Regulatory Impact Statement (RIS) relating to the review of the Rocky Reef Fin Fish Fishery
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Concerns have been raised through stock assessments about the sustainability of snapper (*Pagrus auratus*), a key target species in the Rocky Reef Fin Fish Fishery. Significant regulatory changes need to be made to the way this fishery is currently managed to help snapper stock recover.

The Queensland Government, on behalf of the community, is committed to ensuring that all rocky reef fin fish species are harvested at sustainable levels into the future.

The objective of changing regulations is to reduce fishing pressure on snapper by implementing a 400 tonne cap on the total annual catch. This will enable the stock to rebuild over a 10-year period.

The Queensland Government is committed to achieving this in a way that:

- is considered fair to all stakeholders in the fishery; and
- minimises adverse economic and social consequences of adjusting to a lower catch.

Comment can be provided via an online questionnaire at [www.getinvolved.qld.gov.au](http://www.getinvolved.qld.gov.au) or through a response form that can be either faxed or posted. Copies of the response form will be sent to all key stakeholders or it can be downloaded from [www.fisheries.qld.gov.au](http://www.fisheries.qld.gov.au).

**Port meetings**

Port meetings will be held at 12 locations around the state and you are encouraged to come along. Fisheries Queensland staff will be facilitating the discussions. A summary of the submissions and feedback from port meetings will be available online at [www.fisheries.qld.gov.au](http://www.fisheries.qld.gov.au).

Date: 27/01/11  
Location: Mackay  
Time: 7 pm – 9 pm  
Venue: Reef Resort Mackay  
166–170 Nebo Road, Mackay

Date: 28/01/11  
Location: Yeppoon  
Time: 7 pm – 9 pm  
Venue: Rosslyn Bay Inn  
Vin. E Jones Drive, Rosslyn Bay

Date: 31/01/11  
Location: Bundaberg  
Time: 7 pm – 9 pm  
Venue: Western Suburbs League Club  
Avoca Street, Bundaberg

Date: 01/02/11  
Location: Hervey Bay  
Time: 7 pm – 9 pm  
Venue: Hervey Bay Boat Club  
Buccaneer Drive, Urangan

Date: 02/02/11  
Location: Tin Can Bay  
Time: 7 pm – 9 pm  
Venue: Tin Can Bay Country Club  
Kidd Straight, Tin Can Bay

Date: 03/02/11  
Location: Noosa  
Time: 7 pm – 9 pm  
Venue: Ivory Palms Resort  
73 Hilton Terrace, Noosaville
Date: 07/02/11  
Location: Mooloolaba  
Time: 7 pm – 9 pm  
Venue: Landmark Resort  
Cnr Esplanade and Burnett Street, Mooloolaba

Date: 08/02/11  
Location: Caloundra  
Time: 7 pm – 9 pm  
Venue: The Events Centre  
20 Minchinton Street, Caloundra

Date: 09/02/11  
Location: Redcliffe  
Time: 7 pm – 9 pm  
Venue: Redcliffe Leagues Club  
Cnr Klingner and Ashmole Roads, Redcliffe

Date: 10/02/11  
Location: Wynnum  
Time: 7 pm – 9 pm  
Venue: Wynnum RSL  
174 Tingal Road, Wynnum

Date: 14/02/11  
Location: Victoria Point  
Time: 7 pm – 9 pm  
Venue: Redland Bowls Club  
3 Poinciana Avenue, Victoria Point

Date: 15/02/11  
Location: Southport  
Time: 7 pm – 9 pm  
Venue: Southport Sharks Club  
Cnr Musgrave and Olsen Avenues, Southport

The closing date for comment on this RIS is 5 pm, Monday, 28 February 2011.

Following the closing date, the Queensland Government will consider the responses received and may consult further before developing a final position.
1. Introduction

This document outlines options for the future management arrangements of the Rocky Reef Fin Fish Fishery. Comments on this Regulatory Impact Statement (RIS) will be taken into account when finalising management arrangements of this fishery.

This section outlines the purpose and requirements for the Queensland Government in developing a RIS.

1.1 Purpose of this Regulatory Impact Statement

Under the Statutory Instruments Act 1992, if proposed regulation is likely to impose appreciable costs on the community or part of the community, a RIS must be prepared by government before the regulation is made.

Costs are defined under the Statutory Instruments Act 1992 as including:

- burdens and disadvantages
- direct and indirect economic, environmental and social costs.

The purpose of a RIS is to determine whether or not a proposed regulation is the most efficient or effective way of achieving the 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.

This RIS explains the need for the proposed subordinate legislation and presents the likely benefits and costs.

Submissions are invited from the community, stakeholders and other interested parties on the proposals contained in this RIS. Guidelines on how to comment are available in the ‘Have your say’ section at the start of this document.

2. Overview

2.1 Policy objective

In order to rebuild the snapper stock to a sustainable level over the next decade, scientific research indicates that the annual catch must be significantly reduced. Capping the annual catch of snapper at 400 tonnes (recreational, charter and commercial sectors combined), which represents about a 45% reduction from current levels, has a high probability of achieving the rebuild.

To enable the government to achieve this, new policy arrangements must be put in place. This RIS outlines options that aim to help government develop new policies to reduce annual catch and rebuild our snapper stock.

2.2 Developing fisheries law

2.2.1 Authorising law

The proposed legislation will be made under the provisions of the Fisheries Act 1994 (the Act). Section 42 of the Act details what can be declared in a regulation and Section 223 of the Act gives the Governor in Council the power to make regulations.

2.2.2 Main purpose of the Act

The main purpose of the Act is 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 (ESD)

(b) promote ecologically sustainable development.

The principles of ESD referred to above include issues such as intergenerational equity, protection of biodiversity, the enhancement of social and community wellbeing and the precautionary principle.

2.3 Consistency within legislative requirements

2.3.1 Legislative intent

The intent of the proposed legislation is to reduce fishing pressure on snapper allowing the stock to be rebuilt to sustainable levels, over a 10-year period.

2.3.2 Consistency with authorising law

The proposed regulation will be consistent with the main purpose of the Act.
2.3.3 Consistency with other legislation

The proposed legislation will be consistent with the policy objectives of other legislation relevant to the marine environment including state marine parks legislation and the Queensland Nature Conservation Act 1992. The Rocky Reef Fin Fish Fishery is approved for export under the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth); the proposed changes to management directly address some recommendations associated with the export approval.

2.3.4 Consistency with fundamental legislative principles

The proposed regulatory amendments will have sufficient regard to the rights and liberties of individuals and the institution of parliament, and will be consistent with the fundamental legislative principles provided under the Legislative Standards Act 1992.

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

2.4 Stakeholder involvement

Proposals in this RIS have been developed with input from stakeholders. A Stakeholder Network Working Group comprising representatives from the recreational, charter and commercial sectors, bait and tackle businesses and seafood marketing was established to work in partnership with Fisheries Queensland to address the sustainability of rocky reef fin fish species.

2.5 Implementation

The implementation of any new management arrangements is expected to commence in 2011–12.

Targeted consultation on options relating to the eligibility criteria and allocation models for an individual transferable quota (ITQ) system in the commercial and charter fisheries will be held in parallel with this RIS.

If limited entry and/or quota are to apply to a sector, quota eligibility and allocation procedures will be developed and will be informed by the outcomes of this consultation.

2.6 Performance review of new management arrangements

Following implementation of new regulations, a mid-term review is planned to track the progress of the rebuilding strategy (five years post-implementation of new management arrangements). Issues to be considered during the review may include, but will not be restricted to: the length of any closures, the level of fees and the operation of any quota system.

The review will be informed by all available information, including total catch and catch rates for each sector, the length and age structure of the catch and new information arising from current research (such as post-release mortality rates). As part of the review, the snapper stock assessment will be updated with all available catch, monitoring and research information. The outcomes of the mid-term review will guide Fisheries Queensland in determining whether further regulation is required to achieve the management objective.

A 10-year review post-implementation is also planned to evaluate the status of the fishery.

3. Background

In Queensland the Rocky Reef Fin Fish Fishery supports a large fishing community with more than 35,000 private recreational fishing vessels capable of fishing in it. Approximately 200 charter vessels and 500 commercial fishing vessels have accessed snapper to date. In addition to avid local recreational fishers, many tourists to South East Queensland enjoy snapper fishing.

This RIS focuses on snapper (Pagrus auratus). Other key species of pearl perch (Glaucosoma scapulare) and teraglin (Atractoscion aequidens) will be subject to ongoing monitoring to ensure that harvest levels remain sustainable. Other species typically taken in the fishery include amberjack (Seriola dumerili), cobia (Rachycentron canadum), grass emperor (Lethrinus laticaudis), mahi mahi (Coryphaena hippurus), samsonfish (Seriola hippos) and yellowtail kingfish (Seriola lalandi).

The majority of the key species in the Rocky Reef Fin Fish Fishery are landed in waters from Bundaberg to the New South Wales border; however snapper are regularly caught as far north as Mackay.

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1 Includes licences that have been surrendered or the line endorsement has been removed; the later as a result of the application of the ‘Policy for the Removal of Excess Fishing Capacity in Queensland’s Line, Crab, Beam Trawl and Eel Fisheries’ in 2008–09.
3.1 A history of snapper fishing in Queensland

Snapper has a long history of being fished. In the 1950s, annual harvests were in the order of 200 tonnes\(^2\). Currently, recreational fishers using private vessels land two-thirds of the total snapper catch. The table below provides the average catch of snapper for each sector over recent years. By 2009, the total catch of snapper increased substantially to over 700 tonnes\(^3\).

Over the last decade, fishers from all sectors have expressed concern that snapper, in particular, is being overfished.

On 12 September 2003, Fisheries Queensland issued an investment warning for rocky reef species including snapper, pearl perch and teraglin.

The investment warning stated that increased pressure on snapper stocks was of particular concern. Despite changes to the minimum size limit and bag limits, fishing pressure including total landings of snapper continued to climb following the investment warning.

Indigenous take of snapper is considered to be minimal (much less than one percent of the total catch). Therefore, no specific management options are proposed to reduce, or impact on, Indigenous take.

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2 An estimate from the 2009 snapper stock assessment.


Table 1. Annual catch and estimated gross annual value of snapper

<table>
<thead>
<tr>
<th></th>
<th>Estimated average annual catch of snapper</th>
<th>Estimated annual gross value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational</td>
<td>415 tonnes(^4)</td>
<td>$3.9 million (value based on equivalent commercial value)</td>
</tr>
<tr>
<td>Charter</td>
<td>40 tonnes(^*)</td>
<td>$1.2 million</td>
</tr>
<tr>
<td>Commercial</td>
<td>190 tonnes(^*)</td>
<td>$1.5 million</td>
</tr>
</tbody>
</table>

\(^*\) average catch available from the recreational fishing survey for 2002 and 2005

\(^*\) average annual catch over a five-year period (2003 to 2007 inclusive), based on logbook returns for each sector

3.2 Fisheries Queensland’s research to date

Fisheries Queensland undertook a stock assessment of snapper in late 2008. The results of the assessment, finalised in April 2009, concluded that the snapper stock in Queensland is either fully fished or overfished. Based on weight of evidence and taking a precautionary approach, Fisheries Queensland has assessed the status of the snapper stock as being less than 40% of unfished levels. It is internationally recognised that fish stocks at 40% (or less) of their unfished levels are classed as overfished. This means our snapper stock is being harvested at levels exceeding those that can be sustained.

The stock assessment\(^3\) is scientifically rigorous and has been subject to three independent reviews:

1. In 2009 the stock assessment model and the methods used to generate the input parameters were independently reviewed by a renowned fisheries modeller from New Zealand’s National Institute of Water and Atmosphere (NIWA). The review found that the stock status predicted by the stock assessment was justified, the level of uncertainty associated with fisheries data and assumptions in the stock assessment model was identified and recommendations for improving future assessments were made.
2. In 2010, following concerns from stakeholders about the quality of the fisheries data used in the assessment, two additional independent reviews were conducted. The reviews, by an internationally recognised statistician from the University of Queensland and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), support the conclusions of the stock assessment. The uncertainties in the stock assessment and limitations in the fisheries data were comprehensively evaluated. Notably, the ABARES finding concludes that: ‘given the nature of the assessment and the many sensitivity trials carried out, the overfished status finding suggested in the original report remains plausible’.

Download the stock assessment and reports of independent reviews at www.fisheries.qld.gov.au

3.3 Rebuilding Queensland’s snapper stock

While scientific evidence suggests our snapper stock needs rebuilding, there is no suggestion that all snapper fishing must stop to achieve the objective over the next 10 years. In order to rebuild the snapper stock to a sustainable level over the next decade, scientific research indicates that the annual catch must be reduced to 400 tonnes. This is approximately a 45% reduction in the amount of fish harvested. The options for achieving this reduction are the subject of this document.

3.4 Developing options to manage the snapper stock

Fisheries Queensland released a consultation paper in late 2008 to guide broader community consultation on the issues and options for management. 474 responses were received. Fisheries Queensland conducted 10 port meetings from Mackay to the Gold Coast during the time the consultation paper was released for public comment—more than 300 people attended these meetings.

Respondents generally agreed there were issues relating to the management of snapper stocks and supported action to address concerns regarding sustainability.

Following this broader consultation Fisheries Queensland has developed options that aim to better manage the snapper stock against the backdrop of the Queensland Fisheries Strategy 2009–2014.

The strategy focuses on achieving sustainable use of fisheries resources through a more diverse range of management tools, improving regulation without imposing unnecessary costs and impinging on business opportunities, and seeks users to accept a greater responsibility and role in achievement of a sustainably managed fishery.

Many stakeholders of the Rocky Reef Fin Fish Fishery have already been actively involved in developing and testing potential options. Their advice has informed the development of several options detailed in this paper.

3.5 Overview of options considered in this RIS

For the first time in Queensland fisheries management, it is proposed to allocate a share of the total annual catch to recreational, charter and commercial sectors based on each sector’s historical access.

This RIS also considers a range of options and tools that aim to reduce catch levels by:

- directly restricting the size of the catch
- requiring people to pay appropriate fees to fish, including introducing a snapper permit for recreational fishers
- implementing closures or no-take periods for certain species
- changing access arrangements for the commercial sector
- significantly changing the management of licensed charter operators taking snapper
- affecting behavioural change.

Although charter operations operate as businesses, they are currently considered as platforms for recreational fishing. The RIS proposes a policy shift such that those operators eligible to access snapper are considered as a distinct commercial sector.

The government is not proposing any changes to the way the broader Queensland charter industry is managed at this time.

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4 ABARES was formed following the merger of the Australian Bureau of Agricultural and Resource Economics and the Bureau of Rural Sciences in 2010.
3.6 The impact of making no change to the management of the Rocky Reef Fin Fishery

The snapper stock will continue to decline if no action is taken to reduce current levels of fishing effort. The following items discuss these potential impacts.

3.6.1 Potential ecological impacts

Although it is unlikely that snapper will be fished to the point where the stock collapses, fishing a species down to very low numbers is likely to decrease the species’ resilience to pressures, including fishing impacts and major environmental changes (e.g. changes in water temperature, ocean currents and water chemistry caused by climate change).

3.6.2 Potential economic impacts

In economic terms, the total commercial, charter and recreational snapper catch is currently valued at $6.6 million annually.

However, that figure represents only direct market value. The $6.6 million does not include economic value to the Queensland economy of:

- income from commercial fishing employees
- jobs created in and around the commercial, charter and recreational fishing sectors (such as the 290 bait and tackle businesses between Mackay and the New South Wales border), marine sector support services and tourism.

In the long term, there is a risk that an unsustainable fishery will not continue to support the economic viability of these industries.

3.6.3 Potential social impacts

The scale of social impacts—as a result of reduced snapper yields—cannot be quantified for any of the sectors.

However, failing to address the decline in the snapper stock may have implications for the lifestyle of Queensland anglers. Anglers may face increased difficulty in landing prize fish resulting in a lower-quality fishing experience.

The commercial and charter sectors could experience negative social impacts as a result of the potential decline in the economic return from the fishery.

In the long term, it is anticipated that industry viability will be enhanced through the implementation of new management arrangements and will provide future employment benefits.

4. Current management of the Rocky Reef Fin Fishery

4.1 Current management arrangements

The Queensland Government has the responsibility of managing the Rocky Reef Fin Fishery on behalf of the Queensland community.

The management arrangements currently in place are designed to provide for sustainable harvest. While there is no restriction on the number of fish that can be caught in total, gear restrictions apply to all fishery sectors—recreational and commercial fishers are only permitted to use up to six hooks attached to no more than three fishing lines. Other measures apply to specific sectors and are summarised below.

Recreational fishers

Recreational fishers have access to rocky reef fish stocks through private recreational fishing or organised trips conducted under charter fishing licences. In-possession limits (i.e. bag limits) apply to most species taken by recreational anglers. In Queensland, snapper, pearl perch and teraglin have bag limits of five fish per angler.

Size limits are also commonly used to ensure adequate protection of a stock’s breeding component; generally, to allow half the stock to reach maturity and breed before they are available to be taken in the fishery. Minimum legal sizes for snapper, pearl perch and teraglin apply to all fishery sectors in Queensland, with the exception of fish taken by Indigenous people for traditional use.

In 2003, the minimum size limit of snapper was increased from 30 cm to 35 cm and the bag limit was reduced from ten to five in order to reduce fishing pressure; however, as indicated in the snapper stock assessment, this has had limited success.
Limited biological information is available regarding pearl perch, with the minimum size limit of 35 cm set at a level consistent with snapper to facilitate education and compliance. Teraglin has a more restrictive size limit (38 cm) relative to size at maturity to prevent the wastage associated with discarded catch. Significant numbers of this species die after they are released.

**Charter operators**

Gear restrictions, minimum legal sizes and bag limits (including extended bag limits) apply to recreational fishers fishing from charter vessels, regulating the effort and the amount of catch that can be taken. Charter fishing operators that access offshore marine waters more than two metres deep are licensed, required to keep and submit logbooks and can operate any number of vessels under their licence.

Charter licences are issued on application and there are no limits on the number of licences that can be issued. This is in contrast to the limited entry provisions in the commercial sector. There are over 400 licensed charter operators in Queensland and approximately 200 operators have accessed the Rocky Reef Fin Fish Fishery.

**Commercial fishers**

Commercial fishing effort is controlled through limited entry, size limits, restriction on fishing gear and vessel size.

All commercial fisheries in Queensland are restricted through a licensing and/or an access regime, with limited entry provisions. To access a fishery:

- a commercial fishing vessel must be licensed (commercial fishing boat licence)
- the commercial fishing boat licence must be endorsed with a specific fishery symbol and may require quota
- the operator of the vessel must hold a commercial fisher licence (minimum requirements apply to hold this licence).

These restrictions on access and licensing arrangements create valuable rights for those securing commercial access to the resource.

### 4.2 Current licence fees and levies

Recreational fishers currently support the management of marine-based recreational fishing through the private pleasure vessel (PPV) levy. This levy (currently $16.65) is paid annually upon registration of recreational vessels greater than four horsepower that operate within Queensland waters. Each year DEEDI collects approximately $3.6 million through the PPV levy. The PPV levy is fully expended by contributing to fisheries management activities.

Charter fishing licence holders and commercial licence holders contribute to the management of fisheries resources through annual licence fees of $250.

Commercial licence holders also pay fees for each line fishery symbol allowing access to particular areas of Queensland waters and individual operators may pay extra fees for symbols or quota units to access particular fisheries.

There are a number of fees associated with the provision of administrative licensing services such as applications for transfer of licences, symbols and quota. All fees are outlined in Schedule 9 of the Fisheries Regulation 2008.

The fees from all sectors contribute to existing fisheries management activities such as compliance, education, monitoring and research.

### 5. Overview of management tools

Management tools are strategies that can be used to manage a fishery sustainably. As further background, this section provides an overview of a number of individual management tools and how they could work in relation to the Rocky Reef Fin Fish Fishery. A number of these individual management tools can be combined to create a full suite of management arrangements to ensure a fishery’s sustainability. Options for new management arrangements for the fishery are outlined in Section 6.

The fisheries management tools summarised below have been divided into two categories:

- tools that are appropriate for managing a total allowable catch (TAC) divided among the three sectors
- additional tools that are effective in reducing fishing pressure on snapper.
5.1 Tools for managing total allowable catch

5.1.1 Catch shares based on fishing history

To maximise the probability of rebuilding the snapper stock over a 10-year period, snapper catch needs to be reduced to a TAC of 400 tonnes per annum. In recognition of the historical access to snapper, one approach would be to introduce catch shares for the recreational, charter and commercial fishing sectors by allocating each a proportion of the TAC.

Catch shares allocated to each sector would be based on the historical proportional take of snapper. The estimated breakdown, which has been determined through surveys, or as recorded in logbooks for the years 2002 and 20055, would be:

- recreational catch of 260 tonnes, which equates to 65% of the TAC
- charter catch of 32 tonnes, which equates to 8% of the TAC
- commercial catch of 108 tonnes, which equates to 27% of the TAC.

5.1.2 Tools for administering catch shares

An effective and appropriate means of administering the TAC needs to be put in place, either on a whole-of-fishery basis or for each sector. A TAC can be administered in one of three ways:

- as a notional TAC
- as a competitive TAC
- as an ITQ.

Each system has different operating requirements (in terms of catch reporting and monitoring); therefore, not all systems are likely to be appropriate for all sectors. Each of these systems is defined below.

Notional TAC system

A notional TAC represents an ideal level of catch that should not be exceeded. If the notional catch is exceeded, pre-determined management actions or responses to reduce catch are triggered within subsequent quota year(s). Minimum requirements to operate a notional TAC include catch monitoring or estimates of annual catch from a sector, and mechanisms to reduce catch if the TAC limit is exceeded.

Under a notional TAC, recreational catch estimates would need to be more robust and available on a biennial basis (minimum).

A snapper permit system would provide a sample framework, allowing for more precise estimates of the total catch to be made. In addition, any snapper taken would have to be recorded in a logbook and submitted online after the trip. Logbook information, at a minimum, would include the number of snapper kept, the number of anglers on the trip, and the general location from where the catch was taken (i.e. Gold Coast, Sunshine Coast). This information will be valuable in understanding the spatial levels of catch and the fate of discarded snapper.

The charter and commercial sectors could operate under a notional TAC using the existing logbook reporting system.

Competitive TAC system

Under a competitive TAC system, eligible fishers compete with one another to take the total allowable catch during the quota year. If the TAC is taken before the end of the quota year the fishery is closed until the next quota year.

A competitive TAC is most appropriate where the number of fishers (eligible licence holders) is relatively small compared to the TAC; where the TAC is high and unlikely to be taken in a quota year; or where there are no appreciable economic or social costs associated with the TAC being caught in a short period of time and by a proportion of the eligible operators.

A competitive TAC requires a mechanism to establish entitlement to compete for the catch, and a catch reporting system that provides for real-time monitoring to ensure the TAC is not exceeded in a quota year. Real-time reporting of catch could occur through an automated interactive voice response (AIVR) system, similar to telephone banking. Many Queensland fishers currently use AIVR for the reporting of catches under quota allocations. The system provides fishers with information about their quota balances or the status of the total catch landed to date.

Under this approach, access to the fishery would need to be limited to those operators with an authority to take snapper.

A competitive TAC system would be feasible for the charter and commercial sectors, but it requires a significant change in catch monitoring as existing logbooks do not provide for real-time reporting of catch.

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5 Statewide recreational fishing surveys were conducted in 2002 and 2005. These years also represent appropriate pre-investment warning and post investment warning years for the commercial sector.
The recreational sector’s size (estimated at 35 000 vessels) renders a competitive TAC system impractical for managing the allocation to this sector.

**Individual transferable quota (ITQ) system**

Under an ITQ system, units of quota are allocated to each fisher (eligible licence holder) within the sector, which represents their share of the TAC. These units of quota are then transferable to other eligible fishers.

At a minimum, an ITQ system would require a process for allocation of quota units to individual fishers and a quota use reporting system that allows for real-time tracking of quota used by each licence (fisher).

For **recreational fishers**, an ITQ system is not considered suitable as allocating the transfer of quota requires a commercial transaction.

For **charter operators** under an ITQ system, the 32 tonne TAC would be divided into 32 000 snapper quota units, where one unit equals one kilogram of whole snapper.

Currently, charter operators are only required to hold one licence per business and any number of charter vessels can operate under this licence. To effectively monitor catch and effort, every charter vessel accessing snapper would need to be identified on an authority.

Under an ITQ approach, future charter access to snapper would be limited to operators with an authority that allows access to snapper. As with a competitive TAC, authorities could be assigned to all existing charter licences, or only to those operators who have a demonstrable reliance upon the fishery.

Quota use would be monitored using mandatory logbook reporting and an AIVR system to track quota usage in real-time, as with other quota managed fisheries.

Once a charter operator has used up their allocated quota, no more snapper could be landed unless the operator obtained additional quota units prior to landing.

Under an ITQ system the commercial sector would be required to keep additional records, from catch to retail sale, to verify catch. This is referred to as a ‘whole of distribution chain documentation’ and incorporates requirements to keep consignment notes, tax invoices and delivery dockets, which enables the documents to be used in the enforcement and auditing of the quota system.

Competitive TAC and ITQ systems limit entry to the fishery, create barriers to entry and therefore restrict potential competition. However, any restrictions on competition would be mitigated through licences, fishery symbols and quota being transferable within a sector. This system would still enable new entrants to gain access to the fishery through the open market. Quota holders could sell quota units and prospective entrants could buy quota units with full knowledge of the associated costs.

It may also be possible to further lessen any competition concerns by permitting quota transfers between the commercial and charter sectors. However, such transfers may result in a reallocation of the catch shares between the sectors and may impact businesses involved in the seafood supply chain and the charter sector.

Should an ITQ system be implemented for both the charter and commercial sectors, Fisheries Queensland would not support permanent or temporary transfers of quota between these sectors for the first five years of operation. If this policy position were adopted it would be reviewed after five years.
5.2 Tools for reducing fishing pressure

5.2.1 Cost of fishery access

Introducing a fee or cost for individuals or businesses to access a fishery can act as a disincentive to fishing, thus reducing impacts on a fish stock. Under a fee system, those who choose to pay to access a fishery can benefit from the resource. Revenue gathered through a fee system would provide necessary funds for education, monitoring and compliance services for that fish stock. Current financial contributions from commercial, charter and recreational fishers are below the average fees paid in other Australian states and territories.

Cost mechanisms proposed include:

- an annual snapper permit fee for recreational fishers accessing snapper from private vessels of $70 (see Section 6.2, Option 2) to $90 (see Section 6.1, Option 1)
- access fees for eligible charter and commercial licence holders of $1000 per annum
- snapper quota fees for charter operators of $4.28 per unit
- snapper quota fees for commercial fishers of $1.60 per unit.

For recreational fishers, a vessel-based recreational permit with a fee is a plausible way to curb demand and provide resources for improved estimates of catch, improved compliance and enhanced education services. With an appropriately priced permit ($70 per annum in Option 2 or $90 per annum in Option 1) it is estimated that 9000 of the potential 35 000 registered vessels would purchase a snapper permit.

One of the proposals put forward in this RIS is to notionally allocate a proportion of catch to the recreational sector.

To manage the recreational catch share, a number of activities would need to be considered, including:

- fishery closures
- logbook and online catch recording system to monitor recreational snapper catches
- better estimates of the recreational snapper catch through a biennial survey
- increased compliance
- improved education and awareness initiatives.

The above services come at a cost. It is estimated that an annual fee of $90 would cover the costs associated with mandatory reporting, while a lower fee of $70 would cover the costs if a voluntary reporting and catch recording system were implemented (as administrative costs would be lower than a compulsory system).

Currently, the PPV levy is the only revenue stream supporting marine-based recreational fishing, and it is fully expended by contributing to existing management activities. The PPV levy applies statewide, while snapper fishing occurs mainly in South East Queensland. The recreational snapper permit fee would be one mechanism to ensure that those who benefit from accessing snapper contribute by making a direct financial contribution towards the costs of these services and the long-term objective of rebuilding the snapper stock.

For the charter sector, licence holders pay an annual licence fee of $250 to access offshore waters more than two metres deep. Under a competitive TAC, an annual fee of $1000 per new authority would be introduced.

Under an ITQ system, a licence holder would continue to pay the existing licence fee (currently $250), and also pay $4.28 for each unit of quota held.

Under an ITQ model, services provided to the charter sector would include an administrative system to track usage and a quota registry system to allow operators to view their quota balances online and trade quota units.

Capital costs to charter operators for a competitive TAC or ITQ system have not been determined as it is not known how businesses would structure their operations.

For commercial fishers, licence holders currently contribute to fisheries management through an annual licence fees of $250 and a line fishing endorsement fee of $290. Individual operators may also pay fees for symbols or quota units to access particular line fisheries.

Under a competitive TAC, an annual fee of $1000 per fishery symbol would be introduced for commercial operators. As with charter operators, this represents a flat fee based on 5% of the expected minimum market value of the fishery symbol, which is $20 000.

Under the ITQ approach, a commercial licence holder would continue to pay the licence fee, and also pay $1.60 for each unit of quota held.
Note that the difference in the proposed quota fees for the charter and commercial sectors is based on:

- the services provided to each sector to administer the ITQ system
- the number of units that are expected to be issued to each sector.

5.2.2 Temporal closures

Temporal closures are periods of time when species cannot be taken and can be used to reduce fishing pressure. Consideration would need to be given to the sector(s) to which closures should apply, the duration of the closure, the timing of the closure (i.e. low or high season), the species that are deemed no-take and the area of the closure.

For example, closure periods could apply to:

- all sectors or only to recreational fishers
- weeks or months in one or multiple blocks
- specific times of the year such as winter or summer
- specific species, such as snapper only or snapper and other major co-caught species
- all or part of Queensland’s east coast waters (e.g. a northern boundary at 24°50’S (roughly offshore from Bargara), coinciding with the southern boundary of the closures in place for the Coral Reef Fin Fish Fishery).

Sectors covered by a temporal closure: If a closure was put in place, the sectors to which it would apply need to be considered. A closure has the potential to provide up-front effort reduction for the recreational sector. However, it is questionable whether the closure should also apply to the charter and commercial sectors if they were operating either a competitive TAC or under an ITQ system.

Length of closure: If a closure were to be implemented, the length of the closure would need careful consideration. Consideration needs to be given to whether the closure is applied in a single block (multiple months) or applied in multiple blocks of a shorter duration. By splitting an extended closure into multiple blocks, it may reduce the extent of social and economic impacts and reduce pulse fishing before and after a closure.

Specific species: In order for closures to be an effective tool in reducing fishing mortality on snapper, closures may also need to apply to other species like pearl perch and teraglin. In a snapper-only closure, fishers targeting pearl perch and teraglin are highly likely to catch and discard snapper. Research conducted in New South Wales has estimated post-release mortality of snapper to be 40–75%, depending on depth of capture. The high rates of post-release mortality may reduce the effectiveness of closures in rebuilding snapper stock.

Northern boundary: A closure could be applied statewide. However, some anglers in the northern part of the fishery have suggested a northern boundary at 24°50’S (roughly offshore from Bargara) as they are already impacted by closures in the Coral Reef Fin Fish Fishery (currently two, five-day closures each year). North of Fraser Island snapper is primarily caught in the winter months. A northern boundary may also reduce the economic impact of a closure for the charter sector.

Time of year: As indicated in the graph below, snapper is primarily a winter/spring fishery in Queensland, where approximately 50% of the snapper catch is taken from June to September. North of Fraser Island, snapper is landed primarily in the key winter months of June and July. If a closure were to be put in place, we would need to consider this information when determining the most appropriate timing for the closure.

Sectors covered by a temporal closure:

- all sectors or only to recreational fishers
- weeks or months in one or multiple blocks
- specific times of the year such as winter or summer
- specific species, such as snapper only or snapper and other major co-caught species
- all or part of Queensland’s east coast waters (e.g. a northern boundary at 24°50’S (roughly offshore from Bargara), coinciding with the southern boundary of the closures in place for the Coral Reef Fin Fish Fishery).

5.2.3 Restricting fishing gear

Currently, snapper can be taken commercially using line and net methods. Net methods are highly effective in catching schooling fish such as snapper, and net-caught snapper increased from 1–2 tonnes annually in the period 1999–2004 to 8–10 tonnes annually in the period 2005–07.
Commercial take of snapper could be restricted to line methods only, while allowing for an incidental catch of snapper by commercial net fishers.

### 5.2.4 Size and bag limits

Minimum size limits are used to protect a portion of a breeding stock from fishing and are typically set at a size that allows fish to spawn at least once. The higher the size limit above maturity, the more times fish are able to spawn before being taken. The minimum size limit for snapper is 35 cm total length and applies to all sectors.

Recreational take is typically controlled through bag limits. For snapper, pearl perch and teraglin, the individual bag limit for each species is five. Individual bag limits for species frequently caught in the fishery also apply for amberjack (*Seriola dumerilli*), samsonfish (*S. hippos*), yellowtail kingfish (*S. lalandi*), mahi mahi (*Coryphaena hippurus*), grass sweetlip (*Lethrinus laticaudis*) and cobia (*Rachycentron canadum*). A combined bag limit, similar to that in the Coral Reef Fin Fish Fishery, could be considered for the Rocky Reef Fin Fish Fishery.

Size and bag limits do not stop fish from being caught, merely retained, and can result in fishers discarding small fish in favour of larger fish (i.e. high grading), which can mask the true impacts of fishing on mortality levels.

The snapper stock assessment indicates that an increase in the minimum legal size of snapper at best may deliver a 9% reduction in fishing mortality. This is well short of the reduction in fishing mortality we need to achieve. Historically, increases in the minimum legal size have not addressed the decline in the snapper stock; therefore, this RIS does not discuss options relating to increasing the minimum legal size of snapper.

There is also little current information to support a review of bag and size limits for pearl perch and teraglin. However, a combined bag limit of 15 rocky reef fish could help promote social responsibility and increase awareness of acceptable levels of harvest for a fisheries resource. Fisheries Queensland is proposing to monitor these species and review size and bag limits in the mid-term review five years after the implementation of any new management arrangements for this fishery.

### 5.2.5 Education

Raising awareness and fostering greater stewardship of the fisheries resources would need to be a key component of the future management of the Rocky Reef Fin Fish Fishery. An education program may include information about best practice regarding fish handling and release methods, the status of the fishery and how to participate in responsible stewardship activities.

Education would be delivered through:

- internet-based information and resources
- information sessions with managers and researchers at major bait and tackle outlets
- printed material at boat ramps/jetties (e.g. via the Queensland Boating and Fisheries Patrol and other Fisheries Queensland programs)
- local community promotion and awareness-raising by Fishcare volunteers.

### 6. Options for new management arrangements

As previously outlined, management arrangements are a combination of a number of individual management tools, which are put in place to help ensure the overall sustainability of a fishery.

This section proposes four options for new management arrangements for the Rock Reef Fin Fish Fishery. These options have been developed with the overall objective of rebuilding the snapper stock and providing for equity among the three major sectors in terms of benefits and costs. The options represent combinations of some of the management tools outlined in Section 5. There are a number of possible alternatives in addition to the four proposed. For example, the management of the charter and commercial sectors is feasible using a notional TAC and you are invited to consider this along with other options in the Response Form.
### Table 2. Summary of options for new management arrangements of the Rocky Reef Fin Fish Fishery

<table>
<thead>
<tr>
<th>Recreational sector</th>
<th>Charter sector</th>
<th>Commercial sector</th>
<th>Option 4 (400 tonne TAC)</th>
</tr>
</thead>
</table>
| • 260 tonne notional TAC  
• vessel-based permit  
• mandatory logbook with web-based lodgement  
• six-week closure to take of snapper, pearl perch and teraglin  
• biennial snapper catch and effort survey  
• permit fee – $90 per annum. | • 32 tonne TAC  
• ITQ system  
• limited access through introduction of an authority  
• reporting through AIVR and logbook  
• quota fee – $4.28 per unit per annum. | • 108 tonne TAC  
• ITQ system  
• limited access through introduction of a fishery symbol  
• reporting through AIVR and logbook  
• quota fee – $1.60 per unit per annum. | • four-month closure to the take of snapper – either in one block or in a number of smaller blocks  
• estimates of snapper catch determined through existing statewide recreational fishing surveys conducted every four to five years. |
| Option 1 | Option 2 | Option 3 | |
| • 260 tonne notional TAC  
• vessel-based permit  
• voluntary logbook including the option of web-based reporting  
• six-week closure to take of snapper, pearl perch and teraglin  
• biennial snapper catch and effort survey  
• permit fee – $70 per annum. | • 32 tonne TAC  
• competitive TAC  
• limited access through introduction of an authority  
• reporting through AIVR and logbook  
• fee for limited access authority – $1000 per annum. | • 108 tonne TAC  
• ITQ system  
• limited access through introduction of a fishery symbol  
• reporting through AIVR and logbook  
• quota fee – $1.60 per unit per annum  
• permit fee – $1000 per annum. | • four-month closure to the take of snapper – either in one block or in a number of smaller blocks  
• reporting through existing logbook. |

To help you make an informed evaluation, we have provided a qualitative impact assessment of each option. The impact assessment evaluates the economic and social benefits and costs to each of the fishing sectors. As well as detailed information, a summary of the four options is provided in Table 2 for comparison.

There is no preferred approach identified here—we are seeking feedback on each of the options outlined.

### 6.1 Option 1

**Implement catch shares through a six-week closure to the take of snapper, pearl perch and teraglin for the recreational sector; enhance monitoring of catch for the recreational sector; and introduce an ITQ system for the charter and commercial sectors.**

Proposed new management arrangements for each sector that would be implemented under this option include:

**Recreational fishers**

- The annual notional TAC would be 260 tonnes.
- The operator/owner of a vessel would need to hold a valid permit obtained through the payment of an annual fee of $90 to take snapper.
- Catch records would be mandatory; retaining catch records in a logbook and online reporting of catch to Fisheries Queensland would also be mandatory at the end of each trip.
- A biennial survey of permit holders would be used to review recreational catch levels. Should the catch estimate exceed 260 tonnes, then a management response would take place to reduce the catch.
- A six-week closure for snapper, pearl perch and teraglin would be put in place from 15 February to 31 March each year.
A dedicated education, compliance and enforcement program would be implemented to build awareness and facilitate greater stewardship of the Rocky Reef Fin Fishery.

A combined bag limit of 15 fish for rocky reef fin fish would be introduced.

Bag limits for all individual species would be retained.

**Charter operators**

- The annual TAC would be 32 tonnes.
- Eligible operators would have access to snapper through an ITQ system.
- Annual quota fees would be implemented for the charter sector at $4.28 per unit.
- Quota use would be reported through the AIVR system.
- For each vessel, catch and fishing effort would be recorded in mandatory logbooks. Logbooks would need to be submitted to Fisheries Queensland.
- Extended charter trip bag limit provisions for snapper and pearl perch would be removed.
- Snapper landed on charter vessels would be retained whole or in gilled and gutted form.
- A combined bag limit of 15 fish for rocky reef fin fish would be introduced.
- Bag limits for all individual species would be retained.

**Commercial fishers**

- The annual TAC would be 108 tonnes.
- Eligible operators would have access to snapper through an ITQ system.
- Annual quota fees would be implemented for the commercial sector at $1.60 per unit.
- Quota use would be reported through the AIVR system.
- Catch and fishing effort would be recorded in existing mandatory logbooks and logbooks would need to be submitted to Fisheries Queensland.
- Commercially caught snapper would be retained whole or in gilled and gutted form.
- Commercial take of snapper would be restricted to line methods only, with an incidental limit for net-caught snapper.

**All sectors**

Additional measures that would apply to all fishing sectors include:

- starting the annual snapper quota year on 1 April each year for all sectors.
- retaining existing individual species size limits.

**6.1.1 Impact assessment – benefits**

The benefits of implementing the management arrangements outlined in this option include:

- **Social and economic benefits**: These arrangements would help rebuild the stock, delivering significant benefits to all fishing sectors in the long term by providing a high value (economic or social) fishing experience as well as ensuring that community members can continue to access snapper directly by fishing or indirectly as a consumer. Restricting the commercial take of snapper to line methods only would reduce the potential for social conflict often associated with net fishing in public fishing areas, with minimal economic impact.

- **Ecological benefits**: In addition to the benefits of capping the annual TAC to 400 tonnes, a six-week closure would contribute to rebuilding the snapper stock by reducing recreational fishing pressure by an estimated 14.5%. Removing the extended charter trip bag limit for snapper and pearl perch would contribute to reducing fishing pressure on snapper while impacting only a small number of charter operators. Restricting the commercial take of snapper to line methods only would reduce the risk of localised depletion in areas where targeting can occur.

- **Equitable allocation of catch shares to all sectors**: a sectors’ estimated historical snapper catch would be used as the basis for a proportional allocation of the TAC. Allocating a share of the TAC to each sector is consistent with the Fisheries Act 1994 and is an equitable way to manage the burden of catch reductions.

- **Stronger stakeholder engagement and stewardship of the fishery**: This approach engages users in managing change, integrates recreational fishing into overall sustainability targets and provides opportunities to educate all users about the status of the snapper stock.

- **Better recreational catch estimates**: These arrangements would deliver more precise estimates of the recreational snapper catch.
• **Better catch reporting in the charter sector:** each charter vessel will be identified and required to submit catch records; this will ensure that there is better compliance with catch reporting and enable effective tracking of catch and effort of each vessel.

• **More business security and economic gain for charter operators and commercial fishers:** Allocating ITQs to eligible licences provides for business security and planning for charter and commercial operators and provides a windfall gain estimated between $20 000 and $45 000 for the access rights granted to these operators.

• **Enforcement benefits:** Retaining commercial and charter-caught snapper in whole or gilled and gutted form would assist the enforcement of individual quotas.

### 6.1.2 Impact assessment – costs

The negative impacts of implementing the management arrangements outlined above include:

- **Recreational fishers – increased financial cost and administrative burden of fishing for snapper:** Recreational fishing boat owners would be required to pay a fee of $90 to obtain a vessel permit. This represents an increase in cost; however, it is a relatively small increase in the overall annual cost a recreational fisher would spend on fishing⁶. The permit holder would also expend time and effort to record and report snapper catches where previously this was not required. Restricting access to snapper through a requirement to hold a permit may also impact on the social value of fishing.

- **Recreational fishing support industries – economic impact of closure:** Under a six-week closure, recreational fishers most affected by the timing of the closure will be those fishing the bays, such as Moreton Bay, where snapper are accessible to smaller vessels. Support industries, such as bait and tackle shops, may incur a cost from reduced sales—this would be minimised as other fishing opportunities tend to take precedence in February and March.

- **Limiting charter and commercial access:** Limiting charter and commercial access to the fishery on the basis of commercial reliance raises competition issues; however, this is essential to safeguard snapper and has been developed in ways that minimise the impacts on competition. Using commercial reliance criteria to establish eligibility will result in some existing charter and commercial operations being denied access. The extent of this would depend on the criteria used and is discussed in a separate document outlining the options relating to eligibility criteria and allocation models.

- **Quota fees for charter operators:** For eligible charter licence holders, a quota fee of $4.28 per unit would apply. Buying, leasing or selling quota units would attract quota transaction fees of between $25 and $125 per transaction until online trading for fishers is implemented. Quota holders would also expend time, effort and expense to report snapper catches using AIVR where previously this was not required. New charter entrants to the fishery would be required to purchase access entitlements on the open market.

- **Quota fees for commercial fishers:** For eligible commercial licence holders, a quota fee of $1.60 per unit would apply. Buying, leasing or selling quota units would attract quota transaction fees of between $25 and $125 per transaction until online trading for fishers is implemented. Quota holders would also expend time, effort and expense to report snapper catches using AIVR where previously this was not required. New commercial entrants to the fishery would be required to purchase access entitlements on the open market.

- **Impacts on supply of locally caught snapper:** Limiting the commercial snapper catch is likely to impose a community cost by reducing supply of locally caught snapper.

- **Bag limits:** A combined bag limit of 15 rocky reef fin fish would impact a small number of recreational fishers. Currently, less than 1% of anglers catch a total of 15 rocky reef fin fish or more.

- **Removing the extended charter trip bag limit for snapper and pearl perch:** This would impact a small number of charter operators. In the southern part of the fishery, the majority of charter trips are not extended trips. In the northern part, extended trips are more common and coral reef fin fish are the primary target (with snapper taken incidentally during the winter months).

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⁶ Based on estimates in the National Recreational and Indigenous Fishing Survey in 2000–01.
• **Requirement to retain snapper whole**: Retaining commercial and charter-caught snapper in whole or gilled and gutted form would incur costs. Approximately 1% of commercial caught snapper is landed in filleted form. While some charter clients may prefer their catch filleted on board, inconvenience is likely to be minimal, as charter fishing operators are likely to have sufficient freezer space to store fish retained in this manner.

• **Fishing gear restrictions**: Restricting the commercial take of snapper to line methods only would impact a small number of net fishers. Between eight and 22 commercial fishing boat licences annually have reported taking snapper by net during the period 1999–2008 and less than five net operations specifically target snapper.

### 6.1.3 Regulatory impact

Amendments to the legislation would be required to implement all of the proposed provisions, including a snapper permit for recreational fishers, a permit fee and the six-week closure. ITQ systems are inherently complex, given the reporting, monitoring and auditing requirements necessary to uphold the integrity of the management system. Implementing such a system would result in the addition of this fishery to existing legislation governing ITQs in other fisheries (e.g. the Coral Reef Fin Fish Fishery). Amendments to legislation would also need to be made to clarify definitions relating to take of snapper by recreational fishers on board charter vessels operating under quota.

In terms of the proportionality and effectiveness of the proposed measures, setting a TAC for snapper would be effective in promoting stock rebuilding. Further, allocating ITQs within the charter and commercial sectors may represent a more proportionate or equitable response than a competitive model, with lower associated impacts for existing businesses. Restricting net fishing is a proportionate response as it allows for the significantly reduced TAC to be taken by those line fishers that have demonstrated that snapper is an economically important component of their catch. The restriction will have a low impact on a small number of net operators.

### 6.2 Option 2

Implement the proposed catch shares through a six-week closure to the take of snapper, pearl perch and teraglin for the recreational sector, a competitive TAC system for the charter sector and an ITQ system for the commercial sector, and enhance monitoring of catch for the recreational sector.

Proposed new management arrangements for each sector that would be implemented under Option 2 include:

**Recreational fishers**

Management arrangements differ from Option 1 in that keeping and submitting catch records would be voluntary and the permit fee proposed would be $70 per annum. The management arrangements for recreational fishers for this option are:

- The annual notional TAC would be 260 tonnes.
- The operator/owner of a vessel would need to hold a valid permit obtained through payment of an annual fee of $70 to take snapper.
- Catch records would be voluntary; retaining catch records in a logbook and online reporting of catch to Fisheries Queensland would also be voluntary at the end of each trip.
- A biennial survey of permit holders would be used to review recreational catch levels. Should the catch estimate exceed 260 tonnes, then a management response would take place to reduce the catch.
- A six-week closure for snapper, pearl perch and teraglin would apply from 15 February to 31 March each year.
- A dedicated education, compliance and enforcement program would be implemented to build awareness and facilitate greater stewardship of the Rocky Reef Fin Fish Fishery.
- A combined bag limit of 15 fish for rocky reef fin fish would be introduced.
- Bag limits for all individual species would be retained.

**Charter operators**

- The annual TAC would be 32 tonnes.
- Those operators that are eligible would have access to snapper through a competitive TAC system.
- Eligible licences would hold an authority with an annual fee of $1000.
Licence holders would not have a set share of the TAC; the take of snapper by recreational fishers on charter trips would be prohibited once the 32 tonne TAC has been reached.

For each vessel, catch reporting and the monitoring of the uptake of the TAC would be through mandatory logbooks and reporting catch in real-time using the AIVR system once a specified proportion of the TAC has been taken.

Extended charter trip bag limit provisions for snapper and pearl perch would be removed.

Snapper landed on charter vessels would be retained whole or in gilled and gutted form.

A combined bag limit of 15 fish for rocky reef fish would apply.

Bag limits for all individual species would be retained.

### Commercial fishers

- The annual TAC would be 108 tonnes.
- Eligible operators would have access to snapper through an ITQ system.
- Quota fees would be implemented for the commercial sector and are proposed at $1.60 per unit.
- Quota use would be reported through the AIVR system.
- Catch and fishing effort would be recorded in existing mandatory logbooks and logbooks would need to be submitted to Fisheries Queensland.
- Commercially caught snapper would be retained whole or in gilled and gutted form.
- Commercial take of snapper would be restricted to line methods only, with an incidental limit for net-caught snapper.

### All sectors

Additional measures that would apply to all fishing sectors include:

- starting the annual snapper quota year on 1 April each year for all sectors
- retaining existing individual species size limits.

### 6.2.1 Impact assessment – benefits

The benefits of implementing the management arrangements outlined in this option are the same as those outlined in Option 1 and include:

- social and economic benefits to all sectors
- ecological benefits
- equitable allocation of catch shares to all sectors
- stronger stakeholder engagement and stewardship of the fishery
- better recreational catch estimates
- better catch reporting in the charter sector
- enforcement benefits.

One additional benefit for the charter sector and one additional benefit for the commercial sector apply to this option:

- **Economic gain to the charter operators**: The competitive TAC system for the charter sector would limit the number of charter vessels eligible to operate under the competitive TAC system and deliver appreciable economic benefit to these operators by providing access rights to the fishery. These benefits would be less than the windfall gain resulting from the ITQ system proposed under Option 1.
- **More business security and economic gain for commercial fishers**: Allocating ITQs to eligible licences provides for business security and planning for commercial fishers and provides an estimated gain of between $20 000 and $45 000 for the access rights granted to these operators.

### 6.2.2 Impact assessment – costs

The negative impacts of implementing the management arrangements for this option are the same as those detailed in Option 1 and include:

- recreational fishers – increased financial cost and administrative burden of fishing for snapper
- recreational fishing support industries – economic impact of closure
- limiting charter and commercial access
- impacts on supply of locally caught snapper
- quota fees for commercial fishers
- bag limits
- removing the extended charter trip bag limit for snapper and pearl perch
- requirement to retain snapper whole
- fishing gear restrictions.
Cost impacts of Option 2 that differ from Option 1 include:

- **Recreational fishing fee:** For recreational fishers, a fee of $70 would be required to obtain a vessel permit.
- **Voluntary recreational catch reporting:** This would decrease the value of the recreational catch information provided in the logbooks as the submission of catch returns is predicted to be significantly less under a voluntary system.
- **Charter access fee:** For the charter sector, eligible licenses would hold an authority with an annual fee of $1000. Competitive TAC systems can lead to a ‘race to fish’ attitude, giving operations with larger vessels an advantage. This could compromise the government objectives in relation to minimising business impacts and lead to early closure of the fishery (to the sector) if the TAC is expended before the season ends. The lack of certainty inherent in a competitive system may also disadvantage and discourage smaller charter operations.

6.2.3 Regulatory impact

The regulatory impact under Option 2 is similar to Option 1 with the implementation of a competitive TAC system for the charter sector adding an additional fishery to existing legislation governing such systems in other fisheries (e.g. spotted mackerel and shark).

6.3 Option 3

Implement the proposed catch shares through a reduced bag limit for snapper and an extended closure of the snapper fishery for two months to recreational fishers fishing from private vessels. Introduce a competitive TAC system for the charter and commercial sectors.

Proposed new management arrangements for each sector that would be implemented under this option include:

**Recreational fishers**

- The annual notional TAC would be 260 tonnes.
- The recreational snapper bag limit would be reduced from five to two, with a total combined bag limit of 15 for all rocky reef fin fish.
- A two-month closure for snapper would occur during the quota year. For the closure to be effective, this would need to occur during peak fishing months of June to October.
- The dedicated snapper catch and effort survey outlined in Options 1 and 2 would not be conducted under Option 3 due to reduced financial resources (because of no recreational permit). The estimates of recreational catch would be based on existing statewide recreational fishing surveys conducted by Fisheries Queensland.

**Charter operators**

- The annual TAC would be 32 tonnes.
- Those operators that are eligible would have access to snapper through a competitive TAC system.
- Eligible licences would hold an authority with an annual fee of $1000.
- Licence holders would not have a set share of the TAC; the take of snapper by recreational fishers on charter trips would be prohibited once the 32 tonne TAC has been reached.
- For each vessel, catch reporting and the monitoring of the uptake of the TAC would be through mandatory logbooks and reporting catch in real-time using the AIVR system once a specified proportion of the TAC has been taken.
- Extended charter trip bag limit provisions for snapper and pearl perch would be removed.
- Snapper landed on charter vessels would be retained whole or in gilled and gutted form.
- The snapper bag limit would be reduced from five to two; bag limits for all other individual species would be retained.
- A combined bag limit of 15 fish for rocky reef fin fish would apply.

**Commercial fishers**

- The annual TAC would be 108 tonnes.
- Those operators that are eligible would have access to snapper through a competitive TAC system.
- Eligible licences would hold a fishery symbol with an annual fee of $1000 per symbol.
- Licence holders would not have a set share of the TAC; the take of snapper would be prohibited once the TAC has been reached.
- Catch reporting and the monitoring of the uptake of the TAC would be through existing mandatory logbooks and reporting catch in real-time using the AIVR system once a specified proportion of the TAC has been taken.
• Commercially caught snapper would be retained whole or in gilled and gutted form.
• Commercial take of snapper would be restricted to line methods only, with an incidental limit for net-caught snapper.

All sectors

Additional measures that would be implemented for all fishing sectors include:

• starting the annual snapper quota year on 1 April each year for all sectors.
• retaining existing individual species size limits.

6.3.1 Impact assessment – benefits

The benefits of implementing the management arrangements outlined above include:

• **Unrestricted access to snapper by recreational fishers (no permit required):** Recreational fishers fishing from private vessels would have access to the snapper stock for 10 months of the year; bag limits would apply.
• **Economic gain to charter operators:** Benefits for charter operators are the same as Option 2 in relation to a competitive TAC.
• **Economic gain to commercial fishers:** The competitive TAC system for commercial fishers would limit the number of commercial vessels eligible to operate under the competitive TAC system and deliver appreciable economic benefit to these operators by providing access rights to the fishery. These benefits are less than the windfall gain resulting from the ITQ system under Options 1 and 2.

Benefits of the measures that apply to all sectors have been described under Option 1 and include:

• equitable allocation of catch shares to all sectors
• social and economic benefits to all sectors from stock rebuilding
• ecological benefits from stock rebuilding.

6.3.2 Impact assessment – costs

The negative impacts of implementing the management arrangements for this option include:

• **Value of recreational fishing experience:** There is no direct economic cost to the recreational fisher, but the two-month closure to snapper and a reduced bag limit (to two snapper) will negatively impact on the value of the fishing experience for some fishers and may diminish angler desire to go fishing.

It is estimated that reducing the snapper bag limit to two would impact on less than 15% of anglers. However, support industries would incur a cost if there was a reduction in general fishing activity as a result of the two-month closure to snapper fishing. If the closure occurred during peak fishing months, the impact on the tackle and bait industry could be significant. In the bait and tackle sectors, 50% of sales during the peak winter period can be attributed to snapper fishing—predominantly from Fraser Island to the New South Wales – Queensland border. The costs attributable to a two-month closure may be reduced if the closures are applied in multiple blocks.

• **Recreational catch estimates:** Without additional resources, the biennial targeted snapper catch and effort surveys would not be conducted. The estimates of recreational catch would be based on existing statewide recreational fishing surveys conducted by Fisheries Queensland.
• **Education:** With limited resources for the education and compliance programs, there is limited capacity to build awareness and greater stewardship of the Rocky Reef Fin Fish Fishery.
• **Enforcement in the recreational sector:** Without additional funds, lower levels of compliance with the two-month closure could be expected, presenting a risk to stock rebuilding.
• **Charter access:** For the charter sector, eligible operators will be required to pay an annual fee of $1000 per authority. Competitive TAC systems can lead to a ‘race to fish’ attitude, giving operations with larger vessels an advantage. This could compromise the government objectives in relation to minimising business impacts and lead to early closure of the fishery (to the sector) if the TAC is reached before the season ends. The lack of certainty inherent in a competitive system may also disadvantage and discourage smaller charter operations.
• Commercial access: Eligible commercial fishers would be required to pay a fishery symbol fee of $1000 per annum. The costs associated with a ‘race to fish’ attitude (as described in ‘Charter access’ above) would also apply.

6.3.3 Regulatory impact

Implementation of extended closures and reduced bag limits would require amendments to legislation. Administrative costs of implementation are significantly less than the changes proposed under Options 1 and 2 for recreational fishers and charter operators.

Implementation of a competitive TAC system for the charter and commercial sectors will result in this fishery being added to existing legislation that governs competitive TAC systems in other fisheries (e.g. spotted mackerel and shark).

6.4 Option 4

Implement a four-month closure to the take of snapper, which would apply to all sectors to reduce the total annual catch to 400 tonnes.

In order for the four months to effectively reduce the fishing pressure on snapper, some of the current peak months for landing snapper would need to be included. The four months could be spread throughout the year—in blocks of multiple weeks—or occur as one continuous closure for 16 weeks. With no additional fees there would be limited resources to increase existing enforcement and education programs.

In addition to the closures, the following would apply.

Recreational fishers

• The annual combined bag limit would be 15 fish for rocky reef fin fish.
• Bag limits for all individual species would be retained.
• Recreational catch estimates would be based on existing statewide recreational fishing surveys conducted by Fisheries Queensland.

Charter operators

• For each vessel, catch and fishing effort would be recorded in mandatory logbooks.
• A combined bag limit would be 15 fish for rocky reef fin fish.
• Bag limits for all individual species would be retained.

• Extended charter trip bag limit provisions for snapper and pearl perch would be removed.

Commercial fishers

• Catches would be monitored through existing mandatory logbooks.
• Commercial take of snapper would be restricted to line methods only, with an incidental limit for net-caught snapper.

All sectors

An additional measure that would be implemented for all fishing sectors include:

• retaining existing individual species size limits.

6.4.1 Impact assessment – benefits

The benefits of implementing the management arrangements outlined above include:

• Ecological benefits: this option would achieve a rebuild of the snapper stock, which is simple to enforce and easy to understand provided there is adequate education and awareness of the closures.

6.4.2 Impact assessment – costs

The negative impacts of implementing the management arrangements for this option include:

• Stock rebuilding: The ecological benefits to the snapper stock and the broader ecosystem are at risk from non-compliance with closures and an increase in fishing pressure from continued population growth. There is a potential for significant increases in snapper mortality if fishers continue to fish for other species where snapper occurs.

• Economic and social costs: A four-month annual closure could impose significant economic and social costs on all sectors. These significant costs may reduce the potential for stewardship of the Rocky Reef Fin Fishery.

• Value of recreational fishing experience: Extended closures may significantly diminish anglers’ desire to go fishing even though other species (e.g. coral reef fin fish species and pelagic species like amberjack) could still be fished.
• **Fishing support industries:** It is anticipated that significant costs would be borne by the bait and tackle industry and associated support industries (e.g. the marine sector in the form of lost revenue from reduced sales). Extended closures may impact on recreational fishing tourism and support industries.

• **Recreational catch estimates:** Without additional resources, the biennial targeted snapper catch and effort surveys would not be conducted. The estimates of recreational catch would be based on existing statewide recreational fishing surveys conducted by Fisheries Queensland.

• **Economic impacts on charter operators:** Demand for charter trips may reduce by as much as 25% during closures, leading to a significant reduction in gross income.

• **Economic impacts on commercial fishers:** Approximately 40 licences rely heavily on snapper. These businesses may be significantly impacted. The market for snapper is almost entirely domestic and based on frozen product. Disruptions to supply may occur if sufficient frozen product is not stored prior to closures with loss of market share to other products. The costs attributable to a four-month closure may be reduced if the closures are applied in multiple blocks.

### 6.4.3 Regulatory impact

Extended closures are relatively simple to administer compared to the proposals under Options 1, 2 and 3. Implementation would require amendments to the legislation.

Fishery closures are an effective way to reduce catch. However, extended closures do not meet the government’s objectives of minimising negative social and economic impacts. Also, the use of extended closures may not improve efficiency and security for charter operators and commercial fishers.

### 7. Next steps

To facilitate consultation on the issues in this RIS, we will be holding port meetings between Mackay and Southport from 27 January 2011 to 15 February 2011.

The government will consider community and stakeholder feedback and issues raised through this consultation process. The information will be used in finalising new management arrangements for the fishery.

Implementation of any new management arrangements is expected to commence in 2011–12.

### Definitions: Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABARES</td>
<td>Australian Bureau of Agricultural and Resource Economics and Sciences (formed following the merger of the Australian Bureau of Agricultural and Resource Economics and the Bureau of Rural Sciences in 2010)</td>
</tr>
<tr>
<td>AIVR</td>
<td>Automated interactive voice response</td>
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<tr>
<td>DEEDI</td>
<td>Department of Employment, Economic Development and Innovation</td>
</tr>
<tr>
<td>ESD</td>
<td>Ecologically sustainable development</td>
</tr>
<tr>
<td>ITQ</td>
<td>Individual transferable quota</td>
</tr>
<tr>
<td>NIWA</td>
<td>National Institute of Water and Atmosphere (New Zealand)</td>
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<tr>
<td>PPV</td>
<td>Private pleasure vessel</td>
</tr>
<tr>
<td>RIS</td>
<td>Regulatory Impact Statement</td>
</tr>
<tr>
<td>TAC</td>
<td>Total allowable catch</td>
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