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The Queensland East Coast Inshore Fin Fish Fishery

# Have your say:

Regulatory Impact Statement  
and draft Public Benefit Test

December 2007



PR07-2891



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The Department of Primary Industries and Fisheries (DPI&F) seeks to maximise the economic potential of Queensland's primary industries on a sustainable basis.

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## ***Have your say***

**Members of the community are invited to comment on the information presented in this Regulatory Impact Statement (RIS) and draft Public Benefit Test (PBT) on the East Coast Inshore Fin Fish Fishery.**

Use the response form provided to comment on the RIS and draft PBT. For a copy of the response form, visit the Department of Primary Industries and Fisheries, Queensland (DPI&F) website at: [www.dpi.qld.gov.au/fishweb](http://www.dpi.qld.gov.au/fishweb) or call the DPI&F Business Information Centre on 13 25 23.

The closing date for providing comment on this RIS is 5 pm on Monday 17 March 2008.

Send your response to:

Mail: East Coast Inshore Fin Fish Fishery RIS Response  
Department of Primary Industries and Fisheries  
GPO Box 46  
Brisbane Qld 4001

Fax: 07 3229 8146

Online: To submit your response online go to the DPI&F website [www.dpi.qld.gov.au/fishweb](http://www.dpi.qld.gov.au/fishweb) or visit the Queensland Government Get Involved website [www.getinvolved.qld.gov.au](http://www.getinvolved.qld.gov.au)

### **Public access to submissions**

A summary of the submissions received will be available on the DPI&F website.

### **Consideration of issues raised on the RIS**

Following the closing date for public comment, the state government will consider issues raised by members of the community and may hold further consultation before developing a final position.

### **Further information**

DPI&F encourages people to read the other materials developed in conjunction with this document, including:

- *Have Your Say* brochure
- A summary of issues raised at stakeholder meetings
- Background papers on size and bag limits, closures, Dugong Protection Areas, netting arrangements, and sharks
- *Have Your Say: questionnaire and a summary of responses*
- *Have Your Say: summary of proposed management changes*

To receive up-to-date information on the consultation process, send a blank email to [your-say-subscribe-request@lists.dpi.qld.gov.au](mailto:your-say-subscribe-request@lists.dpi.qld.gov.au). To unsubscribe send a blank email to [your-say-unsubscribe-requests@lists.dpi.qld.gov.au](mailto:your-say-unsubscribe-requests@lists.dpi.qld.gov.au)

For further information on the East Coast Inshore Fin Fish Fishery visit [www.dpi.qld.gov.au/fishweb](http://www.dpi.qld.gov.au/fishweb) or contact the DPI&F Business Information Centre on 13 25 23.



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## ***Background***

### **East Coast Inshore Fin Fish Fishery**

The East Coast Inshore Fin Fish Fishery is the state's largest and most diverse fishery. Its coastal and estuarine waters are home to the widest range of fished species in Queensland. The major species taken from the fishery include barramundi, mullet, bream, whiting, flathead, shark and some smaller mackerels such as spotted mackerel and grey mackerel. The fishery has the largest level of participation of all Queensland fisheries—over 750 000 recreational fishers and approximately 500 commercial operators.

The fishery is important, both for its economic and social value. It is characterised by a vibrant recreational fishing population and a significant commercial fishing industry worth around \$23 million a year. The fishery includes all waters from the Queensland – New South Wales border in the south, to the tip of Cape York in the north. It is adjacent to highly populated regions, such as South East Queensland where fishing grounds are easily accessible and heavily fished, and more remote regions such as Cape York Peninsula where fishing activity remains relatively low.

### **Stage one: Inshore Fin Fish Management Plan**

The fishery is currently managed through arrangements set out in the *Fisheries Act 1994* and the *Fisheries Regulation 1995*. The rules and regulations for the fishery have become complex over time. As a result, management arrangements for the fishery are under review. The result of this review will be an East Coast Inshore Fin Fish Fishery Management Plan.

The Department of Primary Industries and Fisheries, Queensland (DPI&F) proposes to implement new management arrangements in two stages. The first stage will implement a management plan for the fishery that covers netting regulations, size and bag limits, Dugong Protection Areas, shark management and other issues. The proposed changes to management, which will be consolidated in the management plan, are outlined in this RIS and draft PBT.

The second stage will establish a regional consultation process to consider local management issues, following the introduction of the management plan.

### **Stage two: local solutions to local problems**

One of the most difficult issues to address in any fishery is how to share access to fishery resources between fishing sectors. At almost every stakeholder meeting held in 2006 there were calls to provide exclusive access to areas for one sector or another. In many cases the stakeholders also expressed a desire to find local solutions for local issues. Respondents to the questionnaire supported this suggestion.

The second stage will provide a mechanism to address localised issues such as where fishing occurs in a region, what or how apparatus can be used, and temporal or spatial closures. The process would not consider changes to any size or bag limits as it is important that they apply consistently along the east coast.

After considering a range of options for how the second stage should proceed, DPI&F proposes to review the Fisheries Resource Allocation Policy (<http://www2.dpi.qld.gov.au/fishweb/13325.html>) to achieve the following:

- a simplified application process (including a standard application template)
- less stringent information requirements

- a specified application period
- prioritisation of applications through the Management Advisory Committees (MAC).

DPI&F will work with stakeholders to facilitate the process, and will set up a community consultation panel, including local community members and an independent chair. The community consultation panel will prepare a report with recommendations for the Chief Executive. The Chief Executive will make a decision after reviewing the panel's report.

DPI&F recognises that it is essential that stakeholders in local communities can negotiate how they share access in their area and that the best outcomes will be achieved if resource allocation issues are addressed locally rather than at the state level. The proposed process for deciding these allocation issues is framed around this concept for local management.

Figure 1 shows the proposed process to be used in the second consultation stage.

## **Compensation**

As part of the new licensing and fees regime introduced in 2006, provision was given under the Fisheries Act to provide compensation in specific cases.

Fishers are eligible to claim compensation if their fishing rights are lost or reduced by changes to the Fisheries Regulation or management plan that either:

- a) result in a reallocation to someone other than the authority holders impacted
- b) restrict commercial fishing entitlements to protect marine life (such as dugongs and whales) that are not managed under the Act.



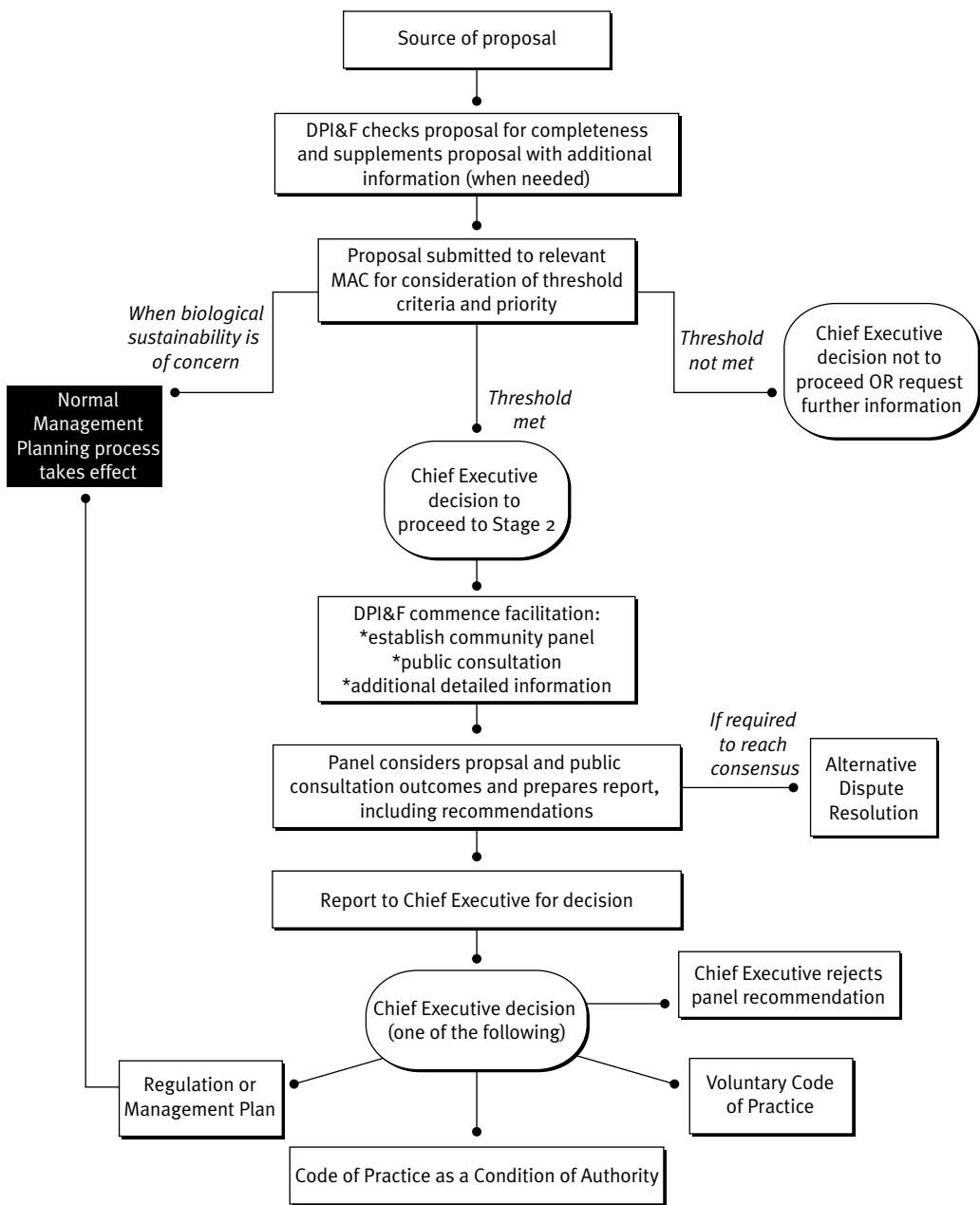


Figure 1: Decision making process for the second consultation stage

### Consultation process to date

The consultation process began in October 2006 with the release of a *Have your say* brochure. Over 45 public meetings were held in major centres along the Queensland east coast to gather information on current management arrangements, and discuss how the fishery could be better managed and further developed in the future.

A questionnaire was released in December 2006 to seek further public comment on the development of appropriate measures for managing the fishery.

Six stakeholder working groups were established to consider key issues and to develop options for further consideration by the Inshore Fin Fish Management Advisory Committee (MAC). The working groups advised on size and bag limits, dugong protection, closures, commercial netting, sharks, and fishery performance measures.

The Inshore Fin Fish Management Advisory Committee (MAC) is the primary source of advice for the DPI&F on management of the East Coast Inshore Fin Fish Fishery. The MAC includes representatives from the commercial, charter, and recreational sectors; conservation groups; research bodies; sea food marketers; and government departments.

The Inshore Fin Fish MAC met in April and June 2007 to consider the issues raised during consultation and to recommend to the DPI&F proposals for managing the fishery.

DPI&F considered the recommendations of the working groups and MAC, and in the majority of cases supported the recommendations. In some cases, DPI&F amended the proposals in order to meet legal requirements or to fit better within the fisheries legislative framework.

A summary of the process used to develop the management plan is shown in Figure 2.

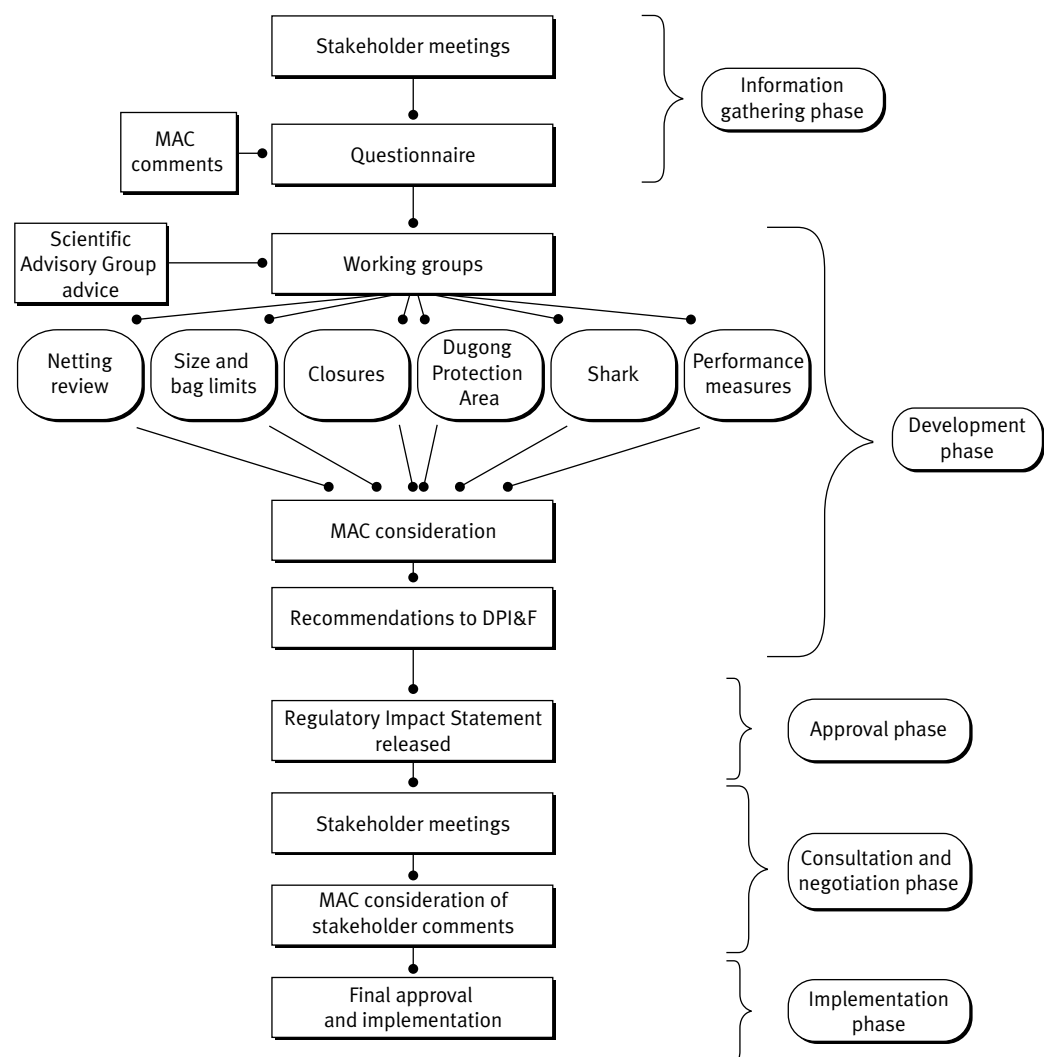


Figure 2: Process for developing the Inshore Fin Fish Management Plan

## How your issues were considered

The working groups, MAC and DPI&F considered all of the issues raised at the public meetings in 2006. In some cases no changes to the current arrangements were proposed. DPI&F recognises the importance of providing feedback to stakeholders on how decisions are made. Appendix 1 summarises the issues raised at the stakeholder meetings that did not result in proposed management changes, and the reasons why no changes were made.

# ***Regulatory Impact Statement and draft Public Benefit Test***

This section describes the purpose and requirements for the state government in developing a Regulatory Impact Statement (RIS) and a draft Public Benefit Test (PBT).

## **Purpose of this Regulatory Impact Statement**

Under the *Statutory Instruments Act 1992*, if a proposed regulation is likely to impose appreciable costs on the community or part of the community, a Regulatory Impact Statement (RIS) must be prepared, before the regulation is made.

A RIS is designed to determine whether or not a proposed regulation is the most efficient and effective way of achieving desired policy objectives. It does this by providing a mechanism by which the Government's policy deliberations are clearly documented and subject to public scrutiny.

The purpose of this document is therefore to explain the need for the proposed subordinate regulation and to present an evaluation of the likely costs and benefits that would flow from its adoption in comparison with other options explored.

## **Purpose of the draft Public Benefit Test**

The Queensland Government is a signatory to the Competition Principles Agreement that requires a Public Benefit Test (PBT) for proposed new legislation or amendments to existing legislation. A guiding principle of the Competition Principles Agreement is that legislation should not restrict competition unless it is demonstrated that:

- the benefits of the restriction to the community as a whole outweigh the costs, and
- the objectives of the legislation can only be achieved by restricting competition.

Both of the criteria must be satisfied, and it must also be demonstrated that there are no less restrictive ways to obtain the desired outcomes.

This document represents a RIS, as well as a draft PBT. Comments on the document will be taken into account when finalising the PBT review report for the Minister for Primary Industries, and Fisheries.

Guidelines on how to comment on the RIS and draft PBT are available at the front of this document.

## **Authorising law**

The proposed legislation is to be made under the provisions of the *Fisheries Act 1994*. Sections 32 to 42 of the Fisheries Act give the power to develop a management plan and prescribe what a management plan can deal with.

## **Policy objectives**

The policy objectives are to develop and implement a management plan for the East Coast Inshore Fin Fish Fishery that ensures ecologically sustainable development of the fishery and achieves:

- a fair allocation of fisheries resources between all users
- a profitable commercial fishery
- maximum benefits for the community with minimal impacts on this fishery, other fisheries and the environment.

Management plans are a commonly used tool to manage discrete fisheries. They are used both internationally and across many Australian states. A management plan consolidates all of the regulations for a fishery in one piece of legislation, which is then monitored and reviewed regularly to ensure it remains effective. The development of a management plan for the fishery is also a condition of the export approval for the fishery which has been granted under the *Environment Protection and Biodiversity Conservation Act 1999*.

The legislative objectives of the new management plan will mirror those of the Fisheries Act, which are to:

Provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats in a way that seeks to:

- (a) apply and balance the principles of ecologically sustainable development
- (b) promote ecologically sustainable development.

There will also be more detailed operational objectives set out in the Performance Measurement System (PMS) for the fishery. The PMS will help to monitor how well the management plan is achieving its objectives. Appendix 2 has further details on the PMS.

## **Legislative intent**

The intended changes to existing legislation and the proposed new management arrangements will be outlined in a Fisheries East Coast Inshore Fin Fish Management Plan. To assist readers, intended changes to the legislation are detailed in the section: *Proposed changes*.

## **Consistency with authorising law**

Implementation of the proposed amendments will be consistent with the achievement of the objectives of the Fisheries Act.

## **Consistency with other legislation**

The proposed legislation is consistent with the policy objectives of other legislation.

## **Options and alternatives**

The Queensland Government is moving towards a less regulatory environment where possible. In looking at options and alternatives for the management of the East Coast Inshore Fin Fish Fishery, a number of broad alternatives to legislation are available, including:

- voluntary codes of practice
- compulsory codes of practice
- environmental management systems
- licence conditions
- permits.

These alternatives were considered when developing proposals for future management of the fishery. However, the following issues also had to be taken into account:

- the enforceability of the alternative
- whether monitoring of catch or effort is possible
- whether it will effectively meet the policy objectives.

Introducing regulations that cannot be enforced or monitored is considered too high a risk to the sustainability of the fishery in the majority of cases. In such cases, the only feasible option to ensure enforceable and appropriate management is legislation.

There are a number of cases where non-legislative alternatives are proposed. These alternatives include codes of practice that outline how fishing activities should occur and guidelines for by-catch reduction devices. The Chief Executive will approve the Performance Management System. This important policy document will provide greater flexibility and adaptability than the option of including specific performance measures in the management plan (as is the case in other management plans).

A more detailed description of the management options considered for each proposal is included in the section: *Proposed changes*. As part of the consultation process to develop future management arrangements for the fishery, stakeholders contributed to an analysis of these different options for each of the key issues. A rationale for each of the final proposals is provided.

## **Fundamental Legislative Principles**

The regulatory amendments proposed in this document have sufficient regard to the rights and liberties of individuals and the institution of Parliament, and are consistent with the fundamental legislative principles provided under the *Legislative Standards Act 1992*.

Under the provisions of the *Native Title Act 1993* (Commonwealth), the proposed regulatory amendments do not extinguish native title rights for traditional owners to take, use or keep fisheries resources in accordance with Aboriginal tradition or under Torres Strait Islander custom.

# ***Proposed changes***

## **Introduction**

This section outlines the proposed changes to management of the East Coast Inshore Fin Fish Fishery. The proposals were developed in collaboration with stakeholders and are designed to ensure a long term sustainable, profitable and world class fishery.

One of the key planks of the consultation process for the fishery is openness and transparency. An overview of the proposals, and the major impacts are provided in each section, as well as set out in tables to assist understanding of the decision making process. The tables show the key issues raised at the stakeholder meetings in late 2006, each stage of the decision making process, and any change proposed.

The review of the fishery identified a number of key issues:

- size and bag limits
- shark management
- Dugong Protection Areas
- netting arrangements
- closures
- other issues.

To assist readers, the proposals are grouped under these issues.

A series of background papers providing detail on each key issue are available on the DPI&F website or through the DPI&F Business Information Centre on 13 25 23.

## Significant changes

As a result of the review, a number of changes are proposed to the management of the fishery. The most significant of these are:

- New and amended bag and size limits.
- Restrictions on the take of shark by commercial and recreational fishers to ensure the sustainable use of shark resources.
- Tightening of netting restrictions in Dugong Protection Areas to minimise interactions with dugong around headlands.
- Providing more flexibility in the type of low risk nets that can be used in DPA A zones (without any increase in the total amount of net that can be used).
- Tightening of net attendance rules, particularly for offshore nets, to reduce the risks to species of conservation interest and promote responsible fishing practices.
- Simplification of netting arrangements where possible to provide greater flexibility, profitability and business choices for net fishers.
- Review of the commercial licensing structure for the inshore net fishery, including removal of some redundant fishery symbols and the introduction of two new fishery symbols to protect future sustainability of shark and other inshore fin fish.
- Removing the current 150 fish in-possession limit for spotted mackerel line fishers and increasing the incidental limit of net-caught spotted mackerel from 15 to 50 fish in recognition that the commercial total allowable catch has not been caught since its introduction, and to minimise fish wastage.
- A small number of new or amended closures that remove inconsistencies, have been suggested by industry or have broad support from stakeholders.

# Size and bag limits

## Background

Size limits are a simple, yet extremely effective tool to protect the sustainability of fish stocks. Size limits ensure fish have an opportunity to spawn prior to being caught, therefore contributing to the future populations. Size limits are based on a species size at maturity.

Bag limits<sup>1</sup> are a well-recognised management tool in Queensland, other Australian states and internationally. Bag limits help to protect the sustainability of fish stocks by limiting excessive catches. They also help promote responsible fishing practices and take account of changing community attitudes that no longer tolerate excessive or unlimited catches. Bag limits take into account how big a species grows, how quickly it grows and how naturally abundant the species is. For example, if fish grow slowly to a large size (e.g. barramundi), a smaller bag limit is usually applied. For more abundant faster growing fish (e.g. whiting), a larger bag limit is applied.

### Did you know?

Barramundi are *protandrous* meaning they change sex from male to female. All barramundi are born male but change to females at around the age of 7 years and then reproduce. To ensure the sustainability of barramundi, there is a maximum legal size limit of 120 cm which protects fish once they change sex.

Feedback from the stakeholder meetings and the questionnaire indicated support for a review of the current size and bag limits and the establishment of new limits where appropriate. A frequent comment at the meetings and from questionnaire respondents was that sound science should be used as the basis for setting size and bag limits.

The size and bag limit working group used the feedback from the meetings and the questionnaire to develop a set of guiding principles for setting size and bag limits for the fishery. These principles include:

- biological size at maturity is used as the primary basis to set size limits
- limits are as simple as possible
- limits are set to ensure sustainability, particularly where there are stock concerns
- the impact of limits on commercial and recreational fishers is considered
- limits are consistent across jurisdictions where possible.

The working group gave the biological size at maturity the highest priority when setting size limits.

The working group also considered the equity of extended bag limits both between fishers (i.e. for extended charter trips) and between regions (i.e. Fraser Island extended limit). As a principle, it was agreed that extended bag limits should not apply in the inshore fishery.

The size and bag limit working group considered the biological information available for each species and then balanced the recommended biological limit with social and economic factors. The result is a balanced outcome that took account of all relevant issues.

DPI&F has prepared a separate document that outlines the detailed biological, social and economic information that was considered for each of the species and how the final recommended size limit was reached. This document is available on the DPI&F website at [www.dpi.qld.gov.au/fishweb](http://www.dpi.qld.gov.au/fishweb).

<sup>1</sup> The term *bag limits*—as it is used in this document—refers to the number of fish that a recreational fisher may take, and have, in their possession at any one time (it is not a daily catch limit).



Research scientists with DPI&F, universities and other organisations collect information about species size at maturity. At present there is limited biological information for some of the inshore fin fish species. The Inshore Fin Fish MAC and its Scientific Advisory Group has identified the collection of basic biological information on many of these species as a research priority.

## Key changes

Key changes proposed include:

- The introduction of reasonable bag limits for many bread and butter species (e.g. bream, dart, and whiting). The proposed bag limits were developed based on how large the species grows, how quickly it grows and the species natural abundance. For example, if fish grow slowly to a large size, a smaller bag limit, such as two, is proposed. For more abundant, faster growing fish, a higher bag limit is proposed.
- A bag limit of 50 on winter whiting (and 30 on other whiting species).
- Removing existing extended bag limits, including the extended in-possession limit of 30 for tailor on Fraser Island. The limit is now consistent with other areas (20).

## Other changes

There are also changes proposed to the current size and bag limits for another 40 inshore species. The existing limits for these species were reviewed using current information and the agreed guiding principles, such as the principle to keep size and in-possession limits simple.

While not a change, it is important to note that the review has recommended maintaining the current size limit of 23 cm on bream and whiting.

## Major impacts

When developing size and bag limits, the working group considered the social and economic impact of a proposed change on commercial fishing operations or the recreational fishing experience. Impacts were minimised wherever possible without jeopardising the sustainability of any species.

During the first round of consultation recreational fishers often stated that if tighter bag limits are introduced, further restrictions should also be placed on commercial fishers so that all sectors are impacted equally. It is estimated that overall, the impacts on the commercial and recreational sectors are commensurate with each other.

### **Commercial sector**

Commercial fishers are only affected by size limits, not bag limits. Commercial net fishers use nets with specific mesh sizes as a way of targeting particular species and minimising the catch of undersize fish. When a size limit changes significantly, fishers must often change their nets and fishing apparatus. Some of the size limits may result in fishers having to change gear, incurring a potential cost. The cost of a new net depends on how specialised the net is, the type of mesh and the length of net. However, they generally range between \$1000–\$4000.

Increased size limits can also impact on commercial fishers through loss of product in the short term. This impact applies to commercial fishers who use either net or line. However, in the longer term, appropriate size limits can result in better yields and higher prices paid for better quality fish.

## ***Recreational and charter fishers***

Changes to size and bag limits will impact recreational fishers and the charter sector. The impact of the proposed size limits on fishers may include:

- a reduced ability to catch and retain fish
- increased numbers of fish discarded because they are undersize.

In the longer term, appropriate size limits should provide recreational fishers with larger catches of higher quality fish.

Data from the Recreational Fishing Information System (RFISH) was used to estimate the possible impact of changes to bag limits. The estimates indicate that the changes are likely to affect only a small number of skilled, keen fishers who take significant quantities of fish. Less than 10% of fishing trips overall are likely to be affected by the changes. There will be limited impact on the majority of fishers who do not fish as regularly or catch as many fish per trip. Therefore, flow on impacts from proposed bag limits to bait and tackle stores and other related businesses is likely to be negligible.

The removal of extended bag limits on some inshore fin fish species may affect some charter operators. Charter fishers can currently take twice the quantity than other recreational fishers if they are on an extended charter trip of more than 48 hours. This extended bag limit currently applies to spotted mackerel, grey mackerel, shark mackerel, mulloway, black jewfish, cobia, estuary cod and wahoo. These provisions are inconsistent with the remainder of the inshore species. The size and bag limit working group identified these extended bag limits as inequitable, both between fishers (i.e. for extended charter trips) and between regions (i.e. Fraser Island extended limit). As a principle, it was agreed that extended bag limits should not apply in the inshore fishery. Consequently, it is proposed that charter fishers are limited to the standard bag limits and the Fraser Island extended bag limit is removed. Although the effect on charter operators is unknown, it is believed that many operators are unaware of this allowance, and in any case, would rarely undertake extended trips of longer than 48 hours.

## **Costs and benefits of alternatives**

The alternative to the proposed limits is to maintain the existing limits. If existing size and bag limits are maintained, it is possible that the catch of some inshore fin fish will become unsustainable. While there are benefits in maintaining the existing limits (i.e. no impact to the recreational fishing experience and no costs to commercial fishers from loss of product or changing gear), the long-term costs of overfishing outweigh the short-term impacts from loss of product and the potential need to purchase new nets.

Maintaining the existing bag limits may also lead to an inequitable share of fisheries resources between fishers. This is particularly the case in areas of increasing population growth where fishing pressure is high. Continuing the current arrangements on this basis would be contrary to one of the objectives of the Act which is to promote fair access. This inequity may also lead to significant conflict between fishers and higher costs of enforcement. The concept of extended bag limits was specifically identified as inequitable, both between fishers (i.e. for extended charter trips) and between regions (i.e. the Fraser Island extended limit). In many cases extended bag limits are difficult to enforce if fishers can't demonstrate the length of their trip.

## **Table of proposed changes**

Table 1 outlines the proposed changes to the current size and bag limits for inshore fin fish. The table describes the rationale for a change as well as the potential impact. In a number of cases, the rationale describes why one option was preferred over others.

Table 1: Proposed size and bag limits

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Amberjack	No limit	75	No limit	2	Overseas size at maturity used. No size limit currently.	There may be some impact on commercial line fishers who target samsonfish and amberjack.
Barramundi	58–120	58–120	5	5	The size and bag limits were considered appropriate at current levels. Biological information collected in Moreton Bay for bream suggests that the size at maturity is approximately 23 cm. Therefore the current size limit already allows fish to spawn prior to capture. While the limit is appropriate from a biological perspective, there were numerous requests from recreational fishers to increase the size limit to 25 cm for social reasons. The working group and MAC considered an increase to 25cm, but agreed that there was little biological reason for this and that the increase may result in a loss of up to 40% in the catch for both the commercial and recreational sectors. The commercial industry indicated some support for the increase if it was phased in with some assistance to purchase new nets.	There is no impact foreseen. There would be no impact from maintaining the current size limit. The bag limit may impact on a small number of anglers who target bream in significant quantities. A bag limit of 30 is unlikely to affect the majority of anglers.
Bream: pikey, tarwhine, yellowfin	23	23	No limit	Combined 30		

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Dart: common, small spotted, snub nosed, swallow tailed	No limit	No limit	No limit	Combined 30	<p>The size and bag working group suggested a size limit of 30 cm. However, the MAC believes this would result in significant discards from the ocean beach net fishery, which may cause public amenity issues.</p> <p>The need to have a size limit is reduced because dart are productive and a fast growing species.</p> <p>A bag limit of 30 would limit large catches of dart by recreational fishers.</p>	The bag limit of 30 may impact on some recreational fishers.
Dolphin fish	45	50	No limit	5	<p>Dolphin fish are extremely productive, reaching maturity in around 3 months and dying at around 18 months.</p> <p>Available studies in the US, indicate a size at maturity of 45 cm.</p> <p>The size and bag working group and MAC agreed that a 50 cm limit would align better with similar species.</p> <p>Given the productivity of the species, a higher bag limit (5) is proposed compared to other pelagic species that have a proposed limit of two.</p>	<p>The increased size limit is unlikely to have a significant impact. There is only a small commercial fishery for dolphinfish and most recreational fishers would catch larger fish.</p> <p>The bag limit of 5 may affect some recreational catches around fish aggregating areas or devices where dolphinfish can be caught in large numbers. This should allow for more appropriate sharing of catches.</p>
Estuary cod: blackspot	No limit	38–100	No limit	5	<p>The proposed 38 cm size limit aligns estuary cod with other cod species in the coral reef fin fish fishery.</p> <p>Size at maturity is around 40 cm.</p> <p>The maximum limit was reduced to match the limit imposed by the Great Barrier Reef Marine Park Authority (GBRMPA).</p>	The reduction in the maximum size limit is likely to offset any impact of increasing the minimum size.
Estuary cod: goldspot	35–120	38–100	10	5	<p>Fingermark reach maturity at around 65 cm, and then migrate offshore to spawn. Introducing a size limit of 65 cm would essentially prevent all fishing for fingermark in inshore estuarine areas.</p> <p>The size limit was increased to further protect juvenile fish while not being so restrictive as to prevent recreational fishing in the inshore fishery.</p> <p>A lower bag limit is also proposed given the size limit will be set below the size at maturity.</p>	The increased size limit may affect some recreational fishers in the north of the state. The commercial catch of fingermark is extremely low, so the impact should be negligible.
Fingermark (also know as large scale sea perch)	35	45	10	5		

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Flathead: bar-tailed, sand	30	30	No limit	Combined limit of 5 for all flathead	A standard flathead size limit for all species was not considered feasible because the biology and growth of the species is different. For example, bar-tailed and sand flathead rarely grow larger than 40 cm, but this is equivalent to a small dusky flathead. The working group considered amending the size limit to 40–75 cm, but recognised that this would reduce spawning by around 15%. The concept of one trophy fish is considered the equivalent of not having a maximum size limit. The concept of a size limit on gar is considered impractical because of the range of different species and varying sizes at maturity. A bag limit of 30 was proposed because recreational fishers sometimes take substantial amounts of gar for bait. To set the bag limit the working group took into account research in NSW that identified sea garfish as overfished.	The combined bag limit of five flathead is likely to affect some recreational fishers. The changes will not impact on the commercial sector. There is effectively no change to the dusky flathead arrangements except that this species is now counted towards a combined flathead bag limit. The proposed bag limit may affect those recreational fishers who target gar in significant quantities for use as bait.
Flathead: dusky	40–70	40–70 cm	5			
Garfish: snub nosed, half beak, sea, longtail, river, three-by-two	No limit	No limit	No limit	30		
Grass sweetlip	30	30	No limit	10	The size limit is currently set above the size at maturity, providing adequate protection. The Reef Management Advisory Committee recommended a bag limit of 10 to be consistent with other sweetlips in the coral reef fin fish fishery.	A bag limit of 10 may impact on some recreational fishers.
Grunter: small spotted	30	30	No limit	10 combined	The current size limit is considered appropriate for the small spotted grunter, however, there is limited biological information available for the species. The combined bag limit of 10 is proposed as a way of reducing the potential black market for grunter.	The bag limit of 10 may affect some fishers.
Grunter: spotted (also known as javelin fish)	30	40	No limit	No limit	Spotted grunter (or javelin fish) mature at a larger size (40–45 cm) than the small spotted grunter and require a different size limit. The working group and MAC recognise that the introduction of separate size limits will require education to assist identification of the different species.	The increased size limit may affect recreational catches. The bag limit of 10 may affect those fishers who travel to northern Queensland to target the species.

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Jewfish: black	45	75	10	2	<p>The current size limit for jewfish is set significantly below the size of maturity (which is approximately 85 cm).</p> <p>The proposed 75 cm limit provides additional protection and is consistent with the similar species caught in the south (mulloway).</p> <p>The bag limit of two is consistent with other large, pelagic species.</p>	<p>The significant increase in the minimum size limit and the reduced bag limit may affect some fishers in the north.</p>
Jewfish: silver	45	No limit	No limit	Combined limit of 10	<p>There are a number of smaller species of jewfish that do not grow as large as black jewfish and mulloway.</p> <p>It was agreed that the larger more regularly targeted species should have a size limit of 75 cm.</p> <p>A bag limit is considered sufficient protection for the smaller species that are caught less often.</p> <p>The combined bag limit of 10 addresses difficulties in identifying the difference between silver jewfish and wiretooth jewfish.</p>	<p>The bag limit of 10 is unlikely to impact significantly on recreational catches.</p>
Jewfish: wiretooth	No limit	No limit	No limit			
Kingfish: black (cobia)	75	75	10	2	<p>The current size limit is set at the size at maturity, providing appropriate protection.</p> <p>The bag limit of two is consistent with other large, pelagic species.</p>	<p>The bag limit of two may affect some fishers who target cobia, particularly cobia found in schools.</p>
					<p>The current size limit is below the size at maturity for the species, which is around 60–65 cm.</p> <p>The bag limit of two is consistent with other large, pelagic species.</p>	<p>The increase in size limit and reduced bag limit may affect some fishers.</p>
Luderick (also known as black bream)	23	27	No limit	10	<p>The majority of the catch is taken in south east QLD and in northern NSW where there is some concern about declining catches.</p> <p>To maintain consistency between the two jurisdictions a limit of 27 cm is proposed.</p>	<p>About 10 tonnes of black bream is taken in the net fishery each year. The increased size limit may reduce the catch of commercial operators and require a change of net if they intend to target black bream.</p> <p>The size limit and bag limit may also affect recreational fishers in the southern part of the state.</p>

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
					<p>Males mature at approximately 65 cm, while females are thought to mature at 75 cm. A small part of the catch of grey mackerel is taken in southern Queensland and in recent years many of the fish caught are just over 50 cm.</p> <p>The size and bag limit working group recommended a limit of 60 cm, but the MAC rejected this because of the potentially significant discards and the low survival of mackerels following release. The MAC reviewed its recommendation in June 2007 and supported the original working group recommendation of 60 cm.</p> <p>DPI&amp;F supports the initial working group recommendation, given the increasing commercial catch of grey mackerel in recent years and the fact that the current 50 cm limit is significantly below the size at maturity.</p> <p>The permitted mesh size for offshore nets will also change to prevent discard of undersize grey mackerel. (See Netting section).</p>	<p>The bag limit of five may affect some fishers.</p> <p>The increased size limit is likely to affect offshore net fishers who target grey mackerel. The change is likely to result in a loss of some product. The impact of changing mesh size is further discussed in the Netting section.</p>
Mackerel: grey	50	60	10	5		
Mackerel: school	50	50	30	10	<p>The current size limit is set close to the size at maturity for school mackerel (51 cm).</p> <p>The bag limit of 30 was reduced to 10 to be consistent with other species with similar biological characteristics (e.g. size and growth).</p> <p>Although there is no maturity information available for shark mackerel, it is thought to have similar biological characteristics to school mackerel.</p> <p>A bag limit of 10 is consistent with similar species.</p>	<p>It is unlikely that the reduced bag limit will affect the majority of fishers.</p>
Mackerel: shark	50	50	No limit	10	<p>The spotted mackerel size limit is set above the size at maturity for females (58 cm).</p>	<p>It is unlikely that the reduced bag limit will affect the majority of fishers.</p>
Mackerel: spotted	60	60	5	5		<p>The only proposed change to arrangements for the spotted mackerel is the introduction of a combined limit with other mackerel species.</p>

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Mangrove jack	35	35	No limit	5	A 40 cm limit was considered but not supported as it would result in the discard of a large proportion of estuarine caught fish. Research indicates that the current level of fishing mortality of mangrove jack is a third of the optimal level and the corresponding yield is also less than optimal. Research further suggests that the fishery does not appear fully exploited. The 35 cm limit helps protect juvenile fish while still allowing recreational fishing in the inshore fishery. A bag limit of five is designed to limit the significant catches taken by some fishers.	The bag limit may affect some recreational fishers.
Mullet: diamond scale	No limit	No limit	No limit	20	The bag limit of 20 is designed to prevent some fishers taking excessive quantities of mullet, particularly in cast nets. Sea mullet is the main species taken by both commercial and recreational fishers. The current size limit (30 cm) is set to the size at maturity. The bag limit of 20 is designed to prevent some fishers taking excessive quantities of mullet, particularly in cast nets.	The bag limit may affect some recreational fishers using cast netting.
Mullet: sea	30	30	No limit	20	Research from NSW indicates mullet mature at 7.5 cm. The current size limit is significantly below this. The bag limit of two is consistent with other large species in the fishery.	The changes are likely to affect those fishers who target juvenile mullet (known as school jew or soapies).
Mulloway	45	75	10	2		



Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Queenfish	No limit	50	No limit	5	Queenfish is an important by-product species in the commercial net fishery and is also targeted by many recreational fishers. Although the size at maturity is thought to be around 70 cm, the size limit was not adopted due to the potentially significant discards and the low survival of queenfish following release. The recommended size limit of 50 cm provides additional protection to juvenile queenfish. The bag limit is consistent with similar species in the fishery.	The size limit is unlikely to have a significant impact on commercial or recreational fishers. The bag limit of five may affect some fishers.
Samson fish	No limit	75	No limit	2	No maturity information for samson fish, but thought to have similar characteristics to the amberjack which matures at 75 cm.	The new size limit may affect commercial line fishers.
Sharks and rays	No limit	No limit	No limit	1	There is significant concern nationally and internationally about the sustainability of sharks. A package of new arrangements is being developed for shark to ensure the take of shark on the east coast is sustainable. Part of this package includes management of the recreational catch; given recreational fishers take the equivalent of 25% of the commercial catch. A bag limit of one is proposed for all sharks and rays.	A bag limit of one may affect some recreational fishers.
Squid, cuttlefish, octopus	No limit	No limit	No limit	Combined 50	A range of squid, cuttlefish and octopus are taken in the fishery. Size limits for each individual species would not be practical. A combined limit of 50 will limit excessive catches of squid, cuttlefish and octopus.	The combined bag limit may affect some recreational fishers who take significant quantities of squid, cuttlefish and octopus.

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Tailor	30	35	20 (30 Fraser extended trips)	20	<p>The most recent stock assessment for tailor indicates that the stock has been fished down to the point that mostly only young fish remain (1 and 2 year olds) and recommended that the size limit be increased to 40cm.</p> <p>The size distribution obtained from independent sampling shows that a size limit of 35 cm would protect approximately half the one-year-old fish and provide additional protection for the stock. A 35 cm size limit would result in less discards from the recreational and commercial catches compared to a limit of 40 cm.</p> <p>It is also proposed that the extended bag limit on Fraser Island is removed. The current limit is inconsistent with other fishing areas such as Moreton and Stradbroke Islands and is difficult to enforce. The majority of Fraser Island is now also closed to beach netting.</p>	<p>The increased size limit may affect recreational fishers; however the majority of fish caught are larger than the proposed size limit.</p> <p>The changes are likely to affect ocean beach fishers who target mullet but take tailor incidentally, and inshore fishers who target multiple species (including tailor) in estuaries.</p> <p>It is not known if operators will need to change the mesh size of their nets.</p> <p>The removal of the extended bag limit on Fraser Island may affect some recreational fishers who visit Fraser Island to target tailor.</p>
Threadfin: king	40	60	No limit	5	<p>King threadfin are similar to barramundi in their biological characteristics. They change sex from male to female at approximately 115 cm, while males mature at approximately 30 cm.</p> <p>A 60 cm limit will protect the smaller males and give more males an opportunity to reach the size necessary to change sex.</p> <p>A bag limit of five recognises the larger size of king threadfin compared to blue threadfin and also limits the catch to ensure fish are able to change sex.</p>	<p>The size limit may impact on both commercial net fishers and recreational fishers in central and northern Queensland.</p> <p>The bag limit may affect some fishers who target king threadfin. Most recreational fishers would rarely catch any more than five.</p>

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts
Threadfin: blue	40	40	No limit	10	Blue threadfin do not grow as large as king threadfin. Biological information from the Gulf of Carpentaria suggests that males become females at around 60–65 cm. However, fishers have regularly seen fish roed up at 40 cm, which may indicate that the maturity of fish in the Gulf of Carpentaria is different to the east coast. The bag limit of 10 recognises the faster growing nature of blue threadfin.	The bag limit may affect some fishers who target blue threadfin.
Trevally	No limit	No limit	No limit	Combined 20	There are around 20 species of trevally caught on the east coast, all of which have slightly varying sizes at maturity. One size limit was not considered appropriate for all trevally species. Rather a combined limit of 20 is proposed to protect against significant catches.	The bag limit may affect some fishers.
Wahoo	75	75	10	2	Wahoo are similar to Spanish mackerel in appearance and biology. Maturity information is only available from Mexico, where it was estimated that wahoo mature around 100 cm. This was considered high for the Queensland stock. For ease of identification and consistency with other pelagic species, maintenance of the current size limit is proposed (75 cm). A bag limit of two is consistent with other large pelagic species.	The bag limit of two may affect some fishers.

Species	Current size limit (cm)	Proposed size limit (cm)	Current in-possession limit	Proposed in-possession limit	Rationale	Impacts										
Whiting: golden lined	23	23	No limit	All 3 species combined limit of 30	<p>The size at maturity for golden lined, northern and sand whiting varies between 20 and 25cm. The current 23cm limit is set above the size at maturity for golden lined and northern whiting. Sand whiting maturity varies between different research reports, between 19 and 24cm. It is likely that the 23cm size limit currently in place allows the majority of whiting to spawn prior to capture.</p> <p>While the limit is appropriate from a biological perspective, there were numerous requests from recreational fishers to increase the size limit to 25 cm for social reasons. The working group and MAC considered an increase to 25cm, but agreed that there was little biological reason for this and that the increase may result in a loss of up to 40% in the catch for both the commercial and recreational sectors.</p> <p>The commercial industry indicated some support for the increase if it was phased in with some assistance to purchase new nets.</p>	<p>The combined bag limit of 30 may affect some recreational fishers who target whiting in significant quantities.</p>										
	No limit	23	No limit				Whiting: sand	23	23	No limit		<p>Winter whiting mature at a significantly smaller size than sand whiting (20 cm).</p> <p>A size limit of 20 cm was considered, however it was agreed that winter whiting are extremely productive and grow quickly, reducing the need for a size limit.</p> <p>A bag limit of 50 is recommended to allow for fairer sharing of the catch between recreational fishers.</p>	<p>The bag limit of 50 will affect those fishers who currently take large quantities of winter whiting at peak fishing times.</p>	Whiting: winter (also known as diver whiting)	No limit	No limit
Whiting: sand	23	23	No limit		<p>Winter whiting mature at a significantly smaller size than sand whiting (20 cm).</p> <p>A size limit of 20 cm was considered, however it was agreed that winter whiting are extremely productive and grow quickly, reducing the need for a size limit.</p> <p>A bag limit of 50 is recommended to allow for fairer sharing of the catch between recreational fishers.</p>	<p>The bag limit of 50 will affect those fishers who currently take large quantities of winter whiting at peak fishing times.</p>										
Whiting: winter (also known as diver whiting)	No limit	No limit	No limit	50												

# ***Sharks and rays***

## **Background**

Sharks and rays<sup>2</sup> are slow growing, mature late in life and give birth to a small number of live young. These characteristics make sharks and rays generally less resilient to fishing pressure than other faster growing fin fish. These characteristics also mean that recovery may be slow if shark populations are subject to excessive fishing pressure.

Sharks and rays play an important role in ecosystem structure and function. As apex predators, sharks are responsible for regulating populations of prey species.

Internationally, a number shark stocks have experienced stock collapses. This has been driven in part by an increasing demand and price of shark fins and other shark products, as well as a lack of appropriate fishery management.

In Australia, shark catches have also increased significantly over the last two decades in response to demand for shark product. This increasing catch has caused scientists and fishery managers to express concern about the long term sustainability of many shark fisheries. Some conservation groups, as well as the Great Barrier Reef Marine Park Authority, have suggested that given these concerns, targeted fishing for sharks should not be permitted in the future.

While there is a perception that most shark fisheries are poorly managed, there are also examples of well-managed shark fisheries that have measures in place that restrict fishing pressure to a select number of species and a select number of age classes (eg blacktip shark fishery in northern Australia and gummy shark fishery in southern Australia).

Research by Prince<sup>3</sup> and Simpfendorfer<sup>4</sup> suggests that while it goes against what most people would think, targeting smaller sharks (eg pups, juveniles or sub-adults) rather than breeding adults proves to be a robust management strategy for shark fisheries, as long as those breeding adults are protected from capture.

## ***International obligations***

In response to international concerns about shark sustainability, the United Nations Food and Agriculture Organisation developed an International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks), which was adopted in 1999. The IPOA requires that nations contributing to fishing mortality of shark stocks participate in their conservation and management, use shark resources sustainably, and minimise waste and discards. To implement these measures, Australia developed a policy approach through the National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks). Each state or territory then implements management arrangements for shark fisheries in accordance with the NPOA.

The NPOA-Sharks is not intended to over-ride or supplant existing management arrangements. Nor is the Shark-plan an additional layer of management. The Shark-plan provides nationally endorsed advice and guidance on how the special conservation and management needs of sharks can be integrated into management arrangements for target and non-target fisheries within a particular jurisdiction. The actions under the NPOA-Sharks are arranged under a number of themes:

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<sup>2</sup> Sharks make up the majority of the catch of elasmobranchs in the East Coast Inshore Fin Fish Fishery and are therefore the primary focus of future management. However, because rays possess similar biological characteristics, they are also discussed in this section and will be addressed in terms of future management.

<sup>3</sup> Prince, J.D 2005 *Gauntlet Fisheries for Elasmobranchs – the secret of sustainable shark fisheries*. Journal of Northwest Atlantic Fisheries Science. 35: 407-416.

<sup>4</sup> Simpfendorfer, C.A. 1999 *Demographic Analysis of the Dusky Shark Fishery in Southwestern Australia*. American Fisheries Society Symposium 23:149-160

1. Review existing conservation and management measures;
2. Improve existing conservation and management measures;
3. Improve data collection and handling;
4. Undertake targeted research and development;
5. Initiate focused education/awareness raising programs; and
6. Improve coordination and consultation.

The review of management arrangements for sharks and rays has taken into account these key issues and the 43 specific actions under the NPOA-Sharks.

### ***Shark harvest in Queensland***

In Queensland, the total commercial catch of shark as recorded in logbooks has increased substantially over the last decade, peaking in 2003 at around 1400 tonnes (Figure 3). Since then catches have declined markedly and were around 700 tonnes in 2006. The recent decline in catch is likely the result of a targeted buyout of licences with significant history of shark catch through the Great Barrier Reef Marine Park Structural Adjustment Package.

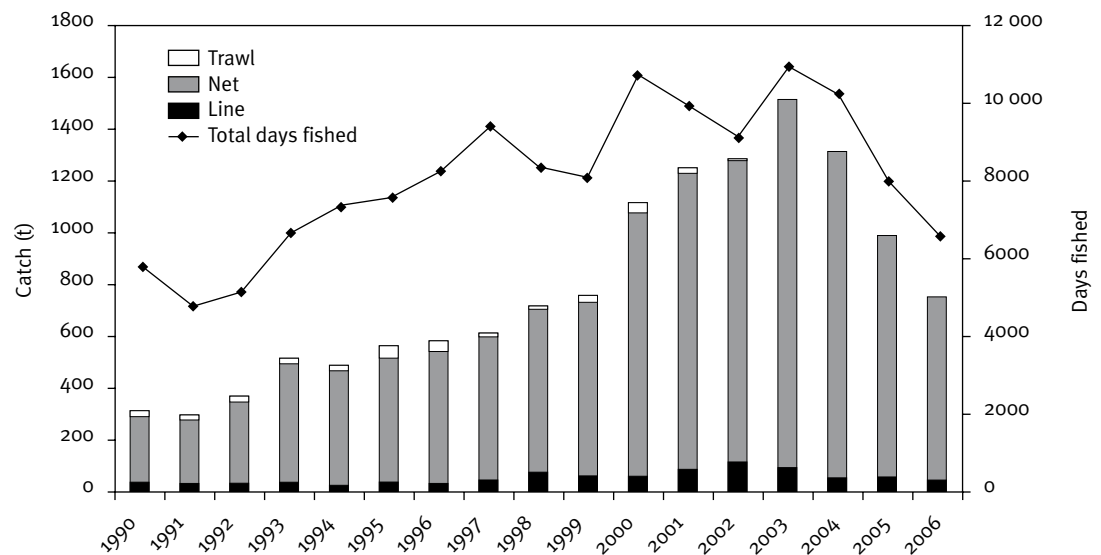


Figure 3: East Coast shark catch and effort

The majority of the total shark catch (around 500 tonnes) is taken by around 25 net boats which target shark as their main source of income. The remainder of the catch is taken by around 200 net and line fishers, most of whom catch shark when targeting other species such as grey mackerel and coral reef fin fish.

While there are around 200 or so boats that take shark currently, there are over 1500 licences that have the potential to take shark. This poses an unacceptable risk to the sustainability of shark if those licences were activated.

Recreational fishers also contribute to the total catch of sharks and rays, harvesting around 150-200<sup>5</sup> tonnes a year (Table 2). RFISH data also indicates that around 90-95% of shark caught recreationally are released.

<sup>5</sup> Catch weight is estimated using catch numbers multiplied by a conversion weight of 3.6kg.

Table 2: RFISH estimates of catch of sharks and rays by recreational fishers

	2002 estimate	2005 estimate
Catch	1 973 t	1 508 t
Release	1 759 t	1 353 t
Harvest	213 t	155 t

While there is currently information available on total shark catch by commercial and recreational fishers, more specific information on the species composition of the shark catch is not available.

There are several research projects currently underway<sup>6</sup> to identify stock structure of some of the key target species and better understand the biology of a range of other species of shark. However, the primary information required for fishery management at this time is species composition of the catch. Logbooks currently only require commercial fishers to record whether a shark falls within one of two broad species groups (hammerheads or whalers). This crude level of information does not provide adequate data from which good management can be underpinned. Consequently, one of the key objectives during the review process has been the development of a more comprehensive monitoring system for the fishery.

### ***Risk assessments***

Different species of sharks and rays vary in their biological characteristics and their susceptibility to capture in commercial or recreational fisheries. Consequently, some species are better equipped to withstand harvest (eg blacktip sharks) while some other species are more vulnerable to even low levels of catch (eg sawfish).

Significant research has been undertaken to identify the risks to different species<sup>7</sup>. Most of these risk assessments use a method where risk is a product of the species susceptibility to capture and its productivity (i.e. whether it is biologically resilient or more vulnerable to over exploitation).

The results of these risk assessments were used to identify those species more at risk from the fishery and develop management measures which provide additional protection.

### ***Review of shark management***

There have been three key objectives to the review of current management and the development of new arrangements to support a sustainable shark fishery. These objectives are to:

- constrain the total catch within sustainable levels
- provide additional protection to those species that are particularly at risk from the fishery because of their biological characteristics
- collect better information on the catch of sharks

Only by addressing all three of these objectives, will it be possible to demonstrate sustainable management of the shark fishery into the future.

<sup>6</sup> *Description of the stock structure of Queensland's east coast shark populations*. FRDC project 2007/035 and *Evaluation of the impacts from industry and community uses on inshore biodiversity* (funded through the Marine and Tropical Scientific Research Facilities).

<sup>7</sup> For example see Salini J 2006, *Northern Australian sharks and rays: the sustainability of target and by catch species Phase 2* Fisheries Research and Development Corporation FRDC Project 2002/064

### **Expert advice**

DPI&F sought advice from the Scientific Advisory Group (SAG), the shark working group and the Inshore Fin Fish Management Advisory Committee (MAC) in regard to shark sustainability and management.

The SAG provided advice on species of shark and ray that may be most at risk from the east coast fishery, taking into consideration the substantial amount of research that has been undertaken for sharks and rays in recent years (eg Northern Sharks and Rays Phase II project<sup>8</sup>).

The shark working group used the information from the SAG, as well as comments from the first round of public meetings, when assessing possible approaches to future management. The shark working group investigated a range of alternatives, including both input<sup>9</sup> and output<sup>10</sup> controls:

<b>Input controls considered</b>	<b>Output controls considered</b>
Shark fishery symbol	Total Allowable Catches
Effort units	Individual Transferable Quotas
Further gear restrictions (net length etc)	In-possession limits (commercial and recreational)
Pupping closures	Trip limits
Net attendance	Size limits
	Product format

It was widely acknowledged that the commercial shark fishery is a high volume and low value fishery that would not be able to support a sophisticated and expensive quota monitoring system similar to those that have been used in high value fisheries (eg reef line and trawl). Given also the multi-species nature of the fishery and the wide variety of apparatus used, the introduction of an output-controlled management regime was not supported.

The shark working group acknowledged that the net fishery is currently managed through input controls, and therefore focussed on refining input controls further and limiting access to shark resources. The working group broadly recommended limiting access to the shark resource (through licence conditions) and in-possession limits for those fishers who only catch a small number of sharks incidentally.

The Inshore Fin Fish Management Advisory Committee (MAC) considered the recommendations made by the SAG and shark working group. The MAC agreed with the spirit of the recommendations, but agreed that limited access should be implemented through the establishment of a new fishery symbol (for those fishers who target shark as their main source of income) while other fishers who take a more moderate level of shark should be permitted to catch more than the basic in-possession limit through a condition on their licence.

DPI&F supported limiting access to the take of shark, but made some amendments to the proposals in order to fit within the new licensing and fees model. Rather than the use of licence conditions, DPI&F proposed the establishment of two new fishery symbols, one for those fishers who target shark as their main source of income (N4) and those who take a more moderate amount of shark when targeting other species (S). At a phone hook up in June 2007, the MAC agreed with the changes made by DPI&F.

8 Salini J 2006, *Northern Australian sharks and rays: the sustainability of target and by catch species Phase 2* Fisheries Research and Development Corporation FRDC Project 2002/064

9 Input controls limit the intensity of use of the gear fishers put into the water in order to catch fish (eg net length, number of fishing nights)

10 Output controls limit how much fish can be taken out of the water (eg bag limits, quotas etc)



## Key changes

The future management of sharks has been one of the most significant and challenging issues to address in the review of the fishery. Significant negotiation and compromise has already occurred between key stakeholders, including commercial and recreational fishers and government agencies in regard to the best approach to future management.

The proposed new arrangements for shark are designed to work in concert together, rather than as stand alone proposals. Together, the package limits future access to shark, improves information on the fishery and provides additional protection for more vulnerable species.

Some conservation groups and the GBRMPA suggest there shouldn't be a shark fishery as it can't be clearly demonstrated that it is selective and sustainable. It is acknowledged, however, that a large proportion of the shark catch is taken when targeting other species. Consequently, it is likely that shark will continue to be taken in significant numbers regardless of whether a formal shark fishery is permitted to continue or not. Therefore, DPI&F believes that the package of arrangements, which focuses on collecting detailed information on the fishery to better underpin future management, will actually result in a better conservation outcome than if the fishery was closed.

Government and conservation groups agree that the package of measures is a significant improvement on the current system of management and will help improve the sustainability of the fishery in the future. Further refinement of measures may be necessary in the future to ensure that the objectives continue to be met.

The proposed changes have been developed to address the three key objectives, and are summarised below.

### ***Objective 1: Constrain the total catch within sustainable levels***

There are currently 1500 licences that have the potential to take shark by net or line on the east coast. In addition, there are also around 450 net fishers who are currently permitted to use up to 1200m of net in waters greater than 20m deep. If even a small proportion of these licences were activated and more fishers began targeting shark in significant numbers, there could potentially be a serious threat to the sustainability of east coast shark. The establishment of new fishery symbols will limit the number of fishers who can take shark and therefore will remove latent effort. Other fishers will be allowed a small incidental limit of sharks in order to minimise wastage.

Proposed changes:

1. Establishment of a separate shark fishery symbol (S) to limit the number of fishers who can target shark (from around 1600 to around 200 fishers).
2. Establishment of a new fishery symbol (N4) that limits the number of fishers who can use 1200m of offshore net (from around 450 to 25 net fishers). Fishers will be required to surrender two net symbols to receive an N4 symbol, given they will have access to double the standard net length compared to an N1 symbol holder.
3. A commercial in-possession limit for those fishers who do not hold a shark fishery symbol (10 sharks or rays for net fishers and 4 sharks or rays for line fishers).
4. A recreational in-possession limit of one shark or ray.
5. A requirement for fishers who do not hold an S symbol to keep sharks and rays whole (i.e. with fins on).

### ***Objective 2: Provide additional protection to those species that are particularly at risk from the fishery because of their biological characteristics***

There are a number of species that are more at risk from the fishery because of their biological characteristics. A number of measures are proposed to provide additional protection to these species, avoid their capture where possible, and ensure that should an interaction occur, animals can be released quickly and survival can be enhanced.

Proposed changes:

1. Establishment of a number of no-take species (spartooth shark and freshwater sawfish).
2. Introduction of a commercial in-possession limit of 1 for more vulnerable species (green and dwarf sawfish species, white spotted guitarfish, grey reef shark and white tip reef shark).
3. Maximum mesh size for all nets used in open waters to be reduced to 162.5mm (6 1/2 inch) from the current maximum mesh size of 245mm to protect larger adult sharks that have greater breeding capacity (see *Netting*).
4. Introduction of attendance requirements for offshore netting and more stringent attendance rules for other nets (see *Netting*).

### ***Objective 3: Collect better information on the catch of sharks***

In order to manage the fishery in a sustainable and transparent manner, it is integral that more detailed information on catch composition, by-catch and fishing method is collected.

The proposed package of measures will ensure independent monitoring can be targeted at those fishers who catch shark, spatial data can be collected and more detailed information can be routinely collected through logbooks. These measures will be supported through a comprehensive education program.

The introduction of a 700 tonne trigger is a key part of monitoring whether total catch is being constrained to sustainable levels.

Proposed changes:

1. Mandatory participation in the Fishery Observer Program when requested for shark symbol holders.
2. A performance measure that will trigger further review of these arrangements should the take of shark exceed 700 tonnes a year.
3. Mandatory use of Vessel Monitoring Systems (VMS) for N4 symbol holders in order to collect better spatial data on shark catch.
4. Introduction of new shark logbook and fortnightly returns.
5. Introduction of a shark identification guide.

*What will a catch trigger do?*

One of the main objectives for reviewing shark management is to constrain the level of catch in the fishery to ensure it does not expand to unsustainable levels in the future. The shark working group and MAC considered the use of a commercial Total Allowable Catch (TAC) for the fishery, but acknowledged that a competitive TAC often results in a *race to fish*, potentially jeopardising the sustainability of the stock. Instead, the working group and MAC recommended a performance measure of 700 tonnes a year. If the measure is reached a review of management arrangements for the fishery will be triggered.

The Commonwealth Department of Environment and Water Resources (DEW) issues export approvals for fisheries to ensure they are managed in a sustainable manner. As part of the export approval for the East Coast Inshore Fin Fish Fishery, DEW recommended that the catch should not exceed the catch at the time of the investment warning (which was 1200 tonnes). The proposed performance measure of 700 tonnes (the 2006 catch level) is considered more precautionary and represents the long-term, average catch prior to the investment warning. As stock assessments provide better information this performance measure can be amended to ensure it remains appropriate.

DPI&F will report on the Performance Measurement System (PMS) annually in the Annual Status Report using all relevant data. If a performance measure is triggered DPI&F will respond within three months with a timetable for an appropriate management solution. DPI&F will develop their response in collaboration with the MAC. The PMS does not prescribe what management changes to implement, but does establish a timeframe for the consideration of changes. More information on the development of a PMS for the East Coast Inshore Fin Fish Fishery is provided in Appendix 2.

## Major impacts

The main aim of the proposals is to limit access to the targeting of shark and prevent further expansion of the fishery. The proposals have been designed however, to recognize fishers' historical participation in the fishery.

The major impacts for commercial fishers may include:

- New annual licence fees for N4 symbol holders (\$2200) and S symbol holders (\$580). These fees have been developed using the same criteria used to establish other fees for fishery symbols, including the size of the fishery area, the exclusivity of access, the type of apparatus permitted and the value and volume of the product targeted.
- Removal of access to the targeted shark fishery for those fishers who do not hold an S symbol.
- A requirement for fishers without an S symbol to retain the shark whole. This will take up storage room on board and impact on the amount of other product landed.
- Loss of income from catches of species that will be no-take or that will have a commercial in-possession limit of one. These species are generally high value.
- Costs associated with installing a Vessel Monitoring System (approximately \$4000–\$5000) for those fishers with an N4 symbol.
- The proposed bag limit of one shark or ray may also affect those recreational fishers who target shark.

## Costs and benefits of alternatives

DPI&F, in consultation with stakeholders, considered a range of alternatives to the proposed package of arrangements, including:

- maintaining the current arrangements
- using less regulatory approaches
- no shark fishery

Maintaining the current arrangement is not considered an alternative because of the significant risk to the sustainability of sharks. As a signatory to the National Plan of Action for the Conservation and Management of Sharks, Australia is required to protect the long term sustainability of shark resources with appropriate safeguards.

Detailed consideration was given to less regulatory approaches in developing a package of arrangements to protect shark. The use of licence conditions in particular was considered. However this would result in different levels of property right on licences that should be the same. This contradicts the new licensing and fees system which has a rights-based model as its basis. In addition, adequate monitoring and enforcement was not possible using licence conditions.

Conservation groups and the GBRMPA suggest there shouldn't be a shark fishery as it can't be clearly demonstrated that it is selective and sustainable. While DPI&F recognises there are risks to the sustainability of the shark fishery that need to be addressed through limited entry, protection of more vulnerable species and better data collection, it also believes that the proposed package will result in a sustainable shark fishery.

Should the shark fishery be closed, it is likely that there would be claims for compensation given that it may be argued that there is no demonstrated need to shut the entire fishery for sustainability reasons.

The Gross Value of Product (GVP) for shark in 2006 was around \$5 million. Consequently, there would be a significant economic impact on the commercial fishing industry through the removal of one of the key target species in the East Coast Inshore Fin Fish Fishery. Over 200 licence holders would be impacted by closure of the fishery.

As has been previously stated, because of the multi-species nature of the net fishery, it is likely that regardless of whether there is a formal shark fishery, shark will continue to be caught while targeting other species. If retention of shark is no longer permitted, this may result in significant discard and wastage of shark. Commercial net fishers are not required to provide information on discards in their logbooks, therefore, much of this discarded catch may go unrecorded.

## **Table of proposed changes**

Table 3 outlines the proposed changes to the shark fishery. Read the table from left to right to follow the decision making process and see the impact of the final proposal.

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Management of the targeted shark fishery. There are around 25 boats that take the majority of shark in offshore waters greater than 20m using 1200m of net. These fishers rely on shark as their main source of income.</p>	<p>Option 1 No target shark fishery.</p> <p>Option 2 Limited entry into the shark fishery based on historical participation</p> <p>Option 3 Maintain the status quo (i.e. 4-50 net fishers potentially have access to the shark fishery).</p>	<p>The working group recommended limited entry to the targeted shark fishery, either through:</p> <ul style="list-style-type: none"> <li>• Licence conditions</li> <li>• A separate shark fishery symbol</li> </ul> <p>The condition on a licence for targeted shark fishers would be unrestricted (compared to other fishers who take shark in smaller quantities that would have a restricted condition (eg 300-1000kg in possession).</p>	<p>The MAC supported limited entry to the targeted shark net fishery through the creation of <u>one</u> separate shark symbol. A symbol was preferred over a licence condition as it allows for transferability and the recognition of a different property right.</p> <p>The MAC recommended that fishers applying for a shark symbol should be required to surrender an N1 to access the fishery. The MAC recommended that the shark symbol should allow catch of shark and other fin fish, using the same apparatus permitted in offshore waters under a current N1. The fishery should be restricted to offshore waters only. The use of 1200m nets in the fishery would continue to be restricted to offshore waters (greater than 20 metres depth) only.</p>	<p>DPI&amp;F considered the MAC proposal, taking into account the legal requirements under the new licensing structure, the need to monitor the shark fishery closely, and the ability to effectively cap the catch of shark.</p> <p>DPI&amp;F supports the concept of limiting the number of fishers who can use 1200m of net in offshore waters to target shark. To facilitate this, it is proposed to introduce a separate offshore net symbol (N4) for up to 25 licence holders. This symbol would allow the use of 1200 m of offshore set net in waters greater than 20 m deep if two other net symbols are surrendered. The surrender of two symbols recognises that N4 holders will effectively be able to use twice the length of offshore net than all other N1 holders.</p> <p>At a phone hook up in June 2007, the MAC agreed with the changes made by DPI&amp;F.</p> <p>It is unlikely that more than 25 operators will apply for an N4 symbol given the surrender provision, however, DPI&amp;F will seek feedback during the consultation stage on a possible process for allocating the 25 symbols if this occurs.</p>	<p>Following the introduction of the N4, fishers operating under an N1 will no longer be able to use 1200 m of net. It is unlikely that this will impact on a significant number of N1 fishers, as it is more common that they use smaller nets.</p> <p>Those operators who currently target shark as their main source of income are likely to support the introduction of an N4 symbol because they will be granted more exclusive access to a valuable component of the fishery. Most of these operators have invested significantly in gear and boats in order to access the area of the fishery and will end up with greater security of access and a more valuable property right in an N4 symbol.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Management of other fishers who take shark There are around 200 net and line fishers that take more than an incidental catch of sharks (eg more than 500kg a year), but do not target shark as their primary source of income.</p>	<p>Option 1 Remove access to the shark fishery except for holders of a shark fishery symbol</p> <p>Option 2 Introduce provision for fishers who target shark in smaller quantities.</p> <p>Option 3 Relax the criteria for the shark symbol so that fishers targeting shark in smaller quantities can potentially be allocated a symbol.</p>	<p>The working group recommended that fishers who take more than an incidental catch, but do not target shark as their primary source of income, should be given a “restricted” condition on their licence, allowing a higher in-possession limit of 300-1000kg of shark).</p>	<p>The MAC considered higher commercial in-possession limits for those fishers who take a moderate amount of shark, but could not agree on a limit that would meet the needs of fishers and ensure that catches do not expand significantly.</p> <p>The MAC recommended that holders of N1 or N2 symbols who do not apply to be part of the targeted shark fishery, but target shark in smaller quantities, should be permitted to take shark if they apply and are given a condition on licence. This may be subject to demonstrating some catch history. No in-possession limit would be attached to the condition on licence.</p> <p>The MAC felt that it was important that this condition be linked to the collection of better information through independent observers. The MAC also recommended a separate catch trigger level of around 200 tonnes for those fishers with a condition on licence.</p>	<p>DPI&amp;F supported the concept of permitting a limited take of shark by those fishers who have historically taken a moderate amount of shark, but have not relied on shark as a primary source of income.</p> <p>While the MAC recommended a condition on licence, this would effectively result in different property rights between licences, which contradicts the new licensing and fees model.</p> <p>Consequently, DPI&amp;F proposes the introduction of an S fishery symbol that allows net or line fishers to retain shark, subject to demonstrating a particular level of catch over recent years (500 kg in two of five years). This S symbol will limit the number of people who can take shark in the future, but recognises the historical catch of net and line fishers.</p> <p>The S symbol also enables DPI&amp;F to easily identify shark fishers and better target monitoring programs.</p> <p>The S symbol will not prescribe which apparatus can be used, it will only prescribe that shark can be retained if an S symbol is held.</p> <p>At a phone hook up in June 2007, the MAC agreed with the changes made by DPI&amp;F.</p>	<p>The proposed shark fishery symbol will recognise fishers’ historical participation in the fishery. Therefore, minimal negative impacts are foreseen.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Incidental catch of shark	<p>Option 1 Prohibit all take of shark except by those licence holders who have an S fishery symbol.</p> <p>Option 2 Introduce by-catch limits to avoid wastage.</p>	<p>The working group agreed that a provision should be given to allow fishers who take shark incidentally to retain a small amount in order to avoid wastage.</p> <p>The working group recommended a lower commercial in-possession limit for those fishers who only take shark incidentally. The working group could not agree on a specific limit and asked that daily catch data be investigated by DPI&amp;F to determine an appropriate kilogram limit.</p>	<p>The MAC recommended that all net fishers be restricted to having 10 sharks or rays in-possession unless they are part of the targeted shark fishery or have a condition on their licence to possess greater than 10 sharks or rays. The MAC initially considered a kilogram limit, but noted that this would be difficult to enforce.</p>	<p>DPI&amp;F supports the MAC recommendation for an in-possession limit of 10 sharks or rays for net fishers who do not hold an S symbol.</p> <p>The Reef Management Advisory Committee recommended a lower in-possession limit for line fishers, which DPI&amp;F supports.</p> <p>The DPI&amp;F is also proposing that those fishers who do not hold an S symbol must keep shark whole with fins on. This proposal aims to prevent finning at sea and should reduce targeting of larger sharks which are otherwise unmarketable apart from their fins.</p>	<p>The majority of net fishers catch and retain less than 100–200 kg a day. It is unlikely that this provision will adversely affect a large number of existing net or line fishers. However, the provisions will restrict future access to the shark fishery; currently accessible to over 400 net fishers.</p>
High risk shark species	<p>Option 1 No target shark fishery</p> <p>Option 2 No take species for all identified as high risk</p> <p>Option 3 No take species for those listed under protected species legislation</p> <p>Option 4 Lower in-possession limits for more vulnerable species</p> <p>Option 5 No changes</p>	<p>The working group noted the information from the Scientific Advisory Group which identified a number of more vulnerable species assessed as high risk through the Northern Sharks and Rays: Phase II project.</p> <p>The working group recommended a system of no-take species, including no take of:</p> <ul style="list-style-type: none"> <li>• grey nurse shark</li> <li>• great white shark</li> <li>• spartooth shark</li> <li>• freshwater sawfish.</li> </ul> <p>A commercial in-possession limit of 1 for <i>Pristis</i> species (green and dwarf sawfish) and white spotted guitarfish.</p>	<p>The MAC supported the working group recommendation.</p>	<p>DPI&amp;F supported the working group and MAC recommendations.</p>	<p>There is likely to be an impact on fishers who target shark.</p> <p>The species proposed for no take or restricted take, are not caught regularly, but are generally of high value because of their white fins.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Recreational fishing for shark	<p>Option 1 No limit on shark for recreational sector</p> <p>Option 2 In-possession limit on recreational and charter fishers</p> <p>Option 3 Size limit on sharks</p>	<p>The working group recognised the substantial catch of shark taken by recreational fishers and recommended an in-possession limit of one shark or ray for recreational and charter fishers.</p> <p>The group also recommended an education program to encourage better handling of sharks and the use of barbless and non-stainless steel hooks that will corrode over time.</p>	<p>The MAC supported the working group's recommendation.</p>	<p>DPI&amp;F supports the working group and MAC recommendation.</p> <p>DPI&amp;F will further investigate an education program to encourage better handling of sharks and the use of barbless and non-stainless steel hooks that will corrode over time.</p>	<p>An in-possession limit of 1 is likely to affect only a small number of recreational fishers who target shark. RFISH estimates indicate that over 90-95% of recreational fishers release sharks that they catch incidentally.</p> <p>One shark in-possession would still provide a substantial quantity of food for those who wish to retain the shark.</p>



Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Better information and data on the shark fishery</p>	<p>Option 1 Revised logbook with greater species breakdown</p> <p>Option 2 Greater observer coverage</p> <p>Option 3 Research</p> <p>Option 4 Vessel Monitoring System (VMS)</p>	<p>The working group recommended the collection of more accurate data on the shark fishery. This included support for greater observer coverage in the targeted shark fishery to gain an understanding of species composition.</p> <p>The working group suggested that may be potential to require fishers with a shark symbol or condition on licence to have an observer on board if requested.</p> <p>The working group also suggested that DPI&amp;F consider revision of the net logbook to cover more than the two species groups (hammerheads and whatlers).</p>	<p>The MAC supported greater observer coverage in the fishery.</p> <p>The MAC also supported collection of better information through logbooks where possible but recognised that this may result in the need to educate fishers about species identification.</p> <p>The MAC supported compulsory VMS for the targeted shark fishers to better monitor the distribution of catch.</p> <p>The MAC recommended a performance trigger of 700 tonnes should be established as a way of ensuring catch and effort does not expand significantly in the fishery.</p>	<p>DPI&amp;F will consider revision of the net logbook in conjunction with the establishment of a new shark symbol.</p> <p>A primary reason for developing new arrangements for shark is to collect better information on the operations of the fishery (including the levels of by-catch and interaction with species of conservation interest) and the sustainability of shark stocks. It is proposed that holders an S fishery symbol will be required to participate in the DPI&amp;F Fishery Observer Program when requested. This will improve monitoring of the total harvest and by-catch. This will allow management arrangements to be amended over time based on the best available information.</p> <p>DPI&amp;F supports the MAC recommendation to introduce compulsory VMS for the targeted shark fishers.</p>	<p>The carrying of observers is currently voluntary. The proposal to require fishers to participate in the Fishery Observer Program may have some impacts on some commercial fishers. As part of the program, DPI&amp;F targets those operators that are capable of carrying an observer comfortably and do not require fishers to do something that would be considered unsafe.</p> <p>The expansion of the current logbook may impact on commercial fishers who are currently only required to record sharks as either “whatlers” or “hammerheads” .</p> <p>The introduction of a revised logbook would need to be accompanied with education on identifying different shark species.</p> <p>The cost of installing a compulsory VMS will affect the 25 targeted shark fishers.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Concerns about how access may be allocated.	<p>Allocations can be based on:</p> <ul style="list-style-type: none"> <li>• history</li> <li>• minimum criteria</li> <li>• tender process</li> <li>• application process</li> </ul>	<p>The working group discussed a range of options for allocating a shark symbol and recommended adopting the following principles:</p> <p>Logbook data should not be used alone to allocate shark symbols. Fishers should be required to validate their logbook records through docketts, tax returns and so on.</p> <p>A symbol should only apply to the boats that take significant quantities (i.e. top 25–30 boats).</p> <p>An application process would be appropriate for fishers who apply for a certain type of licence depending on their circumstances.</p>	<p>The MAC supported these principles and used them in developing a package for shark management.</p>	<p>DPI&amp;F supports the principles and will further develop a process for allocating access to the shark fishery, taking into consideration concerns about the accuracy of logbook data.</p> <p>Further consultation will be undertaken on an appropriate history based allocation. DPI&amp;F proposes that access to the targeted shark fishery using longer (1200 m) offshore set nets will be given to a maximum of 25 licences through the allocation of an N4 symbol (discussed above).</p>	<p>The principles are designed to ensure a fair and equitable process.</p>

# Dugong Protection Areas (DPAs)

## Background

A network of 16 Dugong Protection Areas (DPAs) on Queensland's east coast was implemented in January 1998. DPAs restrict or prohibit the use of nets and are legislated under the *Fisheries Act 1994*. DPAs are also prescribed under the *Nature Conservation Act 1992* through the Nature Conservation (Dugong) Conservation Plan 1999.

Two types of DPAs exist—Zone A and Zone B. Zone A DPAs generally provide the greatest level of protection to dugongs, while Zone B DPAs offer less protection. Both zones allow the use of certain low-risk nets. Restrictions in many of the DPAs are tailored to the risks to dugongs in those particular areas.

There are a number of net characteristics that lower the risk to dugong. These include:

- use of short, taught nets
- small mesh sizes
- short soak times
- attendance of nets to both avoid dugong and release dugong if they become entangled.

Under current arrangements, offshore nets can be used in waters greater than 2 m in depth. Waters around headlands often drop off quite dramatically compared to foreshores, rivers, and creeks. Consequently, these waters are *offshore waters* and the use of 600 m mesh nets is allowed. An agreement to review the effectiveness of Zone B DPAs was made at the Great Barrier Reef Marine Park Ministerial Council. In particular, the review was asked to consider the use of offshore nets around headlands, which are important movement corridors for dugong.

A DPA working group was established with significant expertise in dugong biology, spatial mapping and seagrass ecology to review DPAs. The objective of the review was to assess the effectiveness of existing DPAs at minimising netting impacts on dugong and advise on any potential improvements. The working group addressed a number of specific issues such as netting around headlands, as well as other proposals raised by industry and at public meetings.

### Did you know?

Dugong are slow-growing with long lives, but have low reproductive capacity. They first give birth to a single live young when they are 10–17 years old. Thereafter, dugongs may reproduce at intervals of three to seven years.

## Key changes

Key changes proposed which strengthen protection to dugong, include:

- Extend the Gladstone DPA around Facing Island to provide additional protection to dugong in the region (see Figure 4).
- Introduce a 500 m exclusion zone from high water (*and* in waters greater than 2 m at all stages of the tide) in B Zones to prevent the use of offshore nets around headlands.
- Allow further flexibility in the types of low risk nets that can be used in DPA A Zones, while still maintaining strong regulations that protect dugong from commercial nets (for example, allow the use of a single general purpose net (N1) or barramundi set net (N2)).

The results of these changes will be a net benefit to the protection of dugong.

## Major impacts

The proposed 500 m exclusion zone in B Zones will prevent fishers from using a maximum of 600 m of offshore net around headlands. There will be no change to the current arrangement that allows fishers to use set mesh nets in rivers and creeks and foreshores in these zones. Consequently, any effect is restricted to areas around headlands in B Zones.

The impact of this exclusion zone is likely to be offset by the proposal to allow some further flexibility in the types of nets that can be used in DPA A Zones.

Currently the use of a range of nets is prohibited within DPA A zones, with the precise details varying between areas. These prohibitions however generally relate to the use of nets of large mesh size which, when used outside DPAs, are either set at both ends to target barramundi or allowed to drift freely to target a range of other fish. Outside DPAs up to three set nets for barramundi are generally allowed, and these may be set up to one nautical mile apart. It is clear that such a practice would pose an unacceptable risk to dugong in DPA A zones because of the size and strength of the nets and how they are used.

It is considered that the use of a single general purpose or barramundi set net in DPA zones would pose no greater risk to dugongs than the range of other nets that can currently be used in these areas. This risk will also be constrained by requiring the set nets to be shorter than the maximum length that can be used in other areas, and by requiring the fisher to remain within 100 m of the net while it is in use. A requirement to be in attendance at a net is considered to be one of the most important factors in minimising the risk of such nets in areas of high dugong density.

It is proposed that a fisher will be able to use either a 400 m long general purpose net or a 200 m long barramundi set net in DPA A zones. The current prohibition on the use of drift nets will be maintained. There would be no increase in the total length of net that can be used in DPAs, as only one net will be allowed to be used at a time.

The extension of the Gladstone DPA B Zone is unlikely to affect a significant number of operators. Any impact will be restricted to a small number of local fishers who exclusively use offshore nets around Facing Island. Net fishers can still fish in the area, but will not be able to use offshore set nets within 500 m of the high water mark or in waters shallower than 2 m.

## Costs and benefits of alternatives

Maintaining the current DPA regulations is contrary to an agreement made at the Great Barrier Reef Marine Park Ministerial Council to review the DPAs and address concerns about the use of offshore nets around headlands.

One of the alternatives considered was only addressing the concerns about headlands in the review. This is not appropriate given that DPAs were in place for over 10 years without review. A fuller review was undertaken and helped identify other areas that require attention. This approach will help ensure DPAs remain effective and appropriate.

## Table of proposed changes

Table 4 outlines the proposed changes to Dugong Protection Areas. Read the table from left to right to follow the decision making process and see the impact of the final proposal.

Table 4: Proposed changes to Dugong Protection Areas.

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Use of offshore nets adjacent to headlands in B Zone DPAs	<p>Option 1 Define specific headlands within B Zone DPAs that should be closed to offshore nets.</p> <p>Option 2 Define dugong corridors within B Zone DPAs that should be closed to offshore nets.</p> <p>Option 3 Have an exclusion area within all B Zone DPAs that preclude the use of nets.</p>	<p>The working group recommended that within all B Zone DPAs a 500 m exclusion zone be established from high water (at highest astronomical tide) with respect to the use of offshore set nets, except in a waterway or on a foreshore. The current restriction to only use offshore nets in waters greater than 2 m will continue to apply.</p> <p>It was also recommended that satellite tracking of dugong movements within the 500 m zone is promoted as a highly desirable research project.</p>	<p>MAC supported the working group proposal but also recommended that waters greater than 2 m be based on <i>at all stages of the tide</i>.</p> <p>The Environmental Protection Agency were extremely pleased with the outcome and felt it was a good resolution to a long standing problem.</p>	<p>DPI&amp;F supports the recommendation to introduce a 500 m exclusion zone from high water in B Zone DPAs. Offshore nets will still only be allowed to be used in waters greater than 2 m at all stages of the tide</p>	<p>A minor impact from this proposal is likely. Fishers will still be permitted to use nets in B Zone DPAs, but the use of offshore nets will be further restricted.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Netting Arrangements within A and B Zone DPAs</p>	<p>Option 1 Leave existing netting arrangements as they are.</p> <p>Option 2 Allow the use of restricted nets in A Zone DPAs (conservation zones). The restricted nets would include:</p> <p>Under an N1 symbol:</p> <ul style="list-style-type: none"> <li>• A single 400 m general purpose net, 4 1/2" mesh size, 25 meshes deep.</li> <li>• Fisher in attendance at all times—hands on.</li> <li>• Not to be used in rivers or creeks.</li> <li>• Net may be anchored at one end for a maximum of one hour.</li> </ul> <p>Under an N2 symbol:</p> <ul style="list-style-type: none"> <li>• Single 200 m net, 115–150 mm mesh size, 25 meshes deep.</li> <li>• Fisher in attendance at all times—hands on.</li> <li>• Net may be anchored.</li> <li>• Not to be used in rivers or creeks.</li> </ul> <p>In rivers and creeks bordering A Zone DPAs, a maximum distance of 1600 m between first and last net (as opposed to current limit of 800 m).</p>	<p>The working group asked the MAC to consider the industry proposals noting that no consensus was reached by the working group as it was unaware of the associated risks.</p>	<p>The MAC noted that limited netting currently occurs in DPAs, excluding barramundi. The original rationale for why barramundi can't be taken is unknown.</p> <p>The proposal from industry is to allow a single barramundi set net to be used in A Zone DPAs. An operator would need to use less net than is currently permitted in the A Zone in order to target barramundi. It was believed few operators would do this. The MAC noted that the use of one barramundi set net with hands-on attendance was low risk and would give more flexibility in the type of net used. It was also pointed out that taut set nets are likely to cause less interaction than non-set nets.</p> <p>Industry also proposed allowing anchoring of one end of a net for one hour. It was felt that the tautness of the net would lower the risk to dugong. This would help efficiency and prevent tangling of nets in shallow waters. Fishers would still be required to be in attendance. The MAC also considered extending the distance between nets to 1600 m to avoid stacking of nets in creek mouths where interactions were more likely.</p> <p>The MAC supported the proposals to allow one barramundi set net or single general purpose net, the anchoring of one end of a net and extending the distance between nets in A Zone DPAs. There was a dissenting view from the Great Barrier Reef Marine Park Authority (GBRMPA) and World Wide Fund for Nature (WWF) who could not agree to the proposal, but acknowledged it had merit.</p>	<p>DPI&amp;F supports the proposal to allow some further flexibility in the types of low-risk nets that can be used in DPAs, while still maintaining strong regulations that protect dugong from interactions with commercial nets.</p>	<p>This proposal will have a positive effect for net fishers, increasing flexibility in the type of limited netting that can occur in A Zone DPAs. Conservation groups are likely to oppose a perceived relaxation of netting restrictions in A Zone DPAs.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Boundaries of A and B Zone DPAs</p>	<p>Option 1 Leave existing boundaries of all zones unchanged.</p> <p>Option 2 Review all boundaries.</p> <p>Option 3 Review the boundaries of the Gladstone DPAs.</p>	<p>The working group agreed that current boundaries of DPAs should remain, except for the Gladstone, Bay B Zone. Interactions with protected species on the eastern foreshore of Facing Island (near Gladstone) were considered specifically. Three options for this area were identified for the MAC's consideration:</p> <p>Option 1 Extend the seaward boundary of the B Zone DPA to run from Flora Point on Rodds Peninsula to the northern tip of North Point on Facing Island. Maintain the current regulation of a foreshore set net on the seaward side of Facing Island.</p> <p>Option 2 Extend the B Zone DPA with a boundary extending 1000 m from the shoreline on Facing Island at high water mark (at highest astronomical tide), however the impact on existing fishers who may use foreshore set nets in this area would need checking. (This was subsequently checked with QBFP Gladstone and there are no fishers using foreshore set nets on Facing Island.)</p> <p>Option 3 Address this issue by tightening general net attendance requirements when using offshore set nets.</p>	<p>The MAC supported option 2 which extends the Gladstone B Zone DPAs to include Facing Island. This should help further minimise interactions with dugong in the area.</p>	<p>DPI&amp;F notes the MAC support for option 2 but recommend option 1. This extends the B Zone DPAs to include Facing Island, but in a simpler way that will be easier to enforce.</p> <p>The boundary for option 2 (i.e. 1000 m from shore) would be difficult for both fishers and compliance officers to interpret on the water.</p> <p>The MAC met again in June 2007 and supported the department's recommendation.</p> <p>Option 1 will result in a slightly larger extension of the B Zone, providing a greater degree of protection. See Figure 4 for the proposed new boundaries.</p>	<p>There may be a minor impact on a small number of local fishers. Fishers will still be permitted to use nets in the area, but will be restricted in the type of net used and the attendance rules.</p>

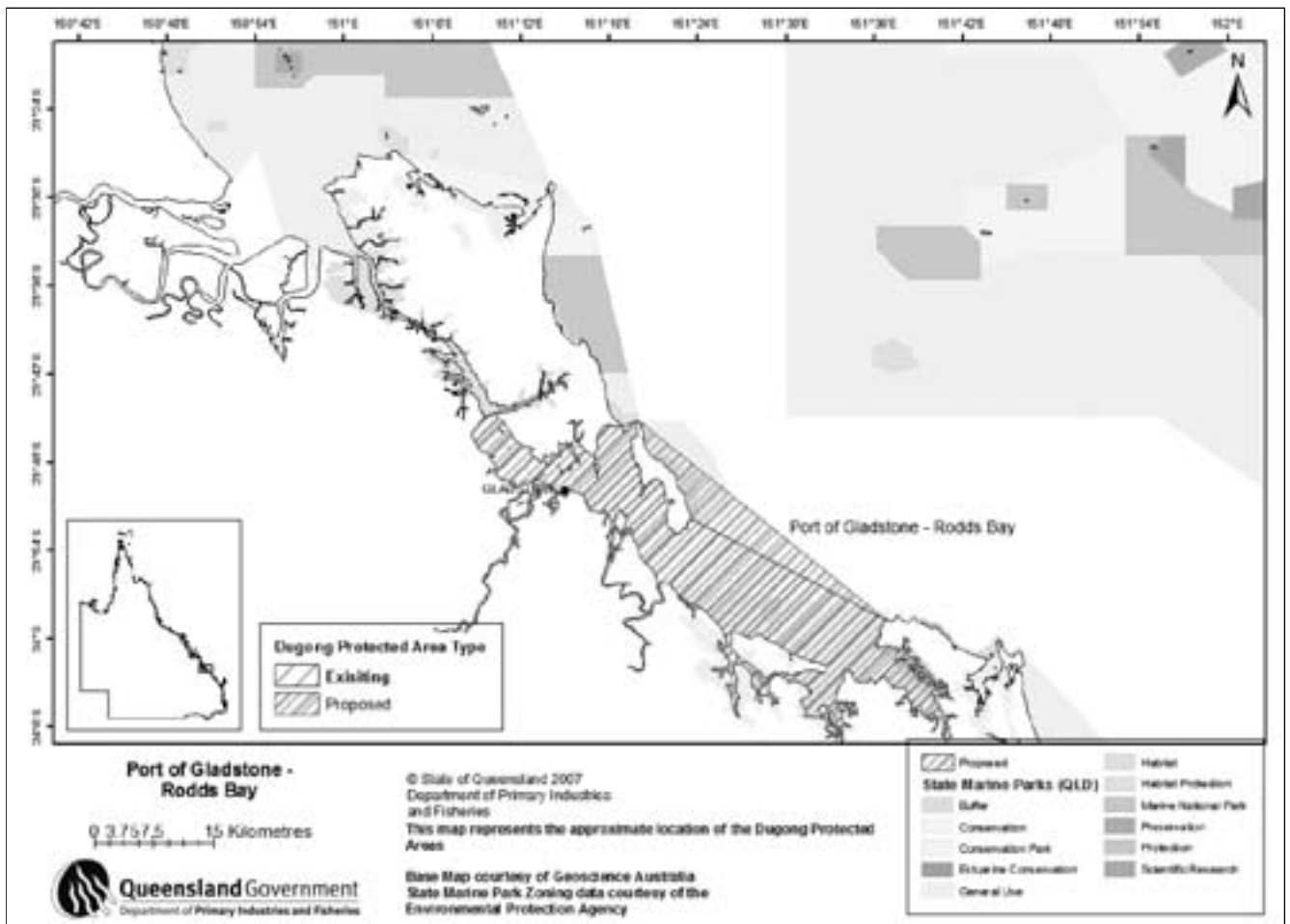


Figure 4: Proposed new boundaries for the Gladstone Dugong Protection Area B Zone



## Netting

### Did you know?

Commercial gill nets can be made highly selective by changing mesh size, ply strength and the way the net is hung and set. Research shows that by-catch in Queensland net fisheries is low compared to a number of other commercial fisheries.<sup>11</sup> Overall, catch of undersized fish was found to make up less than 6% of the total catch.

## Background

Currently the Fisheries Regulation specifies the number, type and conditions of use of nets by both the commercial and recreational fishing sectors. The commercial netting arrangements have over the years become extremely complex, making it difficult for commercial fishers to ensure they are complying with the legislation.<sup>1</sup>

The commercial net fishery, operating along the east coast of Queensland, comprises a number of quite distinct fishing methods targeting a diverse range of species across a wide area. Barramundi, threadfins, grey mackerel and sharks tend to dominate catches in northern waters, while species such as mullet and tailor are taken almost exclusively in the south. Even within one area fishers will use a variety of fishing methods depending on factors such as the season and targeted species. This diversity of species and operations makes the East Coast Inshore Net Fishery arguably the most complex fishery in Queensland. The diverse nature of the fishery is a major reason for the complexity of the netting regulations.

The current commercial netting regulations were transcribed almost entirely from the previous regulation under the *Fishing Industry Organisation and Marketing Act 1984* and have not undergone any significant overall review since that time. A number of changes have been made to specific elements of the netting regulations over time, and this has also contributed to the current level of complexity.

Feedback from the stakeholder meetings and the questionnaire indicated support for a review of the current netting regulations to simplify and modernise them where appropriate. To address this issue a separate overall review of netting arrangements was undertaken. As part of the review a series of 19 port visits were conducted to discuss with commercial fishers regional issues in relation to the operation of the net fishery and a working group was established to develop the proposed changes.

The review considered:

1. The appropriateness of current commercial netting arrangements in regard to the continued need for present restrictions, the complexity of legislation and how it could be simplified. Consideration was given to the following management measures:
  - net length, mesh size and drop
  - number of nets
  - attendance rules
  - fishery symbols
  - other conditions of use.

<sup>11</sup> Halliday, I, Ley, J, Tobin, A, Garrett, R, Gribble, N & Mayer, D 2001, *The effects of net fishing: addressing biodiversity and bycatch issues in Queensland inshore waters*, FRDC project No. 97/206, Department of Primary Industries and Fisheries, Brisbane.

- 2 The sustainability of fish stocks, by-catch, and protected species and the possibility of introducing more flexible management arrangements that enhance profitable commercial fishing opportunities.
3. The appropriateness of current recreational netting arrangements in relation to the sustainability of fish stocks, and the change in apparatus configuration and use over time.

The working group recommendations were further developed by the Inshore Fin Fish MAC. The department then considered the MAC proposals and was generally supportive. While some amendments have been made, the general concepts developed by the working group, and endorsed by the MAC, were maintained.

## **Key changes**

A number of changes are proposed for some elements of the commercial mesh net fishery. No changes are proposed that are specific to the Ocean Beach seine, prawn seine, set pocket net fishery or mesh netting in lakes. For the sake of simplicity these net types are not referred to in the summaries of net types discussed in this RIS.

### ***Changes to commercial fishery symbols***

A fishery symbol provides the holder with access to the specific types of gear used in commercial fisheries, and sometimes access to particular species or species groups. Fishery symbols are fully tradable and access to a fishery is only possible through the purchase of an existing symbol or primary licence package. Fishery symbols therefore provide a means to limit access to a fishery to ensure sustainability.

Key changes to the type of nets that fishers will be able to use under each commercial net fishery symbol are summarised in Table 5. More detail on the rationale for each of these changes can also be found in Table 6. The most significant changes are to:

- Introduce a separate net symbol for the use of 1200 m of offshore net in waters deeper than 20 m to support the introduction of a dedicated net fishery targeting sharks and other species (see also Sharks and rays section). Up to 25 of these N4 symbols will be issued to reflect historic levels of participation in this fishery.
- Introduce a separate net fishery symbol for the use of tunnel nets to limit access and potential expansion in the fishery.
- Amend the N6 bait net fishery to address latent effort, with access to the use of these nets for commercial purposes being based on prior history. At the same time a general provision will be implemented to allow fishers to use these nets to take bait for their own use if they hold a line or crab fishery symbol.
- Remove the redundant fishing symbols N5, N7 and N8.

Table 5: Summary of types of nets that could be used under the new proposals

Amended Symbol	Proposed Fee	General purpose (45–162.5 mm)	Type of net that can be used					
			Barra set net (150–215 mm) <sup>2</sup>		Offshore set and drift (162.5 mm)		Tunnel	Bait (12–45 mm)
			River	Near-shore	600 m	1200 m		
N1 General Net	\$290 (2010/2011 after phase in)	✓	✗	✗	✓	✗	✗	✗
N2 Barramundi	\$290 (2010/2011 after phase in)	✗	✓	✓	✗	✗	✗	✗
N4 Offshore Net	\$2200 (no phase in)	✓	✗	✗	✓	✓	✗	✗
N10 Tunnel Net	\$1100 (no phase in)	✓	✗	✗	✓	✗	✓	✗
N6 Bait Net	\$150 (no phase in)	✗	✗	✗	✗	✗	✗	✓

**Changes to net configurations**

Restrictions on the type and use of fishing apparatus are an important tool for managing fisheries through input controls. Input controls limit the capacity to take fish without imposing an actual limitation on the number of fish that can be taken. For net fisheries the primary elements in regulation controlling the number and type of fish that can be taken are net length and drop, mesh size and ply, and how the net is deployed (for example, fixed at both ends, fixed at one end or drifted).

Key proposed changes to current commercial netting arrangements are summarised in Table 6, and the proposed new netting arrangements are summarised (with exceptions as noted previously) in Table 7. The most significant changes are:

- Where possible, remove specifications on how nets are deployed and retrieved to provide greater flexibility, including the introduction of a *General Purpose* net for use throughout the fishery area.
- Introduce a 400 m attendance requirement for offshore set nets, with the majority of attendance requirements (with the exception of the N2 and set pocket net fisheries) specifying that the commercial fisher must be *on the water*.
- Increase the number of river set nets a fisher may set in the majority of the N2 barramundi fishery to provide greater flexibility. Up to six nets will be able to be used with a decrease in the overall length of net if more than three nets are used.
- Remove the capacity to use offshore nets under N2, to maintain a separation of activities between the N1 and N2 fisheries.
- Allow the use of one 120 m long, 125 mm mesh-size, river-set net to target salmon from April to September to improve supply of a relatively low priced fresh fish to local markets.

<sup>12</sup> Note—fishers can target salmon in rivers and creeks from April to September using a single 120 m long, 125 mm mesh size, net

### ***Changes to recreational nets***

The review found that current cast and bait net specifications were appropriate for recreational netting, particularly in light of proposed changes to bag and size limits. It is proposed however that recreational fishers will be limited to using one cast or bait net at a time to address catch sharing issues. Compulsory marking of recreational nets will be introduced to support the proposed limit of one net in use.

### **Major impacts**

The impacts of the proposed changes are described in Table 6. When developing the proposals consideration was given to the economic and social impacts a proposed change may have on fishers and any flow-on effect. These impacts have been minimised wherever possible, for example, maintaining the right to use a general purpose net and 600 m offshore nets under an N1, N4 or N10 symbol.

### ***Commercial sector***

Commercial net fishers use nets with specific mesh sizes as a way of targeting particular species and minimising the catch of undersize fish. It is intended that the proposed new netting arrangements will allow appropriate flexibility in the size and configuration of nets that may be used to ensure fishers can continue to be as selective as possible. One exception to this is the restriction of offshore nets and general purpose nets in the majority of the fishery to 162.5 mm mesh size, to reduce the take of larger sharks and to support the introduction of an increased minimum size limit for grey mackerel. It is unknown to what extent nets of smaller and larger mesh sizes (current minimum is 50 mm with no maximum) are being used in this component of the fishery. Depending on responses received to this Regulatory Impact Statement, a phase-in of this restriction may need to be considered.

Other major impacts on the commercial sector will come from the introduction of licensing fees for the new symbols proposed. These proposed fees have been set by the department, using the current net symbol fees as a benchmark and based on the size of the fishery area, the exclusivity of access, the type of apparatus permitted and the value and volume of the product targeted.

A new, annual fee of \$150 is proposed for the N6 fishery. The previous exemption from a fee was based on the principle that commercial fishers have the right to collect bait for their own use, and they already pay a fee for this right through their commercial fisher licence. It is considered inappropriate to maintain this exemption if the N6 nets are used to take fish for sale. The proposed fee for the N6 is significantly less than the \$290 fee for an N1 in recognition that a greater number of fishers are likely to apply to hold an N6 symbol, and that the size of nets that can be used is more restrictive than can be used under an N1.

The proposed fee for the N4 symbol is \$2200. This is based on the restricted number of fishers (25) that will be able to access this fishery benchmarked against the N9 fishery in the Gulf of Carpentaria, which uses similar apparatus to take similar species (predominantly shark and grey mackerel). While the N9 attracts a fee of \$15 700 there are fewer licences accessing this fishery (5) and it is therefore likely to be more profitable for individual operators. Unlike the N9 fishery however, N4 operators will also have access to the use of general purpose nets.

The proposed fee for the new tunnel net fishery (N10) is \$1100. It is anticipated that a maximum of 20 licence holders will apply for and receive an N10, which will provide access to one of the more profitable components of the inshore fin fish fishery. The proposed fee is lower than the

N4 in recognition that tunnel netting can only be undertaken in part of Moreton Bay and the Great Sandy region, a relatively small portion of the overall fishery area. N10 fishers however will also be able to maintain access to the majority of nets and all areas permitted in the N1 fishery.

Industry has suggested during consultation that proposals to introduce net attendance for offshore nets will have a major impact on fishing operations. To address these concerns, appropriate exceptions were developed to ensure that impacts are minimised where possible. These exceptions are described in Table 6.

### ***Recreational and charter fishers***

Minimal impact on the recreational and charter sectors is expected. The only significant impact will be that recreational fishers who currently use more than one cast or bait net at one time will not be able to do so, and that all such apparatus will have to be marked with the owner's name.

### **Costs and benefits of alternatives**

A number of alternative approaches to the review of netting arrangements were considered:

- Describe one basic net and make changes to that net in different areas or under different symbols.
- Retain the basic regulations as is, but remove repetition and unnecessary regulation.
- Retain the netting arrangements as they are.

There is a clear need to reduce the complexity of the current regulations and remove a number of unnecessary restrictions. However, the significant investment that operators have made to comply with the current regulations was taken into account.

Consequently the review focused on reflecting current practice, but removing complexity and increasing flexibility. Ideally, the review would have started with one basic net and prescribed exceptions to how or where that net may be used, however, netting practices have evolved so differently in various areas and fisheries that simplification would increase the negative impact on operators.

### **Table of proposed changes**

Table 6 outlines the proposed changes to netting arrangements. Read the table from left to right to follow the decision making process and see the impact of the final proposal. The decision making process for netting arrangements was simplified by early consensus on most issues by the working group, MAC and DPI&F. For this reason the table does not include separate columns for working group and MAC proposals.

Table 6: Proposed changes to netting arrangements

Issue	Proposed Changes	Rationale	Impacts
<p><b>Recreational nets</b></p>	<p>It is proposed that recreational fishers will be limited to using one cast or seine (drag) net at a time and that all nets must be marked with the owner's name and address.</p>	<p>The prohibition on using more than one cast or net seine at a time will address catch-sharing issues and prevent the use of multiple nets, which can lead to excessive catches. Compulsory marking of recreational nets will be introduced to support the proposed limit of one net in use.</p>	<p>No significant negative impacts are foreseen.</p>
<p><b>Fishery area</b></p>	<p>It is proposed that the area of the commercial fishery is amended to align with the Offshore Constitutional Settlement (OCS), (the agreement between the state and Commonwealth governments about management of fisheries resources). This will change the northern boundary of the fishery from its current position (around 60 km west of Cape York) to the point at Cape York. All tidal waters east of longitude 142 31 49 will be part of the East Coast Inshore Fin Fish Fishery and waters west of this line will be included in the Gulf of Carpentaria Inshore Fin Fish Fishery. This will remove overlap between the fisheries and simplify the list of species that can be taken.</p>	<p>Currently the fishery area for the commercial net fishery is defined as all tidal waters east of longitude 142 09E, not including waterways flowing into the Gulf of Carpentaria west of that point. Because the OCS delineates Gulf waters at longitude 142 31 49E the Regulation has a complex description of fish that can be taken in the east coast net fishery. Between 142 09E and 142 31 49E under the OCS the species that can be targeted must be listed, however a fisher may keep other fish taken while targeting these species. East of longitude 142 31 49 a fisher may take any fish other than coral reef fin fish, spotted mackerel or barramundi (unless they hold an N2).</p>	<p>This proposal will remove approximately 60 km of remote coastline from the current fishery area. This will remove the overlapping of fisheries and significantly reduce the complexity of the legislation.</p>

Issue	Proposed Changes	Rationale	Impacts
<p><b>Commercial nets—how nets are used:</b></p> <ul style="list-style-type: none"> <li>Current arrangements include a complex array of descriptions on how certain nets can be used in the fishery including mesh, set mesh, seine, ring and nets that are 'not set or hauled' (i.e. drift nets).</li> <li>These specifications do not cover the full range of current fishing practices.</li> <li>Enforcement is often quite difficult due to a number of grey areas regarding the use of nets.</li> <li>Over-regulation removes the incentive for fishers to be innovative and more efficient in the way they undertake their operations.</li> </ul>	<p>The concept of a general purpose net will be introduced for use throughout the N1 fishery, and where possible specifications on how a net can be deployed and retrieved will be removed.</p> <p>Exceptions to this rule will include:</p> <ul style="list-style-type: none"> <li>Only set nets can be used under N2.</li> <li>A river net under N1 cannot be set north of Baffle Creek to retain the difference with the N2 fishery. To the south of Baffle Creek only one end can be set.</li> <li>Both ends of a net used in nearshore waters under N1 can be set for two hours only.</li> <li>Where a particular way of using a net is prohibited in a specific area or time (e.g. drift nets in Moreton Bay and other areas).</li> </ul>	<p>The aim is to allow net fishers greater flexibility in how nets are used unless there are clear reasons for requiring or prohibiting certain netting methods.</p> <p>The current delineation between the N1 and N2 fisheries will be retained with:</p> <ul style="list-style-type: none"> <li>A requirement to set an N2 net.</li> <li>A prohibition on setting both ends of an N1 net used in rivers and a two hour limit on setting both ends in nearshore waters (see below).</li> <li>The removal of capacity to use an offshore net under an N2 symbol.</li> </ul>	<p>Removing a number of descriptions on how nets can be used will provide greater flexibility for commercial net fishers and no negative impacts are foreseen.</p> <p>There are no impacts from requiring both ends of an N2 net to be set (but not a river net under N1) as this is a current requirement.</p> <p>No impacts are foreseen from allowing N1 nets in nearshore waters to be set for two hours as this is a relaxation on current restrictions.</p> <p>The potential impact of prohibiting the use of offshore set nets under N2 is discussed in the section on N2 nets.</p>
<p><b>Defining foreshore and offshore waters:</b></p> <ul style="list-style-type: none"> <li>Uncertainty regarding the use of a net on a foreshore or offshore, just below low water mark, if the water is less than 2 m deep.</li> <li>Ambiguity about waters that are less than 2 m deep but not on a foreshore.</li> <li>Difficulty in determining if less than 1/3 of an N2 foreshore net is below low tide.</li> <li>Inconsistency between the prohibition on setting both ends of a foreshore net under N1 and current fishing practice.</li> </ul>	<p>Definitions for the use of foreshore nets will be amended to refer to the use of nets in nearshore waters.</p> <p>Provisions for using nets in nearshore and offshore waters will be dependent on whether the water is 2 m deep or less.</p> <p>Set mesh nets used in nearshore waters under an N2 will be required to have one end set in nearshore waters.</p> <p>An N1 general purpose net used in nearshore waters will be allowed to be fixed at both ends for up to two hours only if all of the net is in nearshore waters.</p>	<p>The changes are expected to provide greater clarity.</p> <p>Nearshore waters will be defined as waters that are less than 2 m deep at some stage of the tide, and offshore waters as where the water is at least 2 m deep at all stages of the tide.</p> <p>The two hour limitation on fixing a general purpose net will prevent the use of these nets as set nets that operate throughout the tidal cycle.</p>	<p>The proposal will provide greater clarity and improve flexibility for commercial net fishers and no negative impacts are foreseen.</p>

Issue	Proposed Changes	Rationale	Impacts
<p><b>Net attendance:</b> There is currently no attendance requirement on offshore set nets under N1. For those fisheries where net attendance is required such attendance is not clearly specified.</p>	<p>The following attendance rules are proposed:</p> <ul style="list-style-type: none"> <li>• General purpose nets—100 m attendance <i>on the water</i>.</li> <li>• Offshore drift—100 m <i>on the water</i>.</li> <li>• Offshore set—400 m <i>on the water</i> with the following exception: <ul style="list-style-type: none"> <li>– for waters less than 20 m deep 5 nautical miles (n-mile) (when the net is rolled, AVR reporting and gone less than 6 hours).</li> </ul> </li> <li>• Attendance at the majority of nets will be required to be <i>on the water</i>. The exceptions will be barramundi set nets.</li> </ul>	<p>Inconsistency of attendance requirements across net types was raised during stakeholder meetings. There is concern that unattended nets pose a potential risk to species of conservation interest and are a navigational hazard. The 400 m attendance rule for offshore set nets has been introduced (rather than the alternative of 100 m) to address concerns that being too close to such nets would pose a safety hazard if the boat and/or the net were to shift and become entangled. For small boat operators in the offshore set net fishery it is sometimes impossible to safely load both the entire catch and the net into the boat. The decision to allow a net of up to 600 m length in waters less than 20 m deep to be rendered inoperative is intended to allow for such situations. Fishers will then be able to take their catch up to 5 n-mile and return to retrieve the net within 6 hours.</p> <p>The N5 was introduced primarily for the take of barramundi between Baffle Creek and Kauri Creek. This area is currently also included in the N2 area. The N7 symbol provides for the use of nets that are included in the provisions for the N1.</p>	<p>Some commercial fishers have raised concerns that the introduction of attendance requirements on offshore nets will have a significant impact on their current operations. Continuing without attendance requirements is considered unacceptable given the potential ecological impacts that unattended nets may have. The current proposal is intended as a compromise to allow the fishery to continue to operate with a level of flexibility for smaller boat operators.</p>
<p><b>N5, N7 and N8 symbols:</b> Current arrangements for the N5 and N7 symbols involve a complex set of legislation that caters for a very small number of fishers in each fishery. There are currently no holders of an N8 symbol.</p>	<p>Reference to the current N5, N7 and N8 will be removed.</p>	<p>The N5 was introduced primarily for the take of barramundi between Baffle Creek and Kauri Creek. This area is currently also included in the N2 area. The N7 symbol provides for the use of nets that are included in the provisions for the N1.</p>	<p>There will be no effect on operators who currently have an N5 or N7 symbol, as these fishers will be issued with an N2 and N1 symbol respectively. Fishers likely to be affected have been consulted and raised no objections to the proposed change.</p>



Issue	Proposed Changes	Rationale	Impacts
<p><b>N1 symbol:</b> Current arrangements include a complex set of netting arrangements with different lengths and mesh sizes in different regions. Current regulations restrict flexibility and may not reflect current practice. There is a need to maintain differences between the N1 and N2 symbols to reduce the risk of expanding effort in the fishery through dual symbol holders selling off one of the symbols. There is a need to change the specifications of N1 nets to support the introduction of new symbols for tunnel netting and the use of 1200 m offshore nets.</p>	<p>A summary of proposed net specifications is presented in Table 7. Major changes include:</p> <ul style="list-style-type: none"> <li>• The introduction of a general purpose (GP) net throughout the fishery area. (The current prohibition on using this net in Hervey Bay will be removed).</li> <li>• Changes to attendance requirements.</li> <li>• Reducing the minimum mesh size of a GP net from 50 mm to 45 mm, with up to 200 m of 25 mm for use as a back net, and introducing a max mesh size of 162.5 mm.</li> <li>• Increasing the minimum mesh size for offshore nets in Hervey Bay to 100 mm.</li> <li>• Restricting the mesh size for offshore nets to 162.5 mm.</li> <li>• Restricting the overall length of offshore nets under an N1 to 600 m.</li> <li>• Removing the current 200 m restriction for offshore nets in Keppel Bay.</li> <li>• Removing current provisions for tunnel netting under the N1 to allow the introduction of a separate tunnel net fishery.</li> <li>• Removing the use of river set nets between Kauri and Baffle Creeks.</li> </ul>	<p>The introduction of a GP net and changes to attendance of offshore set nets are discussed previously in this table. The rationale for other changes are: A 45 mm minimum mesh size in a GP net will allow for regional differences in the ability to catch whiting. In cases where a back-net is used as an artificial shore a reduction in minimum mesh size will provide greater flexibility. This reduction in mesh size is considered appropriate given that the mesh size of bait nets that can be used in the same area under the N6 can be as small as 12 mm. The increase in minimum mesh size for offshore nets in Hervey Bay reflects current practice. The decrease in maximum mesh size for offshore and general purpose nets will provide greater protection for larger sharks. A mesh size of 162.5 mm will also support the introduction of a minimum legal size of grey mackerel to 60 cm (see bag &amp; size limits). Removing the 200 m restriction on offshore nets in Keppel Bay will increase consistency across the fishery. It is necessary to remove the provision to use 1200 m long offshore nets to support the introduction of a net fishery targeting shark and other species (see N4 symbol below). The creation of a separate tunnel net fishery (N10) is discussed later in this table. Provisions for the use of river set nets under N1 were previously duplicated from the N2 provisions, however barramundi cannot be retained under an N1.</p>	<p>No negative impacts are foreseen for the majority of the proposals (the impact of attendance requirements are discussed previously). The potentially negative impacts relate primarily to the proposal to develop a separate 1200 m offshore gillnet fishery to target shark and other species. No change is proposed to the current licence fee so there are no direct financial impacts from the proposal. While access to 1200 m offshore nets and tunnel nets will be removed, all fishers will be provided an opportunity to apply to obtain the new symbols that relate to these fisheries, as is discussed in this table.</p>

Issue	Proposed Changes	Rationale	Impacts															
<p><b>N2 symbol:</b> Greater flexibility is sought for barramundi fishing.</p> <p>Currently N2 fishers can use a maximum of six nets in rivers and creeks (360 m total length, mesh size 150–245 mm) and six nets on the foreshore north of Cape Flattery (600 m total).</p> <p>South of Cape Flattery a maximum of three nets can be used in rivers and creeks (360 m total) with three nets on the foreshore (600 m total down to Baffle Creek) if attendance requirements can be met.</p>	<p>A summary of proposed net specifications is presented in Table 7. Major changes include:</p> <ul style="list-style-type: none"> <li>The following schedule of river and nearshore nets is proposed:</li> </ul> <table border="1" data-bbox="359 1086 662 1467"> <thead> <tr> <th>River nets</th> <th>Total length</th> <th>Near-shore nets</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>360 m</td> <td>3</td> </tr> <tr> <td>4</td> <td>320 m</td> <td>0</td> </tr> <tr> <td>5</td> <td>280 m</td> <td>0</td> </tr> <tr> <td>6</td> <td>240 m</td> <td>0</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>The use of one 120 m long 125 mm mesh river set net from midday 1 April to midday 30 September each year to take salmon. This net will count as one river set net in the above table with the standard attendance requirement.</li> <li>Removing provisions for the use of offshore set and drift nets under an N2.</li> </ul>	River nets	Total length	Near-shore nets	3	360 m	3	4	320 m	0	5	280 m	0	6	240 m	0	<p>Fishers have requested greater flexibility in the configuration of river and foreshore set nets that can be used south of Cape Flattery.</p> <p>The use of a salmon set net would provide a means of supplying markets with fresh, value priced local fish at a time when barramundi catches are low.</p> <p>Fishers have indicated that many areas outside of rivers and creeks where they once fished for salmon are now closed to netting through marine parks zoning.</p> <p>Concerns have been raised regarding the use of a salmon set net in rivers and creeks in winter because of potential impacts on barramundi.</p> <p>It should be noted that barramundi are less active at this time of year, and that 100 mm mesh nets can already be used in near-shore waters throughout the year. By-catch of undersized barramundi has not been reported as a significant issue in these nets.</p> <p>Offshore set and drift nets have been removed as barramundi are generally not targeted using these nets, and to maintain differences between activities that can be undertaken with the N1 and N2 symbols.</p>	<p>The proposal will provide greater flexibility for commercial net fishers targeting barramundi and salmon in rivers and creeks. No negative impacts on commercial net fishers are foreseen.</p> <p>Potential impacts of allowing more nets to be used in rivers will be balanced by a reduction in the overall length of net that can be used, and prohibiting the use of near-shore set nets if more than three river set nets are in use.</p>
River nets	Total length	Near-shore nets																
3	360 m	3																
4	320 m	0																
5	280 m	0																
6	240 m	0																

Issue	Proposed Changes	Rationale	Impacts
<p><b>New N4 Symbol (1200 m offshore drift and set nets):</b> There is a need to restrict access to the use of 1200 m long offshore nets in waters greater than 20 m deep to support the development of a mixed fish net fishery in offshore waters, primarily targeting shark and grey mackerel.</p>	<p>A new fishery (N4) will be created to provide access to these larger nets. Up to 25 N4 symbols will be issued, conditional on the surrender of two net symbols, (either N1 or N2).</p> <p>The southern boundary on the use of these nets will be moved to Double Island Point rather than Cape Moreton.</p> <p>The N4 symbol will also allow the use of a GP net and 600 m offshore nets as under the N1.</p>	<p>The introduction of a separate N4 fishery acknowledges that relatively small numbers of net fishers take a large proportion of the targeted catch of sharks.</p> <p>Potential expansion in this fishery needs to be prevented to ensure the sustainability of shark resources. Access to the new fishery will be through application only, so any current N1 holder will have the ability to apply for access to the N4 fishery.</p> <p>The number of symbols issued will be capped at 25 to reflect past levels of participation in the major target fishery for sharks.</p> <p>While a fisher will be required to surrender two netting symbols, either N1 or N2, the N4 will allow the use of all net configurations that will be provided for under an N1. There is no obligation to surrender an N2, this is simply provided as an option should a fisher be unwilling or unable to purchase an additional N1 for surrender.</p> <p>Further detail is presented in the section of this RIS on 'sharks and rays'.</p> <p>Moving the boundary for the use of 1200 m nets is consistent with the current extent of the fishery. Additionally, there is a prohibition on the use of offshore set and drift nets between Double Island Point and Cape Moreton which already limits the use of these nets south of Double Island Point.</p>	<p>Following the introduction of the N4, fishers operating under an N1 will no longer be able to use 1200 m of net. It is unlikely that this will impact on a significant number of N1 fishers, as it is more common that they use shorter nets.</p> <p>The introduction of a new N4 symbol, will impact on a small number of offshore net fishers who currently use 1200 m of net. The requirement to surrender two net symbols in order to obtain an N4 will be balanced by fishers receiving more exclusive access to a valuable component of the fishery.</p> <p>Most of these operators have invested significantly in gear and boats in order to access the area of the fishery and will end up with greater security of access and a more valuable property right in an N4 symbol.</p>

Issue	Proposed Changes	Rationale	Impacts
<p><b>Tunnel netting: (New N10 symbol)</b></p> <p>Tunnel netting has drawn criticism due to concerns that it may have an unsustainable impact on fisheries resources if access is not limited.</p> <p>While there is a need to limit potential growth in the fishery, a number of concerns also relate to perceptions of current impacts and the highly visual nature of tunnel nets.</p>	<p>Provisions relating to the use of tunnel nets under N1 will be removed.</p> <p>A separate limited entry tunnel net fishery will be developed to remove the potential for an expansion of effort to ensure sustainability.</p> <p>Fishers will be required to surrender an N1 symbol and demonstrate an historical financial reliance on tunnel netting to receive an N10.</p> <p>A code of conduct will be developed to cover the use of sorting trays, by-catch reduction devices and resting fishing areas. The code may in the future be linked to licences and operators audited.</p> <p>Tunnel netting will only be permitted at night from Wynnum Creek to Point Talburpin, on the western side of Moreton Bay.</p> <p>A total closure to all netting will be introduced on Moreton Island between Reeders Point and oyster area 64.</p> <p>An annual licence fee of \$1100 will apply.</p>	<p>While current levels of tunnel netting are regarded as sustainable it is important to address latent effort in the fishery. Tunnel netting represents an efficient and clean fishing methodology.</p> <p>Fishers will be required to surrender an N1 symbol to prevent an increase in overall number of netting entitlements.</p> <p>A code of conduct will address other issues to decrease the impact of tunnel netting on non-target fish that are not suited to a regulatory approach</p> <p>Prohibiting day time fishing on the western side of Moreton Bay will address issues regarding the visual amenity impact of tunnel netting in the bay.</p> <p>A tunnel netting closure at the southern end of Moreton Island will address catch sharing issues between commercial and recreational fishers.</p>	<p>Access to the new tunnel net fishery will be based on previous history in the fishery.</p> <p>It is intended that the development of the new fishery will therefore have limited impact on current tunnel netting operations.</p> <p>While fishers will only be able to access the tunnel net fishery if they surrender an N1 this will have no practical impact as the N10 symbol will allow the use of other nets used under the N1 (i.e. GP and offshore set and drift nets).</p> <p>Because of the more exclusive nature of the access right associated with the tunnel net fishery a higher fee will be imposed than the N1. A fee of A\$1100 is proposed.</p> <p>Proposals to reduce visual impact and implement a closure to net fishing have been proposed by tunnel net fishers to address public perceptions over the current impact of tunnel netting.</p>
<p><b>Bycatch reduction devices (BRDs)</b></p>	<p>It is proposed to allow fishers to use a recognised BRD which is outlined in a guideline approved by the Chief Executive.</p>	<p>Some fishers have requested flexibility in the types of nets or other devices that can be used to reduce bycatch.</p>	<p>No negative impact from this proposal is foreseen.</p>

Issue	Proposed Changes	Rationale	Impacts
<p><b>N6 symbol:</b> Concerns have been raised that the majority of the 1600 existing N6 licences are not active and, if they were to be activated, this would result in over exploitation of the fishery.</p> <p>N6 nets are used to take a variety of species for both bait and human consumption; therefore the description of these nets as 'bait nets' is not accurate.</p> <p>While the original intent was that these nets be used for the collection of bait for an individual's own use, there is no restriction on using these nets as a commercial apparatus in their own right.</p>	<p>Fishers with a history of taking fish commercially under the N6 will be able to retain the symbol.</p> <p>All fishers with a line or crab fishery symbol will be given a right to use bait nets to collect bait for their own use as a general provision under regulation.</p> <p>An annual licence fee of \$150 will apply to the N6 symbol.</p>	<p>There are concerns about the expanding use of N6 symbols. No concerns have been raised over fishers taking bait for their personal use, but there were concerns about marketing product taken under an N6 such as whiting and gar.</p> <p>Crab and line symbol holders are the only commercial fishers with the need to collect bait for their own use.</p> <p>Marine park conservation yellow zones currently allow bait netting. This was done on the basis that it was used for personal use, not for commercial sale. As a consequence the Great Barrier Reef Marine Park Authority and the Environmental Protection Agency are seeking to have the latent effort issue addressed.</p> <p>There is currently no fee on N6 symbols, on the basis that use of N6 bait nets is linked to the rights of a commercial fisher to take bait for their own use. It is inconsistent with the rights-based licensing model if fishers are not paying for an access right for nets being used for commercial purposes in their own right.</p>	<p>No negative impacts are foreseen as fishers with a history of taking commercial quantities of fish under an N6 will retain the right to do so. They will however have to pay an annual licence fee of \$150.</p> <p>There will be a cost to government in making administrative decisions on the 1600 licences that currently have an N6 symbol.</p>
<p><b>Definition of a waterway:</b> The current definition is unclear regarding netting activities at low water in a delta river mouth when a waterway is closed to net fishing.</p>	<p>The definition of closed waterways will be amended to exclude waters downstream of the mouth at high water.</p>	<p>It is anticipated that the proposal will provide greater clarity in areas subject to accretion and erosion. It is intended that the use of nets in rivers and creeks will still apply to the river channel below the river mouth; closures would apply from the high water mark up.</p>	<p>No negative impacts are foreseen from the proposal.</p> <p>It is anticipated that areas may be identified where the proposal still does not provide enough clarity due to difficulties in determining the exact location of a river mouth. In these cases, the mouth may need to be defined through navigation marks.</p>

Issue	Proposed Changes	Rationale	Impacts
<p><b>Use of more than one net:</b> It is currently unclear whether the prohibition on using two types of fishing apparatus at the same time (with the exception of crab apparatus) prohibits the use of two or more nets under one or more net symbol.</p>	<p>The legislation will clarify that only one net can be used at a time unless otherwise specified (e.g. more than one barramundi set net may be used under N2). This will include different nets under one or more fishery symbols, but will not prevent a fisher from breaking a net into two or more pieces (e.g. removing a bunt or pocket) to facilitate the handling of fish once they have been taken in a net.</p>	<p>The prohibition on using more than one type of netting apparatus at a time is an important tool in ensuring that fishing effort does not expand and remains within sustainable limits.</p>	<p>Few negative impacts are foreseen from the proposal. It is generally accepted that the current legislation is intended to prohibit the use of more than one net; the proposal will simply clarify this issue.</p>
<p><b>Other restrictions on use of nets:</b> Commercial fishers have requested the removal of the current prohibition on putting a net into a boat with unregulated fish still in the net (i.e. 'bagging on'). The prohibition on using nets within marked navigation channels is inconsistent, and the prohibition on blocking more than half a waterway is unclear. The prohibition on using nets near jetties and wharfs is inconsistent.</p>	<p>The following changes are proposed:</p> <ul style="list-style-type: none"> <li>The legislation will include examples of the types of <i>reasonable excuse</i> under which the prohibition on 'bagging on' does not apply.</li> <li>Using any net in a marked navigation channel (i.e. between sequential lateral marks) will be prohibited.</li> <li>Using fishing apparatus across a waterway in a way that makes more than a half of its width impassable to a boat or fish will be clarified to mean <i>at any stage of the tide during which the apparatus is used</i>.</li> <li>The use of any net within 200 m of a public jetty or wharf (except commercial bait nets and set pocket nets) will be prohibited.</li> </ul>	<p>Current legislative provisions allow for 'bagging on' where the fisher has a reasonable excuse. Possible examples of reasonable excuse are being sought through consultation. The proposal will provide greater consistency and clarity. The use of a common distance is consistent with a less prescriptive approach on how a net may be used.</p>	<p>No negative impacts are foreseen from clarifying the circumstances under which a net may be 'bagged on'. No negative impacts are foreseen from clarifying the use of nets in marked navigation channels and to block waterways. No negative impacts are foreseen from having a common distance of 200 m from a public wharf.</p>
<p><b>Marking nets:</b> The current wording of net marking requirements could be interpreted as preventing a fisher from using additional floats and lights. Fishers should be given greater flexibility to increase the visibility of their nets. There is an inconsistent requirement to have lights on all nets at night. The use of floats on bottom set nets is impossible.</p>	<p>Greater flexibility in marking nets will be provided through the inclusion of the term <i>at least</i> when requirements are specified. The requirements to have nets marked will be extended to all mesh nets marked at night including tunnel nets. The requirement for six floats along a bottom set net will be removed.</p>	<p>Improved safety with increased discretion for fishers to make nets as visible as possible.</p>	<p>No negative impacts are foreseen.</p>

Table 7: Proposed changes to netting symbol types and related net specifications

N1 Symbol	Area		
	Northern extent of fishery to Baffle Creek	Baffle Creek – NSW border	Hervey Bay offshore <sup>1</sup>
<b>General purpose net in rivers and creeks</b>	Max 400 m x 4.5–162.55 mm (<115 mm in barramundi closure) Cannot be fixed 100 m attendance <i>on the water</i>	400 m x 4.5–162.5 mm May be fixed one end 100 m attendance on the water	Not applicable (i.e. as per Baffle Creek – NSW border)
<b>General purpose net in near-shore<sup>2</sup> and offshore<sup>3</sup> waters</b>	Max 400 m x 4.5–162.55 mm (100 m may be 2.5 mm—primarily for use as a back-net) 100 m attendance <i>on the water</i>  Only one end of a general purpose net may be fixed in offshore waters throughout the fishery. Both ends of a general purpose net may be fixed for two hours if both ends are in near-shore waters throughout the fishery.	Max 800 m x 4.5–162.5 mm (200 m of 2.5 mm) 100 m attendance on the water	Not applicable
<b>Offshore set and drift net</b>	Max 600 m x 162.5 mm throughout the fishery with the exception of the Hervey Bay Offshore Area. Both ends may be fixed, or the net may be allowed to drift freely. 100 m attendance if a net is allowed to drift freely. 400 m attendance generally at offshore set mesh nets; 5 nautical miles (nm) if rendered inoperable <sup>4</sup> and AIVR notification given.		Max 600 m x 100–162.5 mm 100 m attendance <i>on the water</i>

- 1 Hervey Bay Offshore Area will be extended to include Platypus Bay, i.e. waters inside a line from the southern bank of Baffle Creek due east to longitude 153°; south to a point due west of Rooney Point; east to Rooney Point; along the shore of Fraser Island to Sandy Point; to Dayman Point on the mainland and then along the mainland shore to Baffle Creek.
- 2 Near-shore waters will be defined as waters that are less than 2 m deep at any stage of the tide.
- 3 Offshore waters will be defined as waters that are 2 m deep or greater at all stages of the tide.
- 4 A guideline will be developed on how a net can be rendered inoperable by lifting the lead line to the float line.

N2 Symbol		Area	
<b>River and Creek set nets</b>	<b>North of Cape Flattery</b>	<p>Max six nets Max 360 m total Max 120 m x 150–215 mm Attendance 800 m or between the first and last net Maximum spread 1 nm</p>	<p><b>Cape Flattery – Kauri Creek</b></p> <p>Attendance 800 m or between the first and last net Maximum spread 1 nm</p> <p>Flexible arrangements relating to foreshore and river set nets proposed to apply as follows:</p> <p>Up to three river set nets used: Max 360 m total Any one net: Max 120 m x 150–215 mm From 1 May–31 August: one net may be 120 m x 125 mm</p> <p>Four – six river set nets used: Max 320 m total if four nets used Max 280 m total if five nets used Max 240 m total if six nets used Any one net: Max 120 m x 150–215 mm</p>
	<b>Near-shore set nets</b>	<p>Max six nets Max 600 m total Max 120 m x 150–215 mm Cannot be used in the barramundi closed season</p>	<p>A set mesh net cannot be used in a river or creek during the barramundi closed season.</p> <p>No near-shore nets will be able to be set if four or more river set nets are used</p>
N4 Symbol		Area	
<b>General purpose net</b>	<b>Northern extent of Fishery – Double Island Point</b>	<p>As for N1 throughout the fishery area</p>	<p><b>Double Island Point – NSW border</b></p> <p>Not applicable</p>
	<b>Offshore set and drift net</b>	<p>As for N1 throughout the fishery area in water less than 20 m deep</p> <p>In water greater than 20 m deep: 1200 m x 150–162.5 mm Both ends may be fixed 400 m attendance <i>on the water</i>—no exceptions.</p>	<p>As for N1</p> <p>Not applicable</p>



N10 Symbol		Area	
<b>Northern extent of Fishery – NSW border</b>			
<b>General purpose net</b>	As for N1 throughout the fishery area		
<b>Offshore set and drift net</b>	As for N1 throughout the fishery area		
<b>Tunnel nets</b>	<b>Moreton Bay tunnel net area<sup>5</sup></b>	<b>Tin Can Bay tunnel net area</b>	<b>Great Sandy tunnel net area</b>
	1700 m net, tunnel 30–200 m throughout the fishery areas 400 m of net either side at least 25 mm mesh, at least 44 mm in the rest of the net, not more than 50 mm mesh in tunnel		

5 Moreton Bay tunnel net area will maintain current arrangements, with the exception of a closure at the southern end of Moreton Island and a prohibition on the use of tunnel nets during the day on the Western side of the bay. Other tunnel net areas will maintain current arrangements outlined in the regulation.

N6 Symbol		Area		
<b>Cast net</b>	<b>North of Baffle Creek</b>	<b>South of Baffle Creek (other than):</b>	<b>Moreton Bay, Hervey Bay–Tin Can Bay</b>	<b>Ocean Beach (April–August)</b>
	3.7 m drop not more than 28 mm in all waters throughout the fishery		Not applicable	Not applicable
<b>River and creek bait net</b>	200 m x 12–45 mm		Not applicable	Not applicable
	400 m x 12–45 mm		400 m x 12–45 mm	200 m x 12–25 mm

## Closures

### Did you know?

Barramundi aggregate in river mouths to spawn from November–February. A number of closures are in place around river mouths to minimise the incidental catch of barramundi during this time.

### Background

There are currently more than 150 individual closures to commercial fishing and approximately 60 to recreational fishing in the East Coast Inshore Fin Fish Fishery. Closures can either:

- protect the sustainability of fish stocks
- allocate access to fisheries resources within or between user groups.

There are a number of closures already in place that help protect inshore fin fish stocks—including spawning closures for tailor and barramundi.

Closures were also introduced to reallocate fishery resources for social and economic reasons. Examples of such closures include weekend closures and dedicated recreational fishing areas such as Pumicestone Passage. At most public meetings held in 2006 there were calls to make additional areas exclusive access to one sector or another. In many cases the public also expressed a desire to find local solutions for local issues. Respondents to the questionnaire supported this suggestion.

The closures working group reviewed those closures already in place for sustainability reasons and considered proposals for new sustainability closures.

They also considered requests to designate exclusive access to some areas. The working group and MAC agreed that these requests should be addressed through a separate regional consultation process in Stage 2. The process will involve establishing a community panel to provide advice on local issues and recommend possible solutions to DPI&F (see: Stage two: local solutions to local problems).

### Key changes

The key changes proposed are to:

- Close Eurimbula Creek to all forms of fishing and create a fish sanctuary. The creek is adjacent to a national park (see Figure 5) and is already closed to commercial net fishing and the take of mud crabs.
- Move the Burdekin River closure boundary to remove uncertainty.
- Make the times for weekend closures consistent.
- Introduce additional netting closures proposed by the commercial fishing industry.

### Major impacts

There are unlikely to be any significant impacts as a result of these proposals. Eurimbula Creek is already closed to the take of mud crabs and commercial fishing. The proposal may impact on local recreational fishers who fish in the creek; however, there are other accessible fishing areas nearby. The other proposals are minor changes to current closures. The proposed closure in Platypus Bay is likely to have minimal impact because most fishers who operate in the area do not use offshore set nets.

## Costs and benefits of alternatives

DPI&F considered addressing resource allocation closures in this first stage, but recognised that this would:

- Significantly extend the time taken to develop and implement a management plan.
- Delay significant sustainability reforms necessary for shark and other species.
- Result in significant conflict between fishers and potentially undermine support for the management plan.

Consequently, only those closures related to the sustainability of the fishery were considered.

## Table of proposed changes

Table 8 outlines the proposed changes to fisheries closures. Read the table from left to right to follow the decision making process and see the impact of the final proposal.

Table 8: Proposed changes to closures

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Eurimbula Creek	<p>Option 1 Close Eurimbula Creek.</p> <p>Option 2 Continue to allow recreational fishing in Eurimbula Creek.</p>	<p>The closures working group acknowledged that the creek was already closed to commercial fishing and the take of mud crab.</p> <p>The working group also recognised that the creek is adjacent to a declared National Park.</p> <p>The working group recommended that the MAC consider closing Eurimbula Creek.</p>	<p>The MAC was unsure why a mud crab closure was originally put in place, but recognised that by adding a closure to recreational line fishing, the creek could be made a fish sanctuary.</p> <p>The MAC felt that positive baseline information can be collected from fish sanctuaries which are less common in rivers and creeks south of the Great Barrier Reef.</p> <p>From an enforcement perspective, QBFP would prefer a total closure, as fishers are currently allowed to use crab pots, but cannot retain mud crabs specifically.</p> <p>The MAC supported Eurimbula Creek becoming a fish sanctuary by closing it to all forms of fishing.</p>	<p>DPI&amp;F supports the recommendation to close Eurimbula Creek to all forms of fishing.</p> <p>The Crab Management Advisory Committee supports the proposal which will also close the creek to the take of blue swimmer crab.</p>	<p>The closure of the creek to all forms of fishing will primarily affect recreational fishers .</p> <p>The effect is likely to be minimal as there are other accessible fishing spots nearby.</p> <p>The take of blue swimmer crab is likely to be negligible in the creek, having very little impact on commercial fishers.</p>
Burdekin River	<p>Option1 Retain current closure description.</p> <p>Option 2 Amend closure description.</p>	<p>The wording of the Burdekin River Closure does not reflect the current location of the FB boards and may not reflect the original intent of the closure. The area has undergone significant physical change over time and it is proposed to move the boundary to a more physically stable location which is described by a line of longitude. The use of FB boards in this location is not practical given the dynamic nature of the river.</p>	<p>The MAC did not consider the issue in any detail.</p>	<p>DPI&amp;F supports the changes to the closure description to clarify the closure and remove confusion (see Figure 6).</p>	<p>A negligible impact is likely.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Consistency between weekend closures	<p>Option 1 Maintain the Great Sandy Strait weekend closure as is.</p> <p>Option 2 Amend Great Sandy Strait weekend closure to align with the rest of the east coast.</p>	<p>The weekend closure in the Great Sandy Strait currently runs from 2pm Friday to 2pm Sunday from 1 February to 30 November.</p> <p>This is different to all other weekend closures which operate between 6pm Friday and 6pm Sunday.</p> <p>The working group supported consistency between weekend closures.</p>	<p>The MAC did not consider the issue in any detail.</p>	<p>DPI&amp;F supports an amendment to the Great Sandy Strait weekend closure to align it with the rest of the east coast (6pm Friday to 6pm Sunday).</p>	<p>The impact is likely to be negligible.</p>
Platypus Bay	<p>Option 1 Continue to allow the use of offshore set nets in Platypus Bay.</p> <p>Option 2 Prohibit the use of offshore set nets in Platypus Bay.</p>	<p>As part of the review of netting arrangements industry members proposed closing Platypus Bay to the use of offshore set nets. The proposed closure would include all waters east of a line from Rooney Point to Moon Point from midday 1 August to midday 31 October annually.</p> <p>This closure is intended to minimise the risk of interaction between these nets and migrating humpback whales, while still allowing the use of other nets (e.g. a general purpose net).</p>	<p>The MAC did not consider the issue in any detail.</p>	<p>DPI&amp;F supports the proposal to minimise the risk of offshore set nets for migrating whales, while still allowing the use of a general purpose net. Because industry supports this proposal it could be implemented as a code of practice rather than a legislated closure</p>	<p>The impact of this closure is likely to be low, given that most fishers who operate in the area do not use offshore set nets.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Southern Moreton Island	<p>Option 1 Do not introduce a new closure.</p> <p>Option 2 Introduce a closure along southern Moreton Island.</p>	<p>When discussing the establishment of a separate tunnel net fishery with industry members, industry suggested closing southern Moreton Island to tunnel netting from Reedeers Point to Oyster Area 64 (see Figure 7).</p> <p>This is designed to further protect an important habitat area where fish congregate and disperse, and also allow for more appropriate catch sharing with the recreational sector.</p>	<p>The MAC supported a tunnel netting closure on Moreton Island between Reedeers point and Oyster Area 64.</p>	<p>DPI&amp;F supports the proposed closure, which will provide additional protection to fin fish in the area.</p>	<p>Industry is supportive of the closure as a way of minimising conflict with other fishers. By addressing public concerns about netting in the area, industry is likely to benefit from increased public support.</p>
<p>Rodds Harbour commercial and recreational closures</p> <p>The current commercial closure in Rodds Harbour includes waterways joining it within the following boundary:</p> <ul style="list-style-type: none"> <li>• from the eastern tip of Blackney Point to the eastern tip of Bird Island</li> <li>• to the western bank of Mort Creek, Rodds Peninsula</li> <li>• along the shore to Blackney Point.</li> </ul> <p>On the other hand, the recreational closure only includes waters within that boundary, and not waterways joining it. This was most likely a drafting error when the legislation was originally introduced, but has caused confusion between fishers over the years.</p>	<p>Option 1 Leave the commercial and recreational closures as they are.</p> <p>Option 2 Amend the recreational closure to be consistent with the commercial closure.</p>	<p>Not considered</p>	<p>Not considered</p>	<p>DPI&amp;F proposes amending the recreational fishing closure to include waterways joining it. This will make it consistent with the commercial closure and remove any uncertainty. It will also improve enforceability of the closures, which were introduced to prevent local black market trade of prawns.</p>	<p>The proposal will affect recreational fishers who can currently fish in some creeks adjoining the closure area.</p>

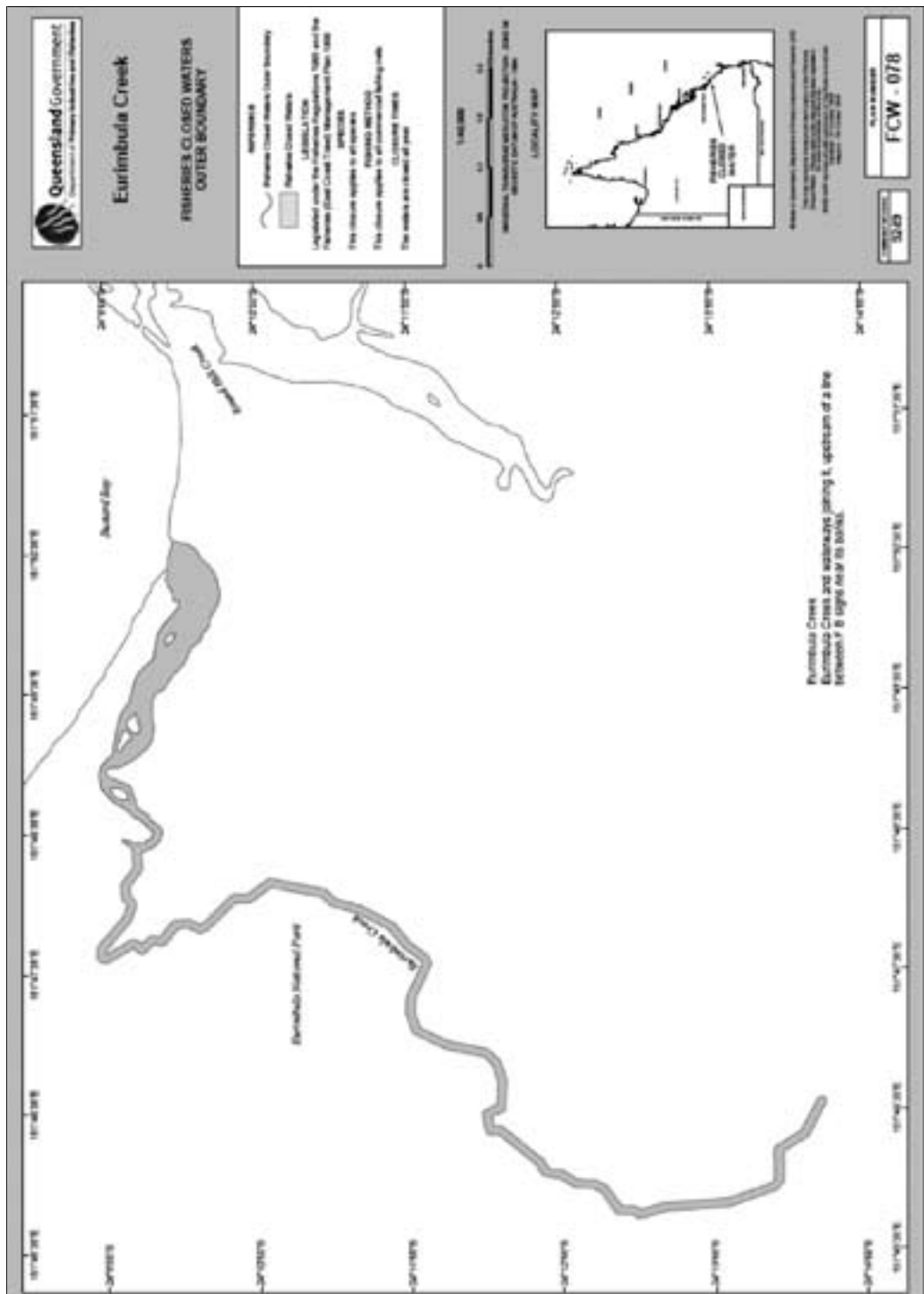


Figure 5: Current closure in Eurimbula Creek

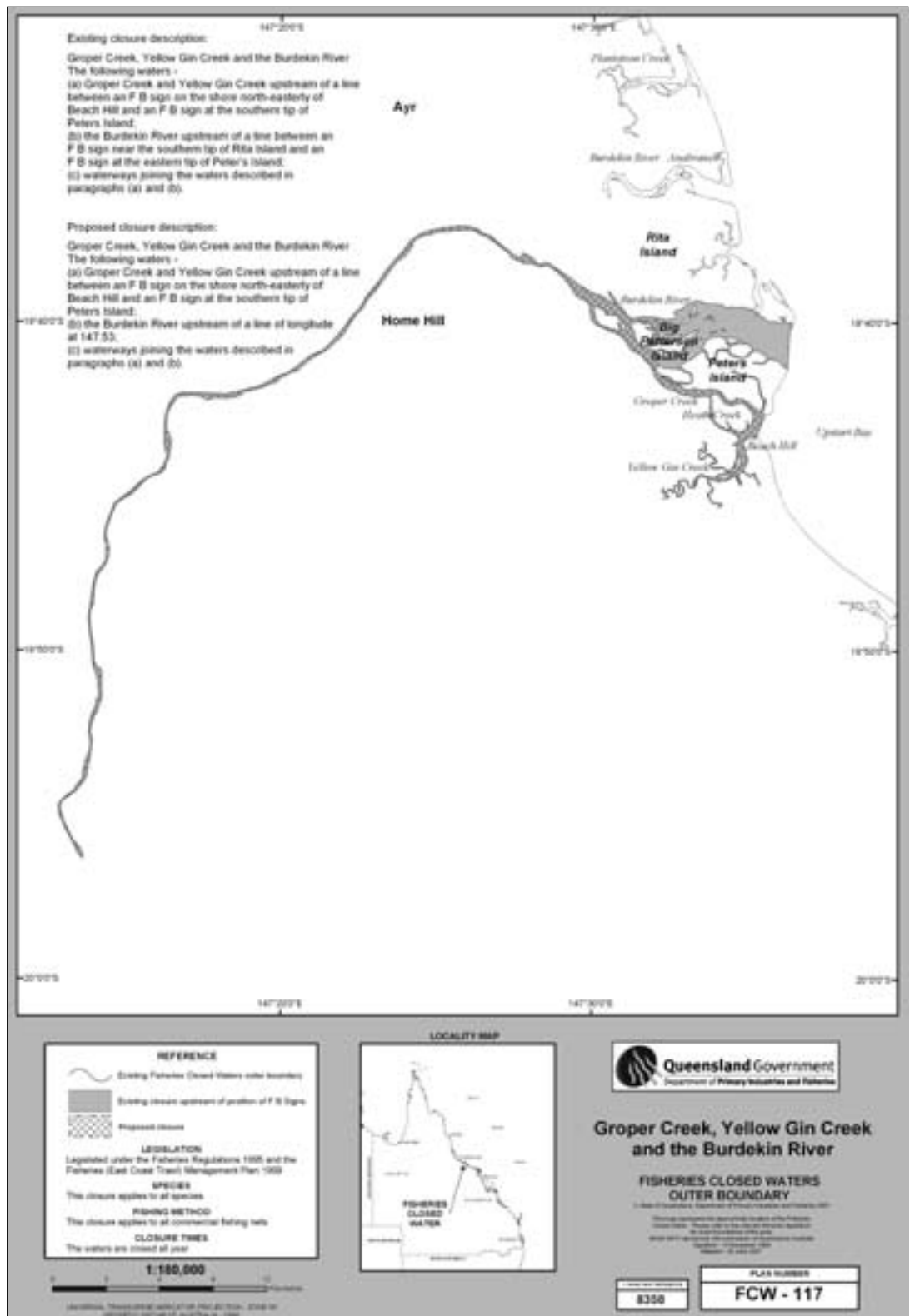


Figure 6: Proposed changes to the Burdekin River closure



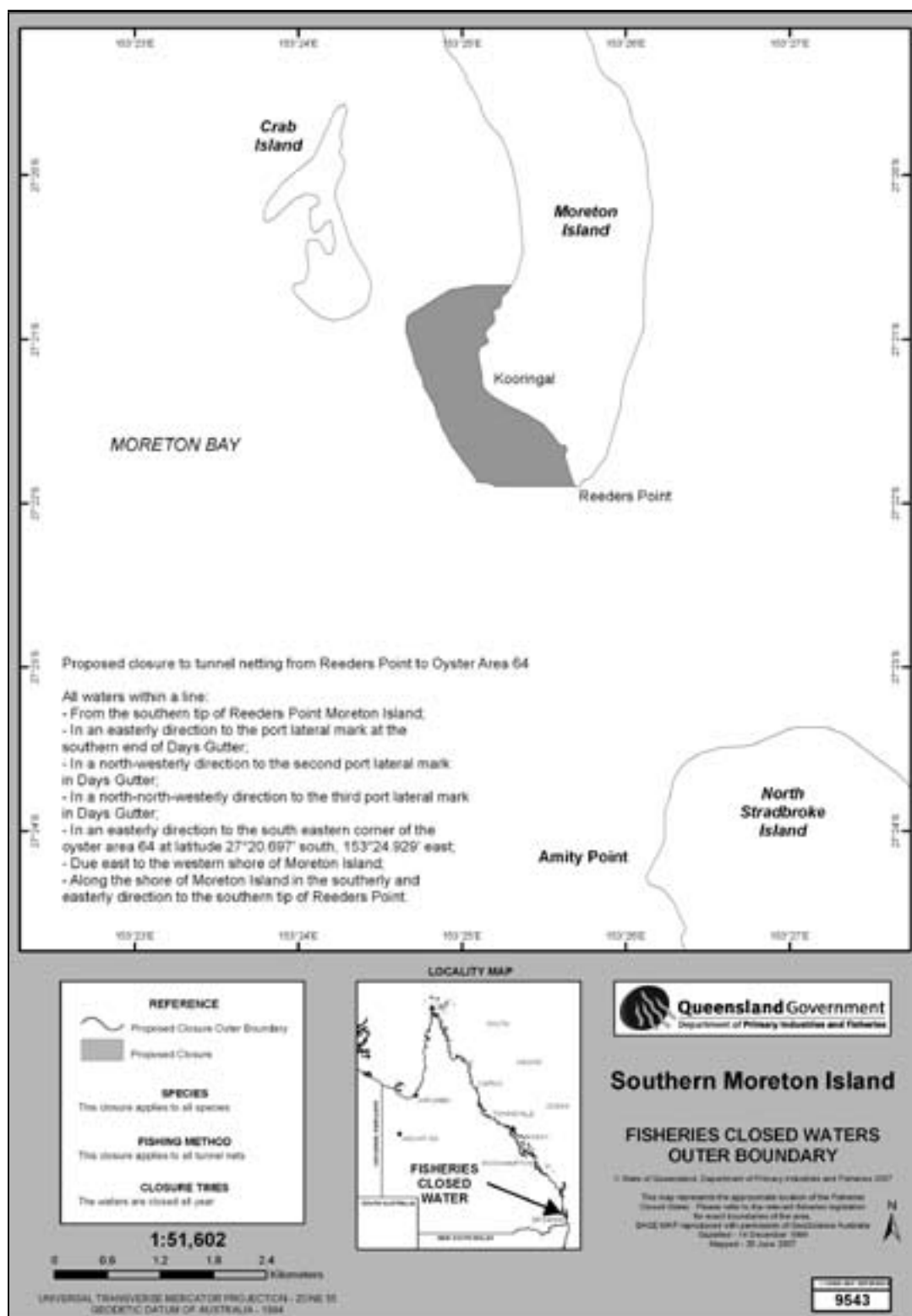


Figure 7: Southern Moreton Island proposed closure

## Other issues

### Did you know?

Recreational fishers often take more tailor than commercial fishers. Estimates of the recreational catch vary, however the catch is thought to be 350–400 tonnes a year, while the commercial sector has a Total Allowable Catch of 120 tonnes

## Background

A number of issues raised at the stakeholder meetings and through the questionnaire did not fall within the scope of any of the working groups. The issues included arrangements for spotted mackerel and tailor, incidental limits for reef fish and Spanish mackerel, and some recreational fishing apparatus restrictions. The Inshore Fin Fish MAC considered these issues and provided advice to DPI&F.

In the East Coast Inshore Fin Fish Fishery, two species are managed through commercial Total Allowable Catches (TAC)—spotted mackerel (140 tonne TAC) and tailor (120 tonne TAC). Since their introduction, the TACs have never been reached. Spotted mackerel catches in particular have never come close to reaching the TAC. The highest catch recorded was less than half the TAC (68 tonnes). The TAC for tailor better reflects the level of catch, however the highest catch recorded (91 tonnes) is still significantly below the TAC.

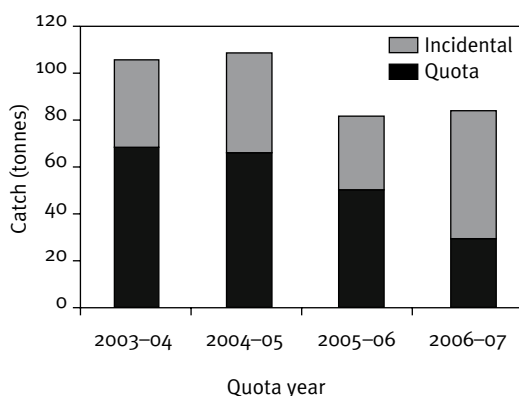


Figure 8: Spotted mackerel commercial catch

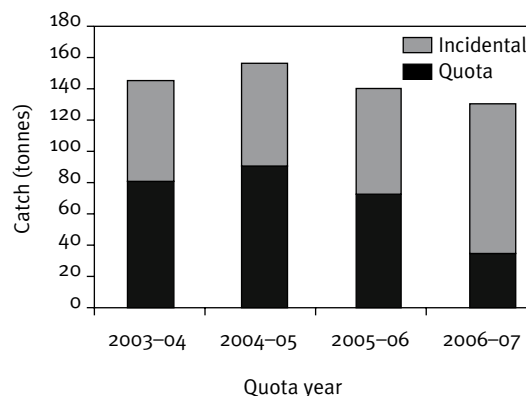


Figure 9: Tailor commercial catch

The underutilisation of the TAC in the spotted mackerel fishery is effectively a result of the decision in 2002–03 to make the fishery line-only. Under current arrangements, line fishers are only permitted to be in-possession of a maximum of 150 spotted mackerel. This limit was originally introduced to share the quota between northern and southern operators. There is also an in-possession limit of 15 fish when netting for other species that allows fishers to take a small number of fish when caught accidentally when targeting other species. The declining catch of spotted mackerel over recent years is not thought to be a result of declining abundance. Rather, fishers are physically unable to catch as many fish by line compared to net.

The undercatch of quota for tailor is thought to be related to the reporting system, rather than to the actual catch. Under current arrangements, fishers only have to report catch of tailor against the TAC when they catch more than 100 kg. Over recent years, increasing numbers of inshore net fishers have landed tailor daily, but not in quantities greater than 100 kg. Consequently, the catch taken incidentally is almost equal to the amount of tailor reported against the TAC.

## Key changes

- Remove the current 150 fish in-possession limit for spotted mackerel line fishers in recognition that the quota is not met. In addition, it is proposed to increase the limit on the number of spotted mackerel that can be retained as a consequence of being incidentally caught in nets from 15 to 50. The commercial TAC of 140 tonnes will be maintained.
- Reduce the tailor incidental limit from 100 kg to 30 kg to better reflect the actual amount of tailor taken under the TAC. The commercial TAC of 120 tonnes will be maintained.
- Allow fishers to retain up to the recreational in-possession limit of coral reef fin fish and Spanish mackerel incidentally caught in nets. Reef Quota (RQ) and Spanish mackerel (SM) quota holders would be required to report these catches against their quota and all net fishers would be required to treat such fish as if they were taken for personal use (i.e. fin-clipped).

## Major impacts

The proposed changes to spotted mackerel arrangements are designed to give greater flexibility to spotted mackerel fishers to catch up to the quota and should result in a positive impact.

The recreational sector may object to the proposal to increase the incidental net caught limit on the grounds that it changes the allocation arrangements and a belief that it may undermine the integrity of the ring-netting prohibition for spotted mackerel. This is unlikely to be the case. The proposal simply allows fishers who incidentally take spotted mackerel in other mesh nets, while targeting other species, to retain those fish. This will also prevent the discard of dead fish. In addition, all catch will be recorded against the TAC to ensure catches are sustainable.

## Costs and benefits of alternatives

At a number of stakeholder meetings, commercial fishers requested the removal of the prohibition on netting of spotted mackerel. DPI&F, in consultation with the MAC, considered this alternative, but recognised that the recreational sector would strongly oppose the proposal. The costs to government of responding to this strong opposition would be high.

## Table of proposed changes

Table 9 outlines the proposed changes to other inshore fisheries issues. Read the table from left to right to follow the decision making process and see the impact of the final proposal.

Table 9: Proposed changes to other issues

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
Commercial fishing of spotted mackerel	<p>Option 1 Maintain the current ban on ring netting and the commercial in-possession limit.</p> <p>Option 2 Increase the in possession limit of 150 fish.</p> <p>Option 3 Remove the in-possession limit in recognition of the TAC in place.</p> <p>Option 4 Increase the incidental net catch limit from 15 fish.</p> <p>Option 5 Remove the ban on ring netting.</p>	<p>The netting working group could not reach consensus on the proposal to increase the incidental net caught limit and felt it was a broader MAC issue.</p> <p>No other limits were considered by any of the working groups (i.e. the in-possession limit for line fishers).</p>	<p>The 150 in-possession limit was introduced when it was thought the TAC would be fully utilised and was designed to share the catch between northern and southern operators. The TAC is significantly under-utilised and it was recognised that the in-possession limit was an unnecessary restriction. The MAC recommended removing the 150 in-possession limit.</p> <p>In regard to the net incidental limit of 15, the MAC recommended that this be increased to avoid wastage of fish taken as by-catch while targeting other species.</p> <p>The MAC recommended increasing the incidental net catch to 50 fish. It was agreed that this limit would still prevent targeting, but would reduce some of the potential wastage.</p> <p>The MAC also acknowledged that the quota of 140 tonnes would still be in place and would include those fish taken incidentally in nets (where more than 15 are landed).</p>	<p>DPI&amp;F supports the recommendation to remove the 150 in-possession limit and increase the incidental net caught limit to 50.</p>	<p>The proposal will have a positive impact on the commercial net and line fishers. Commercial netters will still be prohibited from targeting spotted mackerel, but will be able to take more incidentally when targeting other species with a standard mesh net. Removal of the 150 in-possession limit will help ensure the quota is more fully utilised.</p>
Tailor incidental catch	<p>Option 1 Retain current 100 kg incidental limit.</p> <p>Option 2 Reduce limit to 30 kg (previous MAC recommendation)</p>	<p>Not considered</p>	<p>More tailor was reported as <i>incidental</i> catch in 2006–07 rather than against the TAC.</p> <p>The MAC has previously considered the incidental limit for tailor and suggested it be reduced to 30 kg.</p> <p>The original intention was that the majority of the catch would be reported against the TAC. At the time, it was believed that the incidental take was likely to be less than the 100 kg limit.</p> <p>The MAC supported the change, which effectively only changes the reporting of catch, not the TAC. The same total catch should still be reported.</p>	<p>DPI&amp;F supports the recommendation to reduce the incidental limit to 30 kg.</p>	<p>The proposal is unlikely to have any significant impact on commercial fishers.</p> <p>The proposal does not limit any access, but changes the reporting process to ensure the majority of catch is recorded against the TAC.</p>

Issue	Options	Working group recommendation	MAC recommendation	Final DPI&F proposal	Impacts
<p>Incidental net catch of coral reef fin fish and Spanish mackerel.</p>	<p>Option 1 Allow a small amount of coral reef fin fish or Spanish mackerel to be retained by net fishers. Option 2 Do not allow a small amount to be retained.</p>	<p>Not considered.</p>	<p>Reef MAC considered a request from Inshore MAC to allow net fishers to retain a small quantity of coral reef fin fish or Spanish mackerel if caught incidentally. Reef MAC supported an in-possession catch limit equal to the recreational in-possession limit being applied to all net fishing operations (including those of Reef Quota (RQ) and Spanish mackerel (SM) quota holders) taking incidental catches of Spanish mackerel and RQ species. The in-possession limit would apply to the fishing operation. Net fishers who hold quota would be required to report these catches against their quota and all net fishers would be required to treat such fish as if they were taken for personal use (i.e. fin-clipped and not sold). In addition, in order for fishers to record net caught fish against the quota, fishers will need to report before going fishing if they think there is potential to incidentally catch coral reef fin fish or Spanish mackerel.</p>	<p>DPI&amp;F supports the introduction of incidental limits for net fishers to reduce wastage but maintain the integrity of the quota systems.</p>	<p>The impacts of this proposal are likely to be low.</p>

## Impact on competition

Under National Competition Policy, legislation should not restrict competition unless it can be demonstrated that:

- the benefits of the restriction to the community as a whole outweigh the costs
- the objectives of the legislation can only be achieved by restricting competition.

Table 10 provides a summary of the proposals and their likely impact on competition. Where there are restrictions that result in impacts to competition, these were necessary to protect the sustainability of particular species or components of the fishery. There are a number of cases where the proposals result in removing barriers to entry or unnecessary restrictions, therefore improving competition.

Table 10: Summary of impacts on competition

Proposal	Reason for proposal	Impact on competition
New and amended size and bag limits	Size limits are one of the primary tools to protect the sustainability of individual inshore fin fish. Bag limits help prevent overfishing and also ensure fisheries resources are shared fairly.	Size limits apply to all commercial and recreational fishers. The use of extended bag limits for charter trips has been removed in recognition of the inequity between recreational fishers. This may impact on some charter businesses, but has been done to ensure sustainability and fair access.
Restrictions on the take of shark by commercial fishers	There are significant concerns about the long-term sustainability of the shark fishery on the east coast. It is proposed to establish two new symbols (the S and N4 symbols) to restrict access to the shark fishery and support its long-term sustainability.	<p>Those fishers who can demonstrate a catch of shark and are willing to pay an annual licence fee will be granted an S symbol. These criteria are not onerous and reflect the status quo. The impact on competition will be the reduced number of operators that will have access to the shark fishery. All other fishers will be restricted to an in-possession limit of 10 sharks or rays.</p> <p>However, the risk to sustainability of over 400 licence holders able to potentially target shark in significant quantities is extremely high. This restriction will help ensure the future sustainability of shark, and also give those S symbol holders greater certainty about the long term viability of the shark fishery.</p> <p>The establishment of an N4 fishery symbol acknowledges that there are a small number of people who fish in offshore waters and take the vast majority of the shark catch. Operators will be required to surrender two other net symbols to receive an N4. This will give the holder access to the use of 1200 m of net, which will no longer be permitted under any other net symbol. This restriction is necessary to cap the potential expansion of effort in offshore waters where shark are heavily targeted.</p>

Proposal	Reason for proposal	Impact on competition
Amendments to Dugong Protection Areas	The use of offshore nets in DPAs is being restricted to minimise interactions with dugong around headlands. It is also proposed to allow a slight relaxation of the use of lower risk nets in DPA A zones.	The proposals restrict the use of offshore nets in DPAs, and therefore impact on competition. However, these restrictions are offset by the proposal to allow a number of new, lower-risk nets, to be used in DPA A Zones.
Changes to netting arrangements	Arrangements under each fishery symbol have been reviewed to provide greater flexibility, while also maintaining sustainability. A number of new symbols are proposed (for the tunnel net fishery and shark fishery), which will ensure long term sustainable use of sharks and other fin fish. Stricter net attendance rules are proposed to ensure the risks to more vulnerable species are reduced. The bait fishery has also been reviewed.	<p>The review of netting arrangements has resulted in the proposed removal of a number of restrictions. Where the legislation has previously stipulated how a net must be used, the regulations will now refer to a smaller number of ways in which nets cannot be used. This provides greater flexibility to fishers in how they use nets to target specific species.</p> <p>A number of proposals flowing from the netting review will restrict competition in the future. This is particularly the case in the establishment of new fishery symbols, which will restrict access to a smaller number of fishers than currently. These restrictions are necessary to reduce the sustainability risk from increasing fishing effort in those sectors (i.e. shark and tunnel netting).</p> <p>Net attendance rules were standardised to ensure that all fishers are now in attendance of their nets (with some minor exceptions). While this will affect fishers (particularly those offshore), it is necessary to facilitate better enforcement and reduce risks to more vulnerable species. The costs to business of attendance rules may be significant in some cases.</p> <p>All Queensland commercial fishers currently hold an N6 symbol allowing the use of nets to collect bait. There is no fee associated with this symbol, making it as <i>of right</i> access essentially. There are a number of operators using this symbol to collect bait for commercial sale. These operators do not pay a fee for this access right as all other fishery symbol holders do. It is proposed that those fishers who use the N6 symbol for commercial sale of product will retain the symbol, but will be required to pay a licence fee, making it more consistent with other fishery symbols. Other crab and line fishers will still be able to collect bait for personal use as they have in the past.</p>

Proposal	Reason for proposal	Impact on competition
Amendments to current closures and establishment of new closures	The proposed closures are designed to protect the sustainability of inshore fin fish. They protect important habitat areas. Some of the proposed changes remove uncertainty about closure boundaries.	The proposed new closures and amendments to current closures do not pose significant impacts on competition and are designed to protect the sustainability of inshore fin fish.
Changes to quota managed fisheries	A number of unnecessary restrictions were removed, because there are quotas in place to protect the sustainability of particular species, and these quotas have not been met.	The proposals remove unnecessary restrictions and therefore improve competition, because they will allow greater flexibility in how people run their business.



## ***Appendix A: Responses to issues raised at stakeholder meetings in 2006***

DPI&F recognises the importance of providing feedback to stakeholders on how decisions are made. This section summarises the issues raised at the stakeholder meetings that did not result in proposed management changes, and the reasons why no changes were made.

### **Issues related to the East Coast Inshore Fin Fish Fishery**

<b>Issue</b>	<b>Response</b>
<b>Netting</b>	
Quotas for various fisheries	<p>The working groups and MAC did not consider any additional quotas for the fishery.</p> <p>The East Coast Inshore Fin Fish Fishery is a diverse multi-species multi-gear fishery. Because of these characteristics, Total Allowable Catches and/or Individual Transferable Quotas can be difficult to establish and monitor.</p> <p>The East Coast Inshore Fin Fish Fishery is managed via input controls such as mesh size, net length and the number of nets that can be used. These measures limit the amount of fishing effort that can be applied on the east coast and broadly protect the sustainability of the fishery.</p> <p>Where there are concerns for specific parts of the fishery or for certain species, DPI&amp;F can consider specific arrangements to address this. For example, quotas were put in place for spotted mackerel and tailor as a result of stock assessments.</p>
Buyback/removal of effort	<p>The MAC considered the level of effort in the fishery and agreed that there is not necessarily over-capacity in the whole fishery, but that there are issues with concentration of effort in local areas.</p> <p>A package of measures for the net fishery was recommended that may provide greater flexibility and profitability and address these local concerns.</p>
Cast netting on jetties	<p>The MAC did not support a closure on public structures.</p> <p>It was recommended that the issue be considered by the agency or local council responsible for the structure, not considered under the Fisheries Act.</p> <p>The MAC noted that it was not a sustainability issue but was designed to reduce conflict. It was agreed that this is the responsibility of other agencies or local councils through by-laws.</p>

Issue	Response
<p>Length limits of commercial vessels</p>	<p>The netting working group did not support the increase in boat size due to potential impacts on sustainability, catch sharing arrangements and conflict. For example, if a larger boat size was introduced for a dedicated shark fishery these boats would be able to enter waters less than 20 m deep using 600 m of net and compete with smaller boats.</p> <p>The MAC acknowledged that there are pros and cons of increasing the maximum boat length.</p> <p>The working group identified a range of benefits:</p> <ul style="list-style-type: none"> <li>• greater safety and comfort offshore, particularly for extended trips</li> <li>• better processing facilities and storage adds value</li> <li>• consistency with some other fisheries (e.g. 20 m line boats)</li> <li>• fishers are encouraged to make their own business decisions</li> <li>• greater efficiency in reaching the trigger is promoted.</li> </ul> <p>The following impacts were identified:</p> <ul style="list-style-type: none"> <li>• the shark trigger may be reached faster</li> <li>• there may be conflict with smaller inshore boats</li> <li>• there may be an expanded effort in the shark fishery—contrary to management objectives.</li> </ul> <p>The MAC considered possible surrender provisions that may link to an increase in boat length. While the benefits of an increase were acknowledged, the MAC felt it was more important to gain a baseline understanding of effort in the shark fishery, before changing boat length restrictions.</p> <p>It was also recognised that it may lead to effort expansion in the offshore grey mackerel and shark fisheries. This may undermine the package of shark management arrangements being developed.</p> <p>The MAC recognised the benefits of moving to larger vessels in the shark fishery to promote safety, value-adding and greater efficiency. However, the MAC recommended gathering baseline data and assessing the status of the shark fishery based on current sized vessels.</p> <p>Application for larger vessels up to 20 m (subject to surrender provisions) should be phased in if it can be demonstrated that the fishery can support it.</p>
<p>Tolerance level for regulated fish</p>	<p>The netting working group did not support the introduction of a small tolerance for undersize fish due to the possibility of such fish subsequently being sold. The display of any regulated fish in a retail outlet would be likely to initiate a call from the public which would have to be investigated by QBFP, placing an unnecessary strain on resources.</p>
<p>Indigenous netting</p>	<p>Under the Fisheries Act, Aboriginal people may take, use or keep fisheries resources, or use fish habitats following Aboriginal tradition, and a Torres Strait Islander may take, use or keep fisheries resources, or use fish habitats, under Island custom.</p> <p>The department acknowledges the comments made at the stakeholder meetings in regard to Indigenous netting practices and are currently considering ways of addressing these concerns. The department is also awaiting legal advice on the matter.</p>

Issue	Response
<b>Size and bag limits</b>	
Daily bag limits versus in-possession limits	<p>The size and bag limit working group acknowledged comments about in-possession limits at the stakeholder meetings, but noted that there are particular problems with daily bag limits, for example enforcement. The current definition is working effectively for compliance purposes.</p> <p>NSW has recently moved from daily bag limits to in-possession limits to address these compliance problems. The MAC agreed that in-possession limits were better from an enforcement perspective.</p> <p>The MAC also agreed that powers of officers need to be reviewed to allow QBFP to check freezers for in-possession.</p>
Consider the use of boat and vehicle limits	<p>The size and bag limit working group agreed that the introduction of boat or vehicle limits would be difficult to enforce, as the QBFP may not be able to breach a boat or a vehicle. There may be issues with determining who is in control of the boat or vehicle. It was acknowledged that the inshore fishery is predominantly a shore based fishery and that boat limits may not be appropriate.</p> <p>It was agreed that it may be useful in some cases, particularly in relation to cast netting, but that this should be considered by the QBFP more broadly before its use in the inshore fishery.</p> <p>The MAC also recognised that boat limits would impact on charter fishers significantly unless exemptions were made. This may be inequitable.</p>
Pectoral fin clipping and filleting restrictions	<p>The size and bag limit working group and MAC did not support pectoral fin clipping for inshore fin fish. The working group discussed the problems with the current system of pectoral fin clipping in the reef line and Spanish mackerel fishery and commented that it's unlikely that it has reduced activity on the black market. Fillets don't have a fin regardless of whether they've been clipped or not, making the detection of black market activity difficult.</p> <p>The QBFP felt that it was beneficial to have a tool to investigate certain individuals suspected of black market activity. It was acknowledged as the only tool currently available to help prosecutions. Black market activity is not an issue with the majority of inshore fish species (except mackerels and grunter).</p> <p>The QBFP advised that consistency would be good for key species, particularly where there is overlap between fisheries—for example, mackerels and grassy sweetlip.</p> <p>The MAC felt that tighter bag limits could be used as a deterrent. It also acknowledged that compliance with clipping the pectoral fin is currently very low (around 30%). The stakeholder meetings overwhelmingly opposed fin clipping in the inshore fishery. On balance, the MAC did not support fin clipping.</p>
<b>Dugong Protection Areas</b>	
Add more DPAs to the network	<p>The DPA working group reviewed areas in detail and noted that these areas were now afforded a large degree of protection by the yellow and green marine park zones and the fact that they are in very remote areas. There were limited sightings of dugong and limited seagrass areas in Port Douglas compared to other areas.</p> <p>The MAC agreed that other concessions have been made that will minimise risk for example, attendance and headland issues, and consequently did not support the introduction on new DPAs.</p>

Issue	Response
<b>Closures</b>	
Weekend closure	<p>The Closures working group gave cautious support to opening some rivers and creeks on Friday night 6pm to 6am Saturday morning. Support was on the basis that it should only apply to netting from Kauri Creek north and not include Fitzroy River.</p> <p>While support was given at the working group, feedback following the meeting was that recreational fishers in SEQ and Hervey Bay would strongly oppose the proposal. The commercial industry noted that the proposal was to only open the weekend closure north of Kauri Creek. Consequently, it would not particularly impact on SEQ fishers, but would impact on Hervey Bay anglers. Mr Bateman advised that the recreational sector was not supportive of it in principle.</p> <p>There was some support from the MAC for reviewing the weekend closures, but the recreational sector opposed the proposal to open fishing on Friday nights across the state. The MAC recommended that it be considered as part of Stage 2 at a more local level. The recreational sector was happy to continue discussing the matter, particularly in relation to more isolated creeks and rivers.</p>
Review barramundi spawning closure	<p>The Closures working group agreed that the current timing of the barramundi closure should be retained, given:</p> <ul style="list-style-type: none"> <li>• The success of the spawning closure is highly dependant on rainfall.</li> <li>• The community is well educated on the period of the current seasonal barramundi closure.</li> <li>• There is no compelling research to indicate any benefit from moving to a lunar phase closure.</li> <li>• The current closure covers two full moon phases.</li> </ul> <p>The MAC noted the difference between spawning on the East Coast and Gulf and that the level of aggregating on the east coast is not as strong.</p> <p>The MAC agreed that the timing was always going to be dependent on rainfall. It acknowledged that the costs of re-educating the fishing public would outweigh any benefits. The MAC agreed that the timing of the closure is well known by both residents and tourists.</p>
Review barramundi river mouth closures	<p>The Closures working group and MAC noted advice from the Scientific Advisory Group that, while there was no specific research on the benefits of river mouth closures to protect spawning barramundi, it is likely that they are providing some protection for barramundi as well as inadvertently providing protection for other species spawning during the same period.</p>

Issue	Response
Additional spawning closures	<p>The Closures working group recommended three new spawning closures to apply to all fishers in September each year:</p> <ul style="list-style-type: none"> <li>• Caloundra area (Northern Pumicestone Passage) spawning closure to protect whiting</li> <li>• southern part of Moreton Island spawning closure to protect bream and whiting</li> <li>• Kalinga Bank spawning closure to protect spawning flathead.</li> </ul> <p>The Fraser Island/Inskip Point closure was not supported on the basis that it was not supported previously and was considered contentious.</p> <p>The MAC did not support the additional spawning closures in recognition that these areas have changed physically since the MAC recommended them some years ago. In addition, the Kalinga bank closure was recommended prior to the flathead size and bag limit being introduced, making it less necessary. The MAC agreed that all three have been overtaken by physical changes, changing fishing habits and other management arrangements. It was felt that the introduction of the closures would not achieve significant benefits. The MAC did not consider it worth the costs of having to educate fishers on the closures. While the MAC did not support the proposal, it was supportive of the concept of spawning closures for key species if there was better scientific data supporting the closures.</p>
Removing outdated closures	<p>The Closures working group acknowledged that there are totally opposing views on the removal of netting closures and therefore was unable to recommend a preferred option to the MAC.</p> <p>The working group identified two options:</p> <ol style="list-style-type: none"> <li>1. Apply a licence buy-back scheme targeting those licence holders who operate in areas with excessive netting operations.</li> <li>2. Consider opening some areas to netting through a regional management process under stage two of the management planning process.</li> </ol> <p>The MAC felt it was necessary to look at excess effort, particularly given there is no timeframe on stage 2 when opening of current closures may be considered. Industry members suggested there may be a need to buy out the less active licences before regional consideration of issues. The recreational sector supported buy out. The MAC agreed that regional agreements were more likely to be successful if less active licences are removed. Communities are more likely to raise funds to buy out local fishers if they know they are active licences and will make a tangible difference.</p> <p>The MAC recommended consideration of a buy out of excess effort (particularly less active licences) before considering opening areas as part of the regional management framework.</p>
Additional closures proposed	Stage Two: Local solutions to local problems.

## Broader issues

The following responses were prepared in relation to a number of broader issues raised during public meetings in 2006.

Issue	Response
Review representation on the Inshore Fin Fish Management Advisory Committee	After recent review, the guidelines now state that preference for stakeholder positions will be given to nominees who are members of peak industry bodies—for example, the Queensland Seafood Industry Association, Sunfish or the Queensland Seafood Marketers Association. This does not however mean that only representatives from these bodies will make up membership of the MACs.
Investigate stocking of estuarine and marine waters with inshore fin fish species	State government representatives have discussed the development of national protocols for stocking of open systems. DPI&F will continue involvement with this process. There has been some difficulty in the development of protocols due to a number of complexities related to: <ul style="list-style-type: none"> <li>• Stocking is sometimes seen as a response to environmental degradation, which would not be supported from a fishery perspective.</li> <li>• The need for the development of genetic detection systems.</li> <li>• It is not economically feasible to restock at this stage, i.e. the cost of stocking outweighs the biological and social benefits.</li> <li>• Acceptable methods of determining the success of stocking activity need to be developed.</li> </ul>
Investigate use of artificial reefs and fish aggregating devices	There is a body of literature on the use of artificial reefs. There is also significant information on artificial reefs in the Moreton Bay, Hervey Bay, Bagarra and other regions. Fisheries researchers with expertise in the design and function of artificial reefs will be consulted with a view to establishing protocols for considering suitable areas for the placement of artificial reefs.
Compensation for possible impacts from introducing an inshore management plan	A document outlining the guidelines for the compensation policy is presently being developed. This document will include the process by which compensation claims are to be made by applicants and the decision-making process. The guidelines will be finalised prior to the implementation of the Inshore Fin Fish Management Plan.
Improve consistency of regulations between the east coast of Queensland and the Gulf of Carpentaria (e.g. netting rules, barramundi seasonal closures, size limits and so on)	This is a consistent theme considered by each working group.
Reduce the complexity of regulations in general to provide greater flexibility and improve compliance	A comprehensive review of the Fisheries Regulation 1995 has been undertaken. While the review is a statutory requirement, DPI&F has taken the opportunity to streamline, modernise and simplify the Regulation while maintaining key fisheries management provisions. The review is not intended to simplify fishing rules but to simplify the way in which rules are prescribed. There are no changes to fishery management arrangements as a result of the review.

Issue	Response
<b>Education and promotion</b>	
Educational material to assist recreational fishers and the public to identify and avoid commercial net apparatus	These issues will be considered during development of an inshore implementation strategy. The type and extent of educational materials developed will depend on available resources.
Promote the commercial fishery and its role in providing local fresh seafood	
Promote the economic benefits of both commercial and recreational fisheries	
Develop materials to promote fishers	
Investigate working with marine education teachers	
Develop a handbook for fishers which provides rules and regulations in simple terms	
Increase boat ramp signage and community service announcements	
Distribute recreational fishing rules with boat registrations	
<b>Enforcement</b>	
Expand powers of entry (particularly to target black market activities)	The QBFP will investigate options to improve its capacity to address black market activities. A submission to increase the power of inspectors is being developed. The QBFP has recently recruited six field officers who will be stationed across Queensland.
Increase the number of patrol officers	The QBFP compliance risk assessment process is now operational. This process identifies high risk issues and ensures adequate resources are allocated. The Fisheries Infringement Notice system (on-the-spot fines) are proposed to be expanded. QBFP Response Units are now at full capacity. These units are tasked with covert surveillance and operate throughout Queensland.
Establish mandatory fines	
Expand the on-the-spot fine system	
Increase surveillance	

Issue	Response
<b>Habitat</b>	
The impact of urban development on habitat	<p>New urban developments are required to create buffers between development and habitats. Illegal encroachment of development onto tidal lands is an ongoing issue and reporting of such activities is a public responsibility.</p> <p>DPI&amp;F has established urban mangrove management strategies with Bundaberg and Brisbane City Councils to protect designated foreshore mangrove communities. DPI&amp;F will develop similar strategies with Cairns, Townsville, Mackay, Livingstone and Maryborough Councils.</p> <p>Several large-scale habitat restoration projects are underway at Cairns (East Trinity), Bundaberg (Port Authority lands) and Gold Coast (Pimpama – Kerkins levee). These projects reflect state and local government commitments to restore fish habitats.</p>
<b>Other issues not directly related to the Queensland East Coast Inshore Fin Fish Fishery</b>	
Fewer restrictions on taking tilapia (both recreationally and commercially) to encourage eradication	Any relaxation on the current restrictions on the taking of tilapia is inconsistent with the aims of DPI&F Pest Fish Strategy. A major concern is that because they are mouth breeders, tilapia eggs and juveniles could survive the process of cleaning at sites away from where the parent fish were taken. In general, DPI&F believe that a relaxation of current restrictions would increase, rather than curtail, the spread of tilapia.
Better data collection and public reporting	<p>Comprehensive annual monitoring of barramundi, tailor, mullet and spotted mackerel resources is continuing through the Fisheries Long Term Monitoring Program.</p> <p>Enhanced monitoring of important <i>bread and butter</i> fin fish species in southern Queensland (yellowfin bream, sand whiting, dusky flathead) commenced in 2007. This will provide data on population size and age structure for rigorous stock assessments of the status of these resources; the first assessment of these species is scheduled to be completed by June 2008.</p> <p>Statewide information on recreational fishing participation levels, total catch and catch rates has been collected since 1996 and this will continue on a regular basis. Surveys to collect more detailed information at a regional scale will be implemented in 2007–08. The results of the 1997 to 2002 diary programs are available in reports and through the DPI&amp;F website (<a href="http://chrisweb.dpi.qld.gov.au/chris">chrisweb.dpi.qld.gov.au/chris</a>). The 2005 diary results are currently being prepared for release.</p> <p>In 2006 DPI&amp;F established a program of stock assessment by scientists in the Sustainable Fisheries unit. The program aims to complete quantitative assessments of major fin fish species at least every three years using best available scientific information. Updated assessments of the status of east coast barramundi resources, spotted mackerel, mullet and tailor are planned for 2008–09.</p> <p>For major fisheries, DPI&amp;F provides the public with timely fisheries catch and effort information, assessments of the performance of fisheries management arrangements and results of recent monitoring and research projects through Annual Status Reports. These reports have been available since 2006 on the DPI&amp;F website (<a href="http://www.dpi.qld.gov.au/fishweb">www.dpi.qld.gov.au/fishweb</a>). An annual collated report is also available.</p>
Confusion about clipping pectoral fins in the Coral Reef Fin Fish Fishery	Clipping of a pectoral fin is required for recreationally caught Coral Reef Fin Fish and Spanish mackerel. Its purpose is to deter the black market sale of high value fish such as coral trout, red throat emperor and Spanish mackerel.



Issue	Response
Concerns about the negative impacts of the three nine-day coral reef fin fish spawning closures on commercial and recreational fishers	An independent review of coral reef fin fish spawning closures conducted by external investigators has begun. The first stage of the review will involve an assessment of the biological appropriateness of the timing and duration of current closures. The second stage will involve a broader assessment, including socioeconomic effects. Terms of reference for the review are established and have been endorsed by ReefMAC.
Concerns about inappropriate size limits for some coral reef fin fish (e.g. red emperor and small cod)	Size limits can be reviewed if supported by relevant scientific information. The ReefMAC Scientific Advisory Group regularly reviews available science and how well it is represented in management arrangements. At the time of development of size limits for the plan, a precautionary approach was adopted when the size of a fish could not reliably indicate its sexual maturity status (e.g. in the case of some smaller species of cods).
Concerns about the use of imported prawns as bait (white spot virus)	Importation of uncooked prawns is a Biosecurity Australia issue. DPI&F has for many years encouraged recreational fishers, through web messages and brochures, to use local prawns as bait. The department has also responded favourably to the revised draft of the prawn and prawn product risk analysis (RDIRA). The RDIRA proposed improved quarantine risk management for imported prawns which included testing for some exotic diseases including white spot virus. The implementation of the draft interim measures will reduce the risk of diseased prawns.
Concerns about beam trawlers targeting juveniles and the impact on juvenile habitat	Operators in the beam trawl fishery are currently required to have By-catch Reduction Devices fitted when trawling. In certain areas, Turtle Excluder Devices must also be used. They are restricted to certain areas at certain times, reducing the impact on habitat.
Increase the pot limit from 50 to 100 for the offshore Blue Swimmer Crab Fishery	An investment warning was issued for the fishery in 2003. An increase in the number of pots that can be used in the offshore blue swimmer crab fishery would be contrary to this investment warning and is likely to substantially increase the amount of effort in the fishery. It is intended that a management plan will be developed for the fishery in the future at which time new arrangements for apparatus will be considered.
Confusion about the native title process	<p><b>Native title process</b></p> <p>The native title process is operated through the Native Title Tribunal. Indigenous members within a region may lodge a claim for native title over a particular piece of land and/or water. Information about the land and/or water is gathered from a variety of sources for the Native Title Tribunal to take into consideration when deciding if native title rights exist over the land or water. This process does not extinguish native title rights in general, nor do native title claims necessarily extinguish the rights that already exist (say for commercial or recreational fishermen to operate in a particular area).</p> <p><b>Indigenous fishing rights</b></p> <p>Fishing rights are accorded to indigenous people under Aboriginal tradition or Island custom. Indigenous people may fish in any location and take any fish, providing they are doing it in line with tradition or custom (as determined by the community elders). Aboriginal people and Torres Strait Islanders undertaking fishing for traditional/customary purposes are exempt from the Fisheries Act. These rights exist regardless of whether native title is held over the water.</p>

Issue	Response
<p>Concerns about future marine aquaculture in Hervey Bay/Great Sandy Strait.</p>	<p>The Queensland Government has identified aquaculture as a priority industry for the state. The Queensland Government is also seeking to ensure an appropriate balance between the needs of the aquaculture industry, existing users of the resource, and protecting the environment for a sustainable future.</p> <p><b>Marine aquaculture in Queensland (statewide)</b></p> <p>Queenslanders were recently urged to have their say on the state government's Marine Aquaculture Policy Green Paper (released for public comment from 11 January 2007 to 23 February 2007) which is an important step in the development of a policy framework for the marine aquaculture industry for the entire state. The Green Paper provided wide-ranging information including how regional marine aquaculture plans will be developed, and policy options on how they will be implemented.</p> <p><b>Regional planning for marine aquaculture in the Great Sandy region</b></p> <p>In considering the development of aquaculture within the new Great Sandy Marine Park Zoning Plan, the Queensland Government decided to maximise the development of rack and line aquaculture and sea ranching aquaculture, whilst being consistent with the management objectives of the Marine Park. The government also decided that intensive (sea cage) aquaculture was not appropriate for the Great Sandy Marine Park.</p> <p>To ensure a sustainable industry, a regional marine aquaculture management plan will be developed for the Hervey Bay/Great Sandy region, to guide aquaculture development decisions in preference to the existing process where aquaculture applications are assessed individually on a site-by-site basis.</p> <p>Strategic planning will benefit the Great Sandy region by deciding up-front which areas are most suitable for aquaculture development and which are not, and developing guidelines to ensure that only suitable development is approved. One of the key advantages of the planning process is that it will allow all interested stakeholders, including the public, to have early input into marine aquaculture development for the region.</p> <p><b>Current status of marine planning activities in the Great Sandy region</b></p> <p>The DPI&amp;F, in collaboration with the Department of State Development, has undertaken an initial desktop constraints/opportunities mapping exercise as a first step to inform the consultation process, and has identified a number of areas for further investigation. Further investigations will be in the form of characterisation studies undertaken by a consultant. The DPI&amp;F is now seeking local knowledge to refine the proposed investigation areas.</p> <p>The objectives of this phase of targeted stakeholder consultation are to:</p> <ul style="list-style-type: none"> <li>• modify the desktop 'constraints/opportunities' map using local knowledge</li> <li>• refine the proposed investigation areas</li> <li>• inform local stakeholder groups of the planning process</li> <li>• provide a mechanism for feedback into the planning process.</li> </ul>

## **Appendix B: Performance measurement system**

DPI&F is moving towards a less regulatory approach when it comes to monitoring the performance of fishery management arrangements. Performance measurement systems (PMS) are being developed for all fisheries under a policy framework rather than through legislation.

PMS are designed to measure trends in the status of the fishery and the effectiveness of management in achieving sustainable use of fish stocks and the minimisation of impact on the broader ecosystem. A PMS includes operational objectives that provide a greater level of detail about how the objectives set out in fisheries legislation will be achieved. A PMS provides a useful monitoring system that can trigger a review of current management arrangements—it does not include any prescriptive management responses.

In 2005, the Commonwealth Department of the Environment and Water Resources (DEW) assessed the DPI&F Ecological Assessment of the Queensland East Coast Inshore Fin Fish Fishery and approved the fishery as an accredited Wildlife Trade Operation (WTO) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth). Continued export approval is contingent upon the fishery meeting a number of conditions and recommendations. One of these recommendations is to:

Develop fishery specific objectives for target, by-product, by-catch, protected species and impacts on the ecosystem which are linked to performance indicators by which these objectives are to be attained and performance measures against which the indicators will be assessed.

Aside from the need to deliver on a Ministerial agreement between DPI&F and DEW, DPI&F also has a responsibility to the community to ensure the management arrangements in place to protect fisheries resources are effective.

In 2006, DPI&F developed and implemented a new framework to measure fishery performance in Queensland managed fisheries. The framework allows a PMS to be developed for each fishery, which is then formally approved by the Chief Executive. This has consequently removed the need to include review events in fishery management plans. The framework suggests that future legislation may include reference to *a PMS that has been approved by the Chief Executive* rather than specific review events.

A PMS workshop was held with stakeholders in March 2007 to develop operational objectives, performance indicators and measures and management responses for each of the sectors of the fishery.

The March workshop focused mainly on the ecological aspects of the fishery. Development of a PMS for social, economic and governance aspects of the fishery will be considered in a second workshop.

Examples of performance measures proposed for the inshore fisheries are provided below. These performance measures are limiting reference points, where, if reached, a review of the management arrangements will be triggered.

Target species:

- A reduction in commercial harvest or harvest rate of more than 30% over three consecutive years (for individual key species).
- A change (increase or decrease) of more than 30% in recreational harvest or release between two consecutive RFISH estimates (for individual key species).

- Species biomass is estimated to be less than a certain percentage of virgin biomass levels (for species with a stock assessment such as tailor).
- The total annual catch exceeds a Total Allowable Catch recommended through research or stock assessments (e.g. for mullet).
- The annual commercial harvest exceeds a specified amount (e.g. 700 tonnes for shark)

By-catch:

- A 20% increase in the amount of by-catch taken compared to previous research estimates.<sup>13</sup>
- Any increase in the release rate of key species (with high release mortalities) from two consecutive RFISH estimates.

Protected species:

- Total number of interactions of protected species exceeds the minimum/maximum annual number of interactions recorded in 2005 and 2006.
- The number of protected species released alive does not exceed 90%.
- Percentage of compliance with net attendance rules does not exceed 95%.
- A species is assigned a greater protection status under the Environment Protection and Biodiversity Conservation Act or the *Nature Conservation Act 1992*.

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<sup>13</sup> *ibid*



