of undersized snapper closures was discussed at the previous OTLMAC meeting.

It was proposed that individual port meetings be carried out to identify where closures may be appropriate. The Committee identified the following ports where meetings could be held: Eden, Ulladulla, Port Stephens, Sydney, Forster, Coffs Harbour, Ballina and Tweed.

Key snapper trappers were identified by analysis of recent catch returns (2002/03-2006/07). Ports visited to date include: Tweed, Ballina, Yamba, Coffs Harbour, Macksville, Port Macquarie, Crowdy Head, Greenwell Point and Eden. Further ports to be visited include Sydney, Terrigal, The Entrance and Port Stephens.

There was some support for closing areas where undersized snapper aggregate. NSW DPI will follow up with relevant operators to establish area co-ordinates and the appropriate months when juvenile snapper are present. In areas where there are substantial closures in place due to Marine Parks, fishers did not think that further closures were required. Fishers agreed that any closures to fish trapping should also apply to ocean trawl operators. Some fishers also agreed that closing river mouths at times of flood to fish trapping, as well as to trawling, would be another protective measure.

Outcomes

For discussion

Agenda Item 8 **NSW DPI**

Issue
Updates – Research, Compliance, Management Planning, SIAC and Commonwealth update

Research

- Dr Kevin Rowling – A written update is provided at Attachment 2

- Dr Will Macbeth - an update will be given on the observer program currently in progress in the line-fishing sector of the Ocean Trap and Line Fishery. The Ecology Lab Pty Ltd was the successful tenderer with respect to the provision of observer services for the field sampling phase of the program, which began during September. Information will be provided on the number of observer trips successfully completed to date and any issues/challenges that have arisen.

Compliance
Warren Winter (District Fisheries Officer – Hunter) has provided a written update (Attachment 3). NSW DPI is awaiting clarification from NSW Maritime as to the boarding of fishing boats by Fisheries Officers and the impact this may have on survey requirements.

Management Planning
Advice will be requested from OTLMAC regarding renewal of WTO/export approval, noting any further developments following the AAT decision and resultant actions.

SIAC
There have been no SIAC meetings since the last OTLMAC meeting

Commonwealth
A written update is provided at Attachment 4

Outcomes
For information

Agenda Item 9 **NSW DPI**

Issue
Black Cod recovery plan

Background
Black cod (*Epinephelus daemelii*) is listed as a vulnerable species under the NSW *Fisheries Management Act 1994*. A recovery plan is needed to outline the steps to be taken to aid the recovery of the species. Mr Peter Gallagher will outline the content of the report and provide a presentation on the Black Cod recovery plan. The presentation will cover the following topics:

- Overview of black cod
- Recovery planning process and objectives
- Introduction to the risk assessment approach
- Role of the MAC in providing feedback
- Plan finalisation process

An issues paper will be distributed to MAC members and feedback is sought from the MAC.

Outcomes
For discussion

Agenda Item 10 **Industry**

Issue
Increasing the length of netting able to extend beneath the frame of spanner crab nets from 10cm to 15cm

Background
At the previous meeting, industry requested that NSW DPI investigate the case for allowing an increase in the amount of netting allowed to extend beneath the frame of spanner crab nets from 10 cm to 15 cm to reduce net repairing time.

Departmental response
The 10 cm netting extension sets a tolerance limit that the net must comply with. It is preferable that there be no drop but this would make compliance difficult and it is acknowledged that even after a short while a tightly hung net will stretch. The more slack there is in the net the more the spanner crabs are likely to become entangled, and the more entangled they are the harder it is to clear them without damaging their legs. Previous experimental work showed that limb damage can significantly increase post-release mortality.

Therefore, to maximise the survival of undersized crabs after release, NSW DPI does not support increasing the length of net able to extend beneath the frame.

Outcomes
For information

Agenda Item 11 **NSW DPI**

Issue
Wobbegong shark management arrangements

Background
Currently, wobbegong sharks are managed under the shark trip limits of 1 tonne for 24 hours and 2 tonnes for 48 hours or greater.

The OTL Fishery Management Strategy (FMS) requires that a trip limit of 12 carcasses applying to a minimum 24 hour period be implemented. This has been delayed due to higher priority being assigned to amendments to the Share Management Plans. A closure notice has been prepared to address the FMS requirement.

The FMS also states that a minimum legal length (MLL) for wobbegong sharks of 130 cm TL be implemented subject to scientific peer review of the relevant research and the potential efficacy of a size limit by NSW DPI.

The review of research has been completed. The review recommends that the 12 carcass trip limit be implemented as well as the 130 cm MLL. The 130 cm MLL will provide total protection for the Banded wobbegong (*Orectolobus ornatus*), provides partial protection for the Spotted wobbegong (*O. maculatus*) as the size at which 50% of these wobbegongs (males & females) reach sexual maturity is 128 cm, but would provide limited protection for Hale's wobbegong (*O. halei*). The 12 carcass trip limit would then provide additional protection to all species.

A further option is to implement 2 size limits – one at 130 cm for the Spotted wobbegong and the other at 180 cm for Hale's wobbegong, as well as the 12 carcass limit.

Previous discussions have indicated that a carcass limit of 12 may not prevent targeting of wobbegong sharks. The MAC's advice is sought as to whether the limit should be less than 12.

Outcomes
For discussion

Agenda Item 12 **Industry**

Issue
OCS negotiations

Background
Industry has requested that an update be provided on the current state of negotiations with the Commonwealth on the Offshore Constitutional Settlement (OCS). Specifically, what are the effects of the present OCS and Commonwealth East Coast Tuna Minor Line Permits on the management of the OTL Fishery eg shark and tuna fisheries.

Commonwealth response *(prepared by Eastern Tuna and Billfish Fishery Manager*):
A "minorline" is defined in the Eastern Tuna and Billfish Fishery (ETBF) Management Plan as: "a device consisting of one or more hooks that is used in minorline fishing and is capable of catching only one fish at a time".

In practical terms, the permit allows fishers to engage in activities such as trolling, handlining, or poling. The key aspect is that each line must be capable of only catching one fish at a time. The reference to "one or more hooks" is to allow for apparatus like gang hooks or lures with multiple hooks.

There is currently no restrictions on the number of minor lines that a permit holder can use (ie – they could deploy multiple handlines from the boat, as long as each could only catch one fish). Once Statutory Fishing Rights are granted, they will be restricted to a certain number of lines in use at any one time (this number has not yet been set).

A minorline permit can only be used to target ETBF species (Albacore, Bigeye, Billfish, Longtail, Northern Bluefin, Rays Bream, Skipjack and Yellowfin) and there are a range of bycatch trip limits in place to regulate the take of species that are managed by the States under OCS arrangements. For sharks, that limit is 20, which must be landed with fins and liver attached.

NSW continues to be willing to work with the Commonwealth to clarify the current ambiguity with regard to the taking of tuna and tuna like species in the OCS.

Outcomes
For information

Agenda Item 13 **Industry**

Issue
Imported fish

Background
State and Commonwealth fishers have had to meet management and sustainability criteria to be able to export product. Industry requests that imported fish products also meet the same stringent criteria. Industry notes that the USA and Japan have done this.

Departmental response:
The Commonwealth Government controls the development and implementation of the relevant legislation. Industry should therefore seek comment from the Commonwealth Department of Agriculture, Fisheries and Forestry on this issue.

Outcomes
For information

Agenda Item 14 **Chairperson**

Issue
Other business

Background

Outcomes

Agenda Item 15 **Chairperson**

Issue
Chairperson's summary and next meeting date

Background

Outcomes
For information

Attachment 1
Agenda Item 6 – Executive Summary of the report "A biological and economic assessment of the 2001 change in the Minimum Legal Length (MLL) of snapper in NSW"

In 1999, fisheries scientists with the New South Wales state government recommended a 4 cm increase in the Minimum Legal Length (MLL) of snapper from 28 to 32 cm to reduce the problem of growth overfishing. Given concerns about the financial impacts of a 4 cm size increase for some commercial fishers, the Minister for Fisheries at the time committed to implementing two separate size limit increases of 2 cm increments. The first increase from 28 to 30 cm took effect 1 July 2001; the second increment was to occur after a study of the biological and economic effects of the first increment. Accordingly, the purpose of this study is to report on the biological and economic impacts of the 2 cm increase in the legal catch size of snapper from 28 to 30 cm. The implications of the findings for an increase to 32 cm are also considered.

The research method for assessing the impact of the 2 cm size increase is a "before-and-after" comparison of biological, catch and economic information, complemented by a statistical analysis of price information for four years preceding and five years following the change. The Ocean Trap and Line (OTL) Fishery constitutes the scope of the study because 95% of all commercially caught snapper are from this fishery.

This summary reports on the results of the first change to increase the MLL by 2 cm from 28 to 30 cm, as well as the second anticipated change for an additional 2 cm increase in the MLL from 30 to 32 cm (as originally recommended by NSW fisheries scientists). Key points about biological, catch and economic issues are reported.

Effects of increasing the MLL by 2 cm from 28 to 30 cm

Three key outcomes arise with regard to biological issues:

- The shift in size composition of landed snapper is consistent with previous expectations about the impacts of a 2 cm increase. This shift suggests that the snapper protected by the new size limit have grown and are now contributing to the fishery at these larger sizes and increasing the average weight of fish caught and hence the weight of fillets.

- There has been an increase in the proportion of 3- and 4-year-old snapper in landings since the MLL change. This is a very desirable shift because it reduces the dependency of the fishery on 2- and 3-year old fish and therefore reduces the risks associated with a year or two of poor recruitment. However, the age composition of the fishery is still typical of a heavily fished stock with more than 65% of the catch in 2002/03 and 2003/04 being 2- and

3-year-old fish. The snapper stock and its fishery would likely benefit from a further reduction in reliance on 2- and 3-year-old fish.

- The analyses of trends in average snapper catch per day from trapping indicate that snapper greater than or equal to the 30 cm MLL, and hence available to commercial fishers remaining in the OTL fishery, has increased markedly since the period prior to the 2 cm increase.

Five key points on catch are important to note:

- The total volume of commercial catch of snapper has declined markedly since the early 1990s. This overall decline is part of a long-term trend (even prior to the years discussed in this report) and is mainly associated with a corresponding decline in the numbers of commercial fishers who target snapper. More specifically, the trends between 1997/98 and 2005/06 are as follows:
    - OTL catch declined by 35.2% from 2,299 tonnes to 1,491 tonnes.
    - Snapper catch declined by 27.3% from 278 tonnes to 202 tonnes.
    - For the period 2001 to 2005, the number of fishing businesses voluntarily surrendered by (active) OTL fishers catching snapper for the creation of Recreational Fishing Havens was 24; the number for Marine Protected Area buy out programs was 32.
    - In the OTL fishery, there was a 47.4% decline in the number of fishers catching any snapper from 380 to 200 fishers. Regarding the 180 fishers who stopped catching snapper, approximately 78 fishers participated in the buy out programs between 2001 and 2005, and another 102 fishers stopped fishing for snapper in the OTL fishery for other reasons (between 1997/98 and 2005/06), although they may still be participating in the OTL fishery catching other species or participating in other fisheries.
    - The number of fishers in the OTL fishery who contribute to catching 90% of the total landings of snapper also declined by 47.4% between 1997/98 and 2005/06 from 116 to 61 fishers (though these fishers may still be participating in the OTL fishery or other fisheries).

- Even with the declines in snapper landings and fishers, individual fishers caught on average a greater weight of snapper per fisher in 2005/06 than in 1997/98. This is evident for all fishers catching snapper and for those who contribute to catching 90% of the total—catch for both categories increased by 39%.

- On a regional basis, dedicated snapper fishers (i.e., those contributing to catching 90% of landed snapper) caught 70% more fish per person in the Northern area, 14% more in the Mid-North in 2005/06, and 40% more in the Central area, compared to 1997/98. These increases in catch per fisher are consistent with expectations following the increase in MLL; they may also be associated with naturally productive years in those areas and/or the reduction in the number of participating fishers. The South was the only area to experience a decline in catch, a 7% drop compared to 1997/98.

- The relative importance of the MLL change with respect to other reasons for leaving the snapper fishery is difficult to isolate given the available data. While the change to a 30 cm MLL may account for a proportion of the impact on fishers choosing not to continue fishing snapper or to continue at a lower level, other factors such as natural variation in biological production, buy outs of fishing entitlements or uneconomic operating costs, may also contribute to lower levels of total catch. While year-to-year variations make it difficult to distinguish other factors from the effectiveness of the size limit increase, the analysis of trends within data sets, combined with the comparison of means, immediate impacts, and overall trends, suggests that the change in MLL has had a positive overall impact.

The following six points on economic issues are particularly relevant:

- The estimated Gross Value of Production (GVP) of all catch from the OTL fishery was already in decline before the MLL change for snapper and this decline has been at a faster rate than the decline in GVP from snapper. For example, after taking inflation into account, the OTL GVP declined by 38% over the nine years of record. Over the same period, snapper GVP declined by 32%. This means that factors other than the snapper MLL change are important in the declining GVP of the OTL fishery.

- While the estimated GVP from fishers catching 90% of the total landings of snapper declined in absolute terms, overall average income from snapper per OTL fisher contributing to catching 90% of the total snapper catch (after adjusting for inflation) increased by 40% between 1997/98 and 2005/06 (from $24,493 to $34,277).

- On a regional basis, over the nine years of record, average income from snapper per OTL fisher contributing to catching 90% of the total snapper catch (after adjusting for inflation), increased by 64% in the North (from $27,246 to $44,758), by 10% in the Mid-North (from $25,361 to 27,785), and by 35% in the Central area (from $26,499 to $35,569). It decreased by 11% in the South area (from $12,850 to $11,479).

- There were increased catches of leatherjackets and bream in the year immediately following the MLL change. Although average incomes from

snapper fishing declined by 18.9% for OTL snapper fishers contributing to 90% of the total snapper catch in the year following the change, for many of these snapper fishers the increase in catch of leatherjackets and bream offset short-term losses in income from snapper. In other words, large increases in landings of leatherjackets and bream by fishers since 2000/01 may have offset the short-term losses in income from not catching snapper under 30 cm in length. After adjusting for inflation, the GVP of the OTL fishery – already in decline – decreased slightly from 2000/01 to 2001/02, suggesting that the change to snapper MLL did not have a significant overall impact on the OTL fishery as a whole.

- Over the five years of record after the change, there is a 7 per cent increase in the inflation-adjusted price of snapper per kilogram sold at the Sydney Fish Market, ie a comparison of the before-and-after periods demonstrates that the price of snapper has increased in real terms.

- Although the proportion of all NSW snapper sold at the Sydney Fish Market is unknown, records of NSW sales kept according to grade size allow some comparative analysis. The grade categories are small (less than 34 cm), medium (34 to 48 cm) and large (greater than 48 cm). For the four years of record before the size limit change, there is a price premium of 5.1% and 7.4%, respectively, for small snapper compared to medium and large snapper. For the three years after the size-limit change, the price premium increases to 14.6% and 20.5%, respectively. This suggests that a refinement of the small grade size category has occurred through the elimination of snapper less than 30 cm, i.e., the removal of sizes below the legal size limit. This information indicates that, taking inflation into account, the increase in MLL has been positive for size grade and price.

The next step: Increasing the MLL by 2 cm from 30 to 32 cm

In summary, the biological information indicates that the increase in MLL contributes to increases in snapper catch per fisher and the available biomass of larger fish. Associated with these benefits are increases in the spawning biomass and egg production and therefore probable increases in recruitment. Nevertheless, the composition of the catch indicates that the east-coast snapper stock is still a very heavily fished stock. The next step in continuing to improve yield in this fishery is to shift the size composition of landed snapper by an additional 2 cm. This is consistent with the original scientific advice in the late 1990s that further benefits would occur by increasing the MLL to 32 cm and beyond. It is also consistent with the original Ministerial decision to implement a 2 cm increase from 28 to 30 cm in 2001 as the first part of a planned 4 cm increase, with the second increase to take place following an assessment of the impact of the initial increase.

The following four points about the merits of increasing the size limit by 2 cm from 30 to 32 cm are noted:

- Increasing yield: The original MLL change from 28 to 30 cm was associated with immediately excluding a large proportion, i.e., more than 30% of the fish landed (see Figure 1). The immediate impact was a 20% decline in catch per unit of effort (CPUE) in 2001/02; the CPUE subsequently increased each year to be currently approximately 15% on average higher than pre-MLL change levels. It would be logical to expect that a further increase in MLL to 32 cm would cause a similar decline in catch rates in the year immediately following the change, but that yield per recruited fish (i.e., the average size of snapper caught), would increase from current levels. A further increase in yield would address a desirable and sought after scientific, management and economic objective. Because a 30 cm snapper grows at an average rate of 4 cm per year, harvesting at larger sizes takes advantage of this rapid growth. Harvesting from a population with a higher proportion of older age classes is consistent with risk-averse fisheries management and has the potential to reduce the costs of monitoring the stock in the longer-term.

- Protection of more juvenile snapper: The age–composition of landings remains indicative of a heavily fished stock. Biologically, there is too much fishing mortality on 2- and 3-year-old fish. Not all 2-year-old snapper are sexually mature and a further increase in MLL would protect a greater proportion of 2-year-old snapper. Protection of more juvenile snapper should result in increases in spawning biomass and egg production. It is important to note that snapper in NSW are growth overfished and that reducing fishing mortality will assist in reducing the risk of recruitment overfishing.

- Size limits in other jurisdictions: NSW fisheries scientists have consistently argued that the 4 cm increase in size limit from 28 to 32 cm recommended in the late 1990s was always the minimum recommended increase and that in other jurisdictions where overfishing is a concern larger size limits have already been implemented. For example, the MLL for snapper in Queensland, South Australia and Western Australia is 35 cm, 38 cm and 41 cm (most regions), respectively. In Victoria, where snapper stocks are not believed to be overfished, the size limit was increased on 1 October 2007 from 27 to 28 cm.

- Recreational fishing: A survey of recreational fishing in New South Wales for 2000/01 estimated the recreational catch of NSW snapper at 117 tonnes. This was about 43% of the 273 tonnes of commercial catch, yielding a combined catch of about 390 tonnes. The high proportion of recreationally caught snapper provides an additional factor in favour of a 32 cm size limit because it provides additional protection to a proportion of the snapper that would otherwise be caught without the increase in size limit.

Notwithstanding the above points, there is still a need to address bycatch issues that might result from a further increase in MLL for snapper. The implementation of the smallest-sized escape panel mesh in fish traps (scheduled for 2007) will do little to reduce the bycatch of currently undersized snapper and nothing to prevent the catching and discarding of 30 and 31 cm snapper. The survival of discarded snapper and the relationship of survival rates with the depth released require further consideration.

In summary, the evidence supports the view that the implementation of a 30 cm MLL in 2001 has contributed to the following three major outcomes:

- Increasing yield per recruit;
- Spreading the fishery across more than a couple of young year classes (thus reducing the potential for fishery collapse following a year of poor recruitment), and
- Increasing the reproductive potential of the snapper stock.

A further increase in the MLL by an additional 2 cm to 32 cm (as originally recommended), will likely lead to enhanced biological benefits by shifting catch to a larger proportion of 3- to 6-year-old fish. Expected benefits also include reduced risks to the stock, reduced yearly variations in catches due to recruitment and probable increased egg production. The size limit increase and short-term reduction in the landed weight of snapper is a cost to participants that would likely be offset by other catch as occurred after the first size limit change. On balance, the longer-term benefit of improvements to CPUE compensates the industry for short-term economic costs.

The MLL change is one component of other policy changes (including input controls and buy outs for Marine Protected Areas and Recreational Fishing Havens) that have taken place in NSW fisheries. While no one policy change explains the current catch and income figures for OTL fishers catching snapper, there is no basis for arguing that the first 2 cm increase has had an adverse ongoing impact on snapper fishers continuing in the industry. From an economic perspective, increased catches by weight have slightly improved the viability of fishers catching snapper.

The decision to further increase the MLL to 32 cm can be justified on biological grounds. Given the significant biological benefits (i.e., an increase in yield per recruit and reproduction), it can also be expected that any short-term economic costs will be offset by medium and longer-term economic gains.

Although there are too many confounding factors to link a size increase directly to a price increase, this is not essential information in increasing the MLL. The need for a biological adjustment to promote the sustainability of the snapper stock is the fundamental policy goal. Given the results presented in this analysis, there is no compelling economic reason to object to an additional 2 cm increase

in MLL to 32 cm. The results and conclusions of this study accordingly lead to the following recommendation:

Recommendation: That the Department of Primary Industries increase the MLL by 2 cm from 30 to 32 cm.

Attachment 2
Agenda Item 8 – Research Update, November 2007
Dr. Kevin Rowling, Principal Scientist, Commercial Finfish
Cronulla Fisheries Research Centre ph (02) 9527 8545

Gemfish
The 'trawl survey' was carried out during the winter of 2007 using 2 chartered commercial trawlers in the Ulladulla - Wollongong area. A total of 17 t was caught during 14 boat-days trawling during July. The "standardised" estimate of CPUE from the trawl survey, together with size and age composition data from both the survey and monitoring of trawl and dropline 'by-catches', is being incorporated in an updated Stock Synthesis model by research staff at CSIRO. The quantitative stock assessment will be updated later in 2007 using the results from the model and any other relevant information from the 2007 winter season. NSW DPI is continuing to monitor the size composition of gemfish landings at the Sydney Fish Markets.

Blue-Eye
The Commonwealth auto-longline fleet took heavy catches of blue-eye (80 to 90 tonnes per month) in February / March 2007. Discussions at slope species Resource Assessment Group meetings in Queenscliff on 23/24 July and Hobart on 21/22 August 2007 highlighted potential issues with lack of available quota in the latter half of the 2007 quota year (which is 16 months, ending April 2008). Although it was agreed the Group should work towards a better 'qualitative' assessment of the blue-eye fishery (in lieu of a formal quantitative stock assessment, which is still proving elusive for blue-eye) there is little progress to date in this regard.

Mulloway
As a consequence of the 'overfished' determination within the Resource Assessment System, a "recovery program" is currently being developed by the wild fisheries management branch, and no change was made to the Minimum Legal Length or recreational bag limits as part of the recent review. NSW DPI is continuing to monitor the size composition of commercial landings of mulloway.

Teraglin
Ageing of otoliths collected during 2006/07 is scheduled to be undertaken this year, and monitoring of the size composition of commercial landings is being continued. Contact has been made with researchers in Queensland working on teraglin.

Biology of Trap and Line Species
The Final Report for the FRDC funded research project on appropriate harvest sizes for species in the commercial trap and recreational line fishery is close to being printed, and copies should be available in the near future.

Onboard Observers for the Line Fishing Sector
Fieldwork has commenced by at-sea observers to document fishing practices and catches by the line fishing sector of the Trap & Line Fishery in partial fulfilment of Objective 1.2(a) of the Fishery Management Strategy. Dr Will Macbeth will provide a verbal report to the MAC on this project. Collection of data aboard commercial boats is scheduled to continue for 2 years, and should provide valuable biological data on some of the less well studied species taken by the line fishery.

Monitoring of Size / Age Composition and Stock Assessment
In 2007/08 the size composition of landed catches of important trap and line species will continue to be monitored at the Sydney Fish Markets and at some regional co-operatives.
Trap and line species being monitored for size composition include:
Snapper
Rubberlip Morwong
Yellowtail Kingfish
Mulloway
Teraglin
Silver Trevally
Bonito
Gemfish
Ocean Perch
Bar Cod

Future Research Priorities
Apart from the research work mentioned above, a number of priority research areas have been identified for Trap & Line Species, including:

- Improvement in the reporting categories for 'large sharks', to provide for more accurate catch reporting across the number of species taken in this category.
- Mapping of fish trapping grounds to address objective 1.1(a) of the Trap & Line Fishery Management Strategy.

Attachment 3
Agenda Item 8 – Compliance Update

Boarding of vessels by Fisheries Officers
NSW DPI has made several requests to NSW Maritime as to the boarding of commercial fishing vessels by Fisheries Officers. That is, we have asked for clarification as to whether the additional persons aboard a boat (by virtue of Fisheries Officers having boarded) may breach the survey requirements with respect to the number of persons aboard. We await a reply and will inform MAC members as to the outcome.

Liability if a Fisheries Officer injures a skipper or crew when conducting compliance operations
The matter of liability should someone be injured aboard a vessel as a result of being boarded by Fisheries Officers or while officers are aboard is a complex matter. Liability would be determined on the circumstances that led to the injury and would be assessed on a case by case basis. There is no blanket answer. Every person has a duty of care and liability arises when a duty of care is breached.

Compliance outcomes:
- There have been 10 instances of non-compliance in the Ocean Trap and Line program during the first quarter of this financial year.
- 5 of these instances were minor and verbal warnings issued.
- 2 further matters (sell prohibited size fish and make false/misleading entry in fish record) were dealt with by way of an infringement notice.
- Another 2 matters (sell prohibited size fish and fail to produce fishing authority) resulted in the offenders receiving written cautions.
- 1 additional matter (take fish for sale when unlicensed) is to be the subject of a prosecution and a brief of evidence is being prepared.
- For the financial year to date Fisheries Officers have recorded completing 163 patrol hours, 4 court hours and 21 meeting hours.
- The compliance rate for financial year to date is 84%.

Attachment 4
Agenda Item 8 – Commonwealth Update (excerpt from AFMA Update fortnightly newsletter)

ETBF
Drum monitor trials: Sea trials of the drum monitor commenced in the ETBF during September with prototype units fitted to vessels Vanessa S and the Sensation. Initial results appear positive with drum monitor data successfully transmitted from these vessels via their Vessel Monitoring System (VMS) to AFMA. Under the ETBF Management Plan 2005, operators in the fishery will be required to install drum monitoring units on their boats. These units will monitor drum usage and form the basis of the effort monitoring system which will be implemented under the Plan. AFMA has entered into a contract with VIPAC Engineers and Scientists to design, test, manufacture and install drum monitoring units on all ETBF boats. The drum monitor units will send VMS messages when fishing activities occur. This includes information on the vessel's location, time, date and the type of event, eg. commencement or completion of a set or haul, and the number of drum rotations. Depending on the success of the trial, a fully operational drum monitoring system could be implemented in the ETBF by early 2008.

SBT Fishery Management Plan: AFMA is inviting comments from Statutory Fishing Right holders and other interested parties on draft amendments to the Southern Bluefin Tuna Management Plan 1995. Comments should be sent by **Wednesday 7 November 2007** to Ryan Murphy, Manager Southern Bluefin Tuna Fishery, Australian Fisheries Management Authority, PO Box 7051 Canberra Business Centre, Canberra ACT 2610, by fax to (02) 6225 5439, or email ryan.murphy@afma.gov.au.

General AFMA Updates
Proposed US legislation on IUU fishing and bycatch: The US Government published a proposal for legislation that would ban imports to the US of seafood from countries whose fishers are engaged in Illegal, Unregulated and Unreported (IUU) fishing activities, and from countries that employ fishing practices that result in the bycatch of "protected living marine resources". The proposed legislation specifically mentions the mandatory use of circle hooks in longline fisheries to mitigate sea turtle capture but is likely to be much wider in application. The US indicated the legislation will likely be enacted in 2009. The US Government is undertaking domestic consultation on the proposed legislation. This consultation will later be widened to include international stakeholders. The Australian Government, led by the Department of Agriculture Fisheries and Forestry (DAFF) is liaising with US counterparts to determine the application and impact of such legislation on Australian fisheries. The Government will prepare a submission in response to the proposed legislation once it becomes available.

South-east Commonwealth Marine Reserve Network declared: A network of 13 new Commonwealth Marine Reserves has been declared in Australia's South-east Marine Region (Commonwealth waters) under the Environment Protection and Biodiversity Conservation Act 1999. The region extends from the far south coast of New South Wales, around Tasmania and Victoria and west to Kangaroo Island off South Australia. This is the first temperate deep sea network of marine reserves in the world. The reserves came into effect on 3 September 2007. They are managed by the Department of the Environment and Water Resources (DEW) under delegation from the Australian Government Director of National Parks. The activities allowed in the South-east Commonwealth Marine Reserve Network are based on a system of zones which allow and prohibit certain activities. While some fishing methods are allowed in some zones of some of the reserves, demersal trawl, Danish seine, scallop dredge and gillnetting below 183 metres are not allowed in any of the reserves. These arrangements are explained in detail on the DEW website.
To fish in areas where it is allowed or to transit any of the reserves, commercial fishers must register for an approval prior to fishing. There are no fees or charges associated with being registered. For more information on how to register please contact the South-east Region Manager on (02) 6274 1111 or go to the DEW website. Maps are also available.

Dramatic decline in illegal fishing: The Australian Government has announced a 90 per cent reduction in incursions by foreign motorised fishing vessels in its northern waters at its six-monthly meeting with State Fisheries Ministers in Darwin recently.
AFMA has played a major part in this reduction along with Border Protection Command, Customs and Defence.

New submarine cable protection zones in NSW waters: Fishers operating off NSW should be aware that the Australian Communications and Media Authority (ACMA) has declared protection zones over two key submarine cables that land at Sydney beaches. In the protection zones, activities that may cause cable damage are prohibited or restricted. Some prohibitions and restrictions will be particularly relevant to commercial fisheries, such as those relating to demersal longlining, trawl fishing and anchoring. The protection zones came into effect on 1 October 2007 as follows:

- the Northern Sydney Protection Zone; extending from Narrabeen beach to 40 nautical miles offshore covering northern branches of the Australia Japan Cable and Southern Cross Cable, including the area between these two cables; and
- the Southern Sydney Protection Zone; extending from Tamarama and Clovelly beaches and extending 30 nautical miles offshore covering the southern branches of the Australia Japan Cable and Southern Cross Cable, including the area between these two cables.

Bycatch Action Plans: Bycatch action plans identify the specific bycatch issues in a fishery and detail actions required to address those issues. The bycatch action

plan is then integrated into the management arrangements for the fishery to enable the actions to be implemented. Plans are reviewed every 2 years. The most recent Bycatch Actions Plans completed by AFMA are for the Northern Prawn Trawl Fishery and the SESSF. Details of other actions plans and Implementation Reports are available at: http://www.afma.gov.au/information/publications/fishery/baps/default.htm