

# Queensland Sustainable Fisheries Strategy

2017–2027





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# Minister's foreword

Our state's fisheries resources are important to all Queenslanders. Our stakeholders range from those who make a living from commercial fishing, recreational fishers who love to wet a line and those who enjoy eating a Mooloolaba prawn, to traditional fishers who have an enduring connection to their sea country and those in the community who want to know that our environment is being cared for responsibly.

The Queensland Government is responsible for ensuring our public fisheries resources are managed and used sustainably. This is an important, but not always easy job. We recognise that our current fisheries management framework is outdated and is not keeping up with community expectations and modern fisheries management practices.

The *Queensland Sustainable Fisheries Strategy: 2017–2027* is the outcome of a significant consultation exercise in 2016, during which we sought views from everyone in the community about where we are now, where we want to be and how we can get there. We received more than 11 000 submissions and the vast majority of respondents indicated support for reform.

This strategy sets out the reform agenda for the next 10 years. By 2027, I expect that we will have a more modern and responsive system of fisheries management, built upon a foundation of better data and research, stronger stakeholder engagement and more responsive decision-making. A key reform will be developing harvest strategies for all our fisheries, to set clear harvest limits and allocate fishery resources in a more transparent manner. We can maximise the benefits and value of this amazing resource, but only if we manage it well.

Unlike the current approach, which has tended to maintain the status quo, moving to best practice fisheries management will adopt the precautionary principle required by the *Fisheries Act 1994*. This means that if the information is insufficient at a particular time to provide confidence in the existing fishing rules to sustainably manage our fisheries, a more conservative approach may be required through clearly defined management actions.

The Queensland Government is committed to delivering the reforms in this strategy. To kickstart the initial implementation we have provided more than \$20 million over the next three years to support the reforms. It's also important that those who derive commercial benefits from a public resource like fisheries should contribute to funding its management. Currently, both the recreational and commercial sectors contribute around \$5 million a year to management through existing fees (commercial licence fees and the recreational use fee on boat registrations). The government does not support the introduction of a recreational fishing licence.

This strategy successfully delivers a number of government election commitments and three actions under the Reef 2050 Long-Term Sustainability Plan. Fisheries reform was identified as one of the six investment priorities in the Reef 2050 Investment Framework. This funding commitment highlights, yet again, Queensland's commitment to protecting the Great Barrier Reef.

I look forward to working with all our stakeholders to progress the reforms in this strategy to ensure more sustainable and economically viable fisheries for all.



**The Hon Bill Byrne MP**

Minister for Agriculture and Fisheries and Minister for Rural Economic Development

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# Summary

The Queensland Government is committed to ensuring fisheries resources are managed in a sustainable and responsible manner that recognises the interests of all Queenslanders.

The current arrangements governing fisheries are problematic, costly to administer, inflexible and increasingly ineffective in ensuring the sustainability of fisheries resources and the economic viability of fishing sectors.

The *Green paper on fisheries management reform in Queensland (2016)* proposed a new vision for sustainable management and outlined a range of challenges and proposed areas of reform. The overwhelming message was that all stakeholders wanted reform in the way we manage fisheries. There was strong support from all sectors for better fishery monitoring, more effective engagement, more responsive decision making and greater fisheries compliance.

The *Queensland Sustainable Fisheries Strategy: 2017–2027* sets out the government's reform agenda for the next ten years, taking into account the public feedback on the Green Paper.

The vision for the future is:

A modern, responsive and consultative approach to fisheries management ensures fishing is a low risk to Queensland's aquatic resources, and these are used in a way that optimises benefits to the community.

This Strategy sets out clear targets to be achieved by 2020 and 2027 and a range of actions to deliver on the vision and targets. There are 33 actions across ten reform areas.

Key actions include: additional monitoring and research (including new technologies); setting clear sustainable limits for each of our fish stocks; working groups and a Sustainable Fisheries Expert Panel to engage stakeholders; establishing harvest strategies for all fisheries which set clear targets for fishery performance, triggers for action, and clear decision rules for the actions that will be taken; piloting regionally based fisheries management; satellite tracking on all commercial fishing vessels; and helping facilitate industry led structural adjustment to reduce the number of fishing licences and improve sustainability and profitability.

To implement the reforms, the Queensland Government will invest in more compliance officers, monitoring and research, improved engagement with stakeholders and more responsive decision-making.

This Strategy will be reviewed in five years to ensure it is effectively delivering the vision for sustainable fisheries management in Queensland and ensure the targets and actions are being successfully implemented.

# Sustainable Fisheries Strategy 2017–2027

## Where we are in 2017

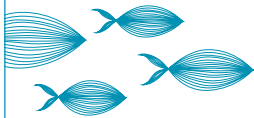
- Data gaps
- Poor engagement
- Slow decision-making
- Low economic benefits
- Some stocks under pressure
- No clear, predictable management actions when there are sustainability concerns

## Where we want to be in 2027

- Improved monitoring and research, including new technologies
- Best practice fisheries management
- Effective engagement
- Clear harvest strategies with trigger points for action
- No overfished stocks
- Improved satisfaction and maximise economic benefits



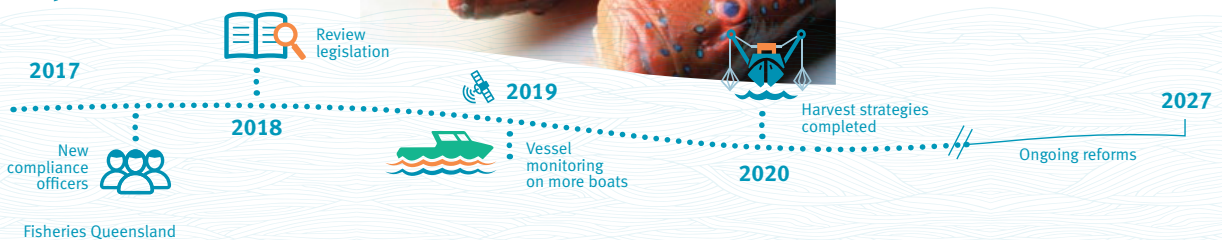
Reforming fisheries management in Queensland. How we will get there?



### Snapshot of actions

- ✓ More monitoring
- ✓ Satellite tracking on all boats
- ✓ Harvest strategies for all fisheries
- ✓ 20 more compliance officers
- ✓ Cultural liaison officers
- ✓ Fishery-specific working groups
- ✓ Independent expert advice
- ✓ Regionally specific fishing rules
- ✓ New technologies, such as cameras on boats and apps
- ✓ Partnering with industry, universities and the community

### Implementation



### Our vision

“A modern, responsive and consultative approach to fisheries management ensures fishing is a low risk to Queensland’s aquatic resources, and these are used in a way that optimises benefits to the community.”



Feedback **11,800**

responses to Green Paper on fisheries management reform in 2016

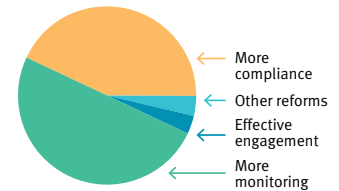
#### We want:

- Better information
- Improved consultation
- More compliance
- Responsive decision-making

### Kickstarting reforms

more than **\$20 million** over **3 years**

New government funding investing in:



# Introduction

Fishing has always been important to our way of life. It was first practised here by the Aboriginal and Torres Strait Islander peoples of Queensland. Coastal Indigenous communities in particular have strong cultural links to the sea and marine animals, both as a source of sustenance and for their spiritual significance. Today, Queensland's fisheries resources are highly valued for their economic, social and cultural contributions to the state.

Our fisheries are diverse and extend across more than 7000 kilometres of coastline, half of which is adjacent to the unique Great Barrier Reef World Heritage Area. Commercial fishers operate regional businesses along our coast that provide employment and fresh seafood to the local community and overseas, while recreational and charter fishing connect Queenslanders with treasured pastimes. Our fisheries resources are a major tourism attraction and an important part of why people visit the Great Barrier Reef.

With so much at stake, it is vital that we carefully manage these resources to ensure they can provide future generations with the same benefits we enjoy today. The common-property and open-access nature of fisheries resources means government has a responsibility to protect them from over-exploitation and sustain a viable resource long-term. The aim is to not only conserve them, but to manage their use to ensure sustainable access.

Sustainable fisheries are important for maintaining a healthy and resilient Great Barrier Reef and delivering fisheries reform is a key action under the Reef 2050 Long-Term Sustainability Plan.

## Vision

Our vision for Queensland's wild harvest fisheries is:

A modern, responsive and consultative approach to fisheries management ensures fishing is a low risk to Queensland's aquatic resources, and these are used in a way that optimises benefits to the community.

## Purpose

The purpose of this strategy is to:

- provide a clear vision for how to best manage access to, and sustainable use of, Queensland's fisheries resources
- provide policy direction for both fisheries managers and stakeholders to guide the reforms necessary to achieve the future vision for Queensland's fisheries over the next 10 years
- target priority reforms in the short and medium term to bring fisheries management up to the necessary standard
- help protect the Great Barrier Reef by ensuring fisheries are managed in a sustainable way within the World Heritage Area.

## Scope

This strategy provides the overarching approach to manage wild harvest fisheries in Queensland, including inland waterways.

The strategy does not cover fishing and boating safety, aquaculture, marine park management or marine habitat impact assessment.

# The case for reform

The current management framework is based on approaches developed in the late 1970s. The arrangements are cumbersome, costly to administer, inflexible and increasingly ineffective in ensuring the sustainability of fisheries resources and the economic viability of fishing sectors. The current framework does not meet modern fisheries management standards and is not sufficient to achieve the future vision for Queensland's fisheries.

Without reform it will be increasingly difficult to ensure and demonstrate sustainability, profitability will continue to decline and community expectations won't be met. Competition for shared resources between sectors will increase with no clear process to resolve these issues.

The most important challenges are:

- gaps in monitoring and research, which limit the ability to make timely, evidence-based decisions
- no clear process for managing fish stocks and resource allocation
- inflexible management that is not keeping pace with best practice fisheries management
- unclear decision-making processes that complicate effective management actions
- a need to shift the focus from preventing overfishing to maximising benefits for the community and ecosystems through sustainable fisheries management practices.

Queensland needs a more modern and responsive system that is transparent and based on good monitoring and research. All stakeholders, including government, will need to be part of the process to achieve the future vision for Queensland's fisheries. The reforms will improve our reputation as a marine tourism and recreational fishing destination, and underpin a commercial fishing sector capable of supplying high quality seafood to market. The reforms will also better recognise the role of traditional fishing.

Unlike the current approach, which has tended to maintain the status quo, moving to best practice fisheries management will adopt the precautionary principle required by the *Fisheries Act 1994*. This means that if the information is insufficient at a particular time to provide confidence in the existing fishing rules to sustainably manage our fisheries, a more conservative approach may be required through clearly defined management actions.

Once this reform process has been completed, Queensland will have some of the world's best-managed fisheries resources. Our fish stocks will be more sustainable, providing greater resilience into the future while supporting and providing better experiences for all fishers.



# Consultation

The *Green paper on fisheries management reform in Queensland: July 2016* was a major step in developing a strategic policy to guide the sustainable management of Queensland's fisheries resources into the future. The green paper outlined the Queensland Government's vision for the better management of wild harvest fisheries, where we want to be and the proposed reforms that are required to get there.

Public consultation on the green paper took place between 21 July and 14 October 2016. A total of 11 800 responses were received, including 192 written submissions, 663 responses to the short online survey and 476 responses to the long online survey. A total of 230 people met with departmental officers to discuss issues at 126 face-to-face meetings.

The result of the consultation was support for reform. There was widespread support for a number of reform areas, including better data, improved compliance, formal engagement mechanisms and more responsive decision-making. There were mixed views about the proposed biomass target of 60%, resource allocation and how the decision-making framework would operate in practice. As a result of the consultation, a number of approaches proposed in the green paper have been modified or further refined.

More detailed information about the feedback received is outlined in the *Results of the fisheries green paper consultation report* available on the Department of Agriculture and Fisheries website at [www.daf.qld.gov.au/fisheries](http://www.daf.qld.gov.au/fisheries).

"If we do not do something we will not have a fishery for anyone."

Recreational fisher



# Targets

## By 2020, we aim to have:

- set sustainable catch limits based on achieving at least maximum sustainable yield for all Queensland fisheries (around 40-50% biomass)
- implemented harvest strategies for all Queensland fisheries, which set clear targets for fishery performance, triggers for action and clear decision rules for the actions that will be taken
- maintained all Commonwealth export approvals
- improved stakeholder satisfaction about engagement mechanisms
- increased satisfaction of recreational fishers (compared to 2017 figures)
- better data for key fisheries to underpin evidence-based management.

## By 2027, we aim to have:

- set sustainable catch limits based on achieving maximum economic yield for all Queensland fisheries (around 60% biomass)
- identified that no Queensland fisheries are overfished
- increased certainty for commercial operators
- reduced the volume of fisheries regulation
- improved trends of compliance rates
- implemented a responsive and consultative approach to fisheries management.

# A more modern and responsive system in 10 years

Given the scale of the reform needed to sustainably manage our fisheries, we have committed to achieving the vision for Queensland's fisheries and implement 10 reform areas over 10 years. The current management approach versus the desired future management approach is illustrated in Figure 1.

<b>2017</b> Where we are now	<b>2027</b> Where we want to be
Basic elements are missing	Management built on firm foundations
Monitoring and research is inadequate to inform management decisions	Fisheries monitoring and research is robust, regular and builds confidence
Ongoing debate about interpreting performance of fish stocks	Sustainable limits are defined for all key stocks/regions
No formal process for seeking stakeholder views	Effective engagement between all stakeholders
No clear system for management of impacts on non-target species	A sound risk-based approach is used to assess impacts on non-target species
Limited options for management tools	Access to best practice tools
Ongoing debate about acceptable harvest levels	All major fisheries are managed by harvest strategies with defined targets
Rules excessively complicated, too much reliance on input controls	Fishing rules are clear, practical and appropriate
Ongoing conflict between sectors over access to the resource	Transparent process for resource allocation
Decision-making is slow and criticised for excessive political influence	Responsive and evidence-based decision-making with clear management actions
Implementation is reactive	Implementation is strategic
Limited resources or capacity to forward plan	Management and reform is adequately funded
Limited capacity to enforce regulations (e.g. black market, crab pot raiding)	Education and compliance is effective and provides confidence

**Figure 1:** The current management approach versus the desired future management approach

# The 10 major areas of reform

This strategy identifies the 10 major areas of reform needed to deliver the vision for Queensland's fisheries. These reforms are grouped into three types—foundational, tools and implementation (see Figure 2).

A number of foundational reforms are needed to underpin sound fisheries management. For example, without improved monitoring and research, better engagement and clear sustainable limits, implementation of new tools such as harvest strategies will not be possible.

Each of the 10 areas of reform include the principles that will be applied to that reform area and the actions that will be taken over the next 10 years to deliver that reform area.

## Foundational reforms

1. Improved monitoring and research	2. Setting sustainable catch limits	3. Improved stakeholder engagement	4. Environmental risk assessments
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## Reform of tools

5. Resource allocation	6. Harvest strategies	7. Fishing rules and access	8. Responsive decision-making
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## Implementing reforms

9. Compliance	10. Resourcing
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**Figure 2:** The three types of reform

## REVIEW OF THE STRATEGY

The strategy will be reviewed in five years, or earlier if progress towards the 2027 targets is not sufficiently on track.

"Data collection has to become as much a part of fishing as putting bait on a hook."

Conservation group

# Foundational reforms

## 1. Improved monitoring and research

Accurate, reliable and timely data is one of the foundations of sustainable fisheries management. Fisheries data may include ecological, environmental, social and economic information. It is collected from various sources, including commercial fishing logbooks, reporting on a fisher's individual share (or 'quota') of the maximum allowable catch, recreational surveys, biological monitoring of priority species and research.

Stakeholders were almost unanimous in wanting better fisheries data. One of the strongest messages from stakeholders was that improvements to fisheries management are not possible with the information currently available. Urgent investment in data collection strategies is required to address data gaps and improve confidence. Without robust monitoring and research, tools such as harvest strategies will be ineffective.

Validation of commercial fishing data (e.g. logbooks) is a critical element to ensure management decisions are based on evidence and provide confidence to stakeholders that the management action is appropriate and our fisheries are sustainable.

No formal system currently exists for obtaining data on the economics of commercial fishing or the economic contribution of recreational fishing. Improved economic and social data will support better resource allocation decisions so we maximise the benefits from our fisheries resources.

Fisheries data will be shared and made publicly available (while respecting individual privacy) to ensure transparency of information and encourage integration of fisheries data with other monitoring programs (e.g. the Reef Integrated Monitoring and Reporting Program, and waterway report cards).

### PRINCIPLES

- Information on fisheries resources is accurate, reliable and timely.
- The public have confidence in the fisheries monitoring and research that underpins sustainable management of fish stocks.
- Information is collected in an efficient way, taking advantage of new technologies.
- Fisheries data is integrated with other monitoring programs.

### ACTIONS

#### Action 1.1

Develop a fisheries monitoring and research plan to outline standards for improved data collection and guide the identification of data needs, resources and priorities to support the implementation of this strategy.

#### Action 1.2

Undertake additional monitoring of key biological stocks to better understand fishery performance and support management actions in a more timely way.

#### Action 1.3

Develop partnerships to trial the use of novel technologies for fisheries monitoring, such as apps, robotic vision, spatial interfaces and mapping, social media and citizen science.

#### Action 1.4

Develop and implement a data validation plan to provide:

- mechanisms to independently validate data on catch and interactions with protected species
- education programs to improve submission of accurate catch data (include promoting a move to electronic logbooks)
- robust systems for checking and forensically analysing incoming data.

#### Action 1.5

Develop and implement a practical and cost-effective system for collection of economic and social data.



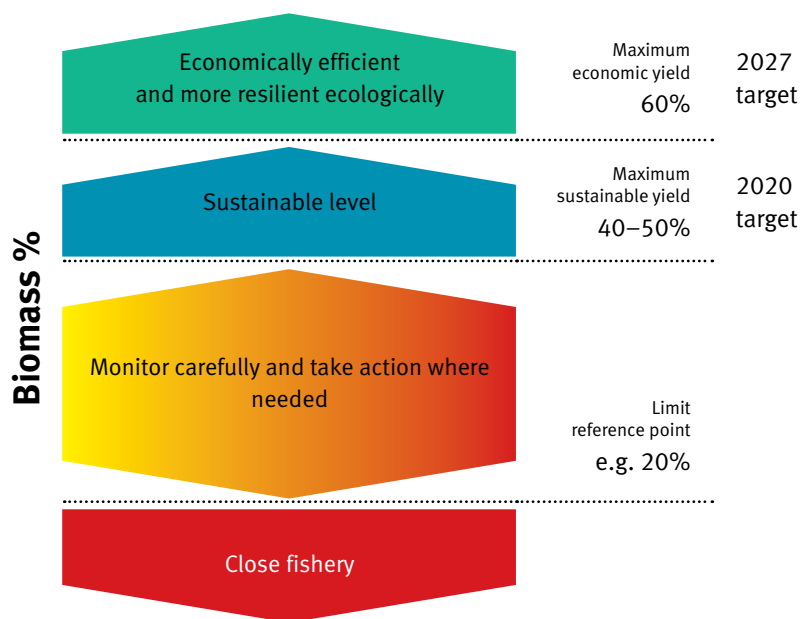
## 2. Setting sustainable catch limits

Ensuring the sustainable use of fisheries resources is the objective of the *Fisheries Act 1994*. Sustainable catch limits and defining the target and minimum limits for sustainability are foundations of effective management.

In general, a fish stock is classified as sustainable when around 40–50%<sup>1</sup> of the original, unfished biomass remains (i.e. before fishing began). Biomass refers to the total weight or volume of fish in a particular place at a particular time, and is an important factor when considering the health and resilience of fish stocks. However, the minimum necessary for sustainability doesn't always promote the most economically efficient use of the resource or a resilient system that can bounce back from other adverse environmental conditions (e.g. floods, bleaching and cyclones) more quickly. A more resilient level is when around 60% of the biomass remains.

Sustainable fisheries are also dependent on healthy ecosystems. Fish species, and the habitats on which they depend, can be impacted by catchment runoff. Environmental drivers will need to be considered when setting sustainable limits.

Targets for Queensland's fisheries resources will be to achieve at least the maximum sustainable yield (MSY), with a longer term target (2027) to build stocks up to achieve the maximum economic yield (MEY) to improve commercial profitability, the quality of fishing and stock resilience (see Figure 3). This is a balanced approach given the mixed feedback received during the green paper consultation about what is the most appropriate biomass target. Setting sustainable catch (and effort) limits will be based on these principles. Sustainable catch limits will also need to take into account some of the drivers of fisheries productivity (e.g. catchment run-off, rainfall and other events) to ensure we are considering broader ecosystem influences.



**Figure 3:** Example of management responses that may apply depending on the health of fish stocks

<sup>1</sup> Department of Agriculture, Fisheries and Forestry 2007, *Commonwealth fisheries harvest strategy: policy and guidelines*, Australian Government.

## PRINCIPLES

- Sustainable catch limits are set for each fish stock based on scientific evidence and the principle of achieving at least the maximum sustainable yield (and moving to maximum economic yield by 2027). In the absence of a specific estimate of MSY from a quantitative assessment, a target of 40–50% unfished biomass should be used.
- Harvest strategies set out fishery-specific targets and limits, along with management actions for achieving them.

## ACTIONS

### Action 2.1

Develop guidelines for how sustainable catch limits should be set, as part of a harvest strategy guideline (see reform area '6. Harvest strategies'). At a minimum, this should include:

- determining how to divide the fishery into smaller units (e.g. fish stocks and/or regions) in order to apply management arrangements at the appropriate scale
- setting catch limits (including sustainable target and limit reference points) for each fishery with an aim to promote the most economically efficient use of the resource, develop a more resilient system and maximise enjoyment for recreational fishing
- determining appropriate time frames to achieve the catch limits
- defining the minimum data requirements to set catch limits (e.g. genetic information, regular stock assessments, economic and social data, and level of risk or iconic status of a species).

### Action 2.2

Using improved data, undertake regular stock assessments (annually or at least every two years) for key stocks to assess the fisheries status against the sustainable target and limit reference points.

"I support sound management of fisheries based on good science and economics."

Commercial fisher



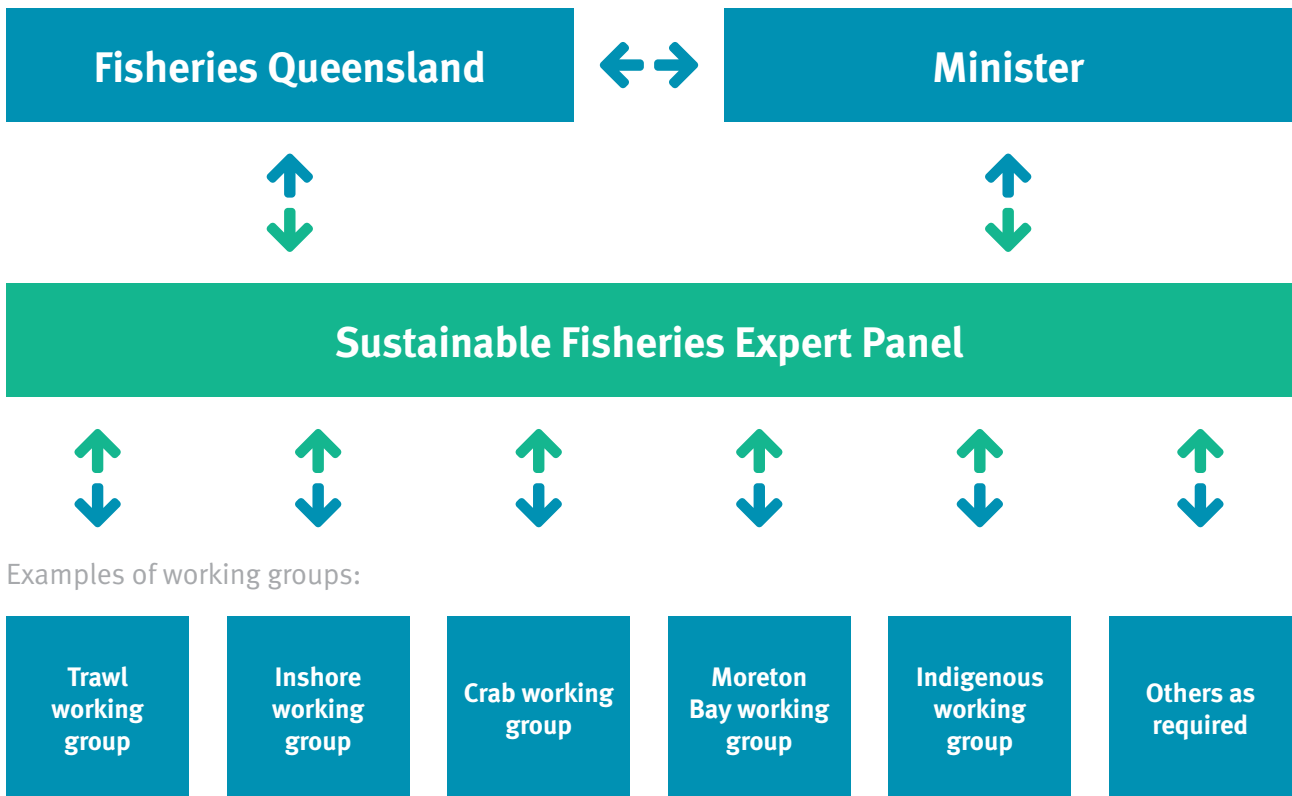
### 3. Improved stakeholder engagement

Effective engagement with stakeholders will be fundamental to the successful implementation of this strategy. The green paper acknowledged that without a formal avenue to provide input on the future of Queensland’s fisheries, stakeholders feel disconnected from the management system. Much of the feedback highlighted the need for ongoing and transparent stakeholder engagement mechanisms that include the broader community as well as all fishers.

A new engagement process will help oversee implementation of this strategy. This will involve:

- an **expert advisory panel** to provide independent advice to the responsible minister and Fisheries Queensland on best practice fisheries management and evidence-based decision-making
- establishment of **fishery working groups** to develop harvest strategies and encourage a greater stakeholder role in providing advice on management options
- Work with **Indigenous groups** and communities through various forums to ensure they are engaged in fisheries management processes, such as fishery-specific harvest strategies.
- use of more **novel engagement techniques** to gather views from stakeholders and the broader community, including more regular information exchange and online methods to seek feedback on particular issues and estimate levels of stakeholder satisfaction.

Figure 4 outlines the reporting arrangements of the new engagement process and Table 1 outlines the roles and membership of the groups.



**Figure 4:** Reporting relationships in the new engagement process



**Table 1: Roles and memberships of the expert advisory group and fishery working groups**

Sustainable Fisheries Expert Panel	
<p><b>Role</b></p> <ul style="list-style-type: none"> <li>• Provide independent expert advice to the Minister and Fisheries Queensland on the appropriateness and feasibility of fisheries management proposals and strategies including options to improve management</li> <li>• Provide advice on sustainable limits and reference points for individual fisheries/species</li> <li>• Provide advice on the adequacy of proposed fishery harvest strategies including whether proposed approaches are likely to meet the relevant objectives and guidelines</li> <li>• Provide advice on data, research and monitoring needs</li> <li>• Provide linkages and advice to other relevant strategic advisory groups (e.g. Reef 2050 Advisory Committee) where needed</li> <li>• Provide advice on other fisheries management issues as requested by the Minister or Fisheries Queensland</li> </ul>	<p><b>Membership</b></p> <ul style="list-style-type: none"> <li>• Independent chair</li> <li>• Members selected based on expertise in: <ul style="list-style-type: none"> <li>– stock assessment</li> <li>– fish biology</li> <li>– fisheries management/resource allocation</li> <li>– threatened species</li> <li>– economics and social science</li> <li>– social and/or cultural matters</li> </ul> </li> </ul> <p><b>Appointment process</b></p> <ul style="list-style-type: none"> <li>• Responsible Minister to appoint members</li> </ul>



"Trust needs to be built with stakeholders through greater transparency."

Recreational fisher

## Fishery working groups

### Role

- Provide operational advice to Fisheries Queensland on particular fisheries
- Assist with the development and implementation of harvest strategies
- Work program set by Fisheries Queensland in consultation with the expert panel
- Working groups established by Fisheries Queensland as required—initial working groups to focus on crab, net and trawl fisheries

### Membership

- Chaired by Fisheries Queensland
- No more than eight members appointed to each working group, made up of commercial, recreational, conservation and Indigenous representatives
- Membership to be refreshed every two years to allow for rotation of different representatives and development of new industry leaders

## PRINCIPLES

- Engagement with stakeholders and Queenslanders on fisheries issues is improved.
- An independent expert panel provides advice to the Minister and the Fisheries Queensland support evidence-based fisheries management into the future.
- Fishery working groups provide a mechanism to engage stakeholders (representing all sectors) in the fisheries management processes.
- Mechanisms to engage the broader community in fisheries management are continually improved.

## ACTIONS

### Action 3.1

Appoint an expert panel to provide independent advice on best practice fisheries management and science in 2017.

### Action 3.2

Establish fishery-specific working groups with rotational membership to provide operational advice and participation to support the harvest strategies, with initial priority working groups to be established by the end of 2017.

### Action 3.3

Work with Indigenous groups and communities through various forums to provide advice on fisheries management issues.

### Action 3.4

Utilise more novel engagement techniques (including online surveys) to gather a range of stakeholder feedback on particular fishery issues.

### Action 3.5

Review the effectiveness of engagement mechanisms in two years (2019).

## 4. Environmental risk assessments

Managing the impacts of fishing activities on non-target species and the broader marine ecosystem is one of the foundations of sustainable fisheries management. Managing the risk of interactions with threatened, endangered or protected species is a requirement for all fisheries that interact with species listed under the federal *Environment Protection and Biodiversity Conservation Act 1999*.

Environmental risk assessments (ERAs) identify and measure the wider ecological risks of fishing activity and identify issues that must be further managed under harvest strategies. An ERA is an analysis of the best available information of fishery impacts on target, non-target and protected species (e.g. dugongs, turtles, dolphins and protected fish) and the broader ecosystem to determine the level of risk posed by fishing.

### PRINCIPLES

- A structured, risk-based approach is used to manage the impacts of fishing on non-target species.
- Species considered to be at high risk are prioritised for management action.
- ERAs will be undertaken in consultation with relevant agencies and stakeholders.

### ACTIONS

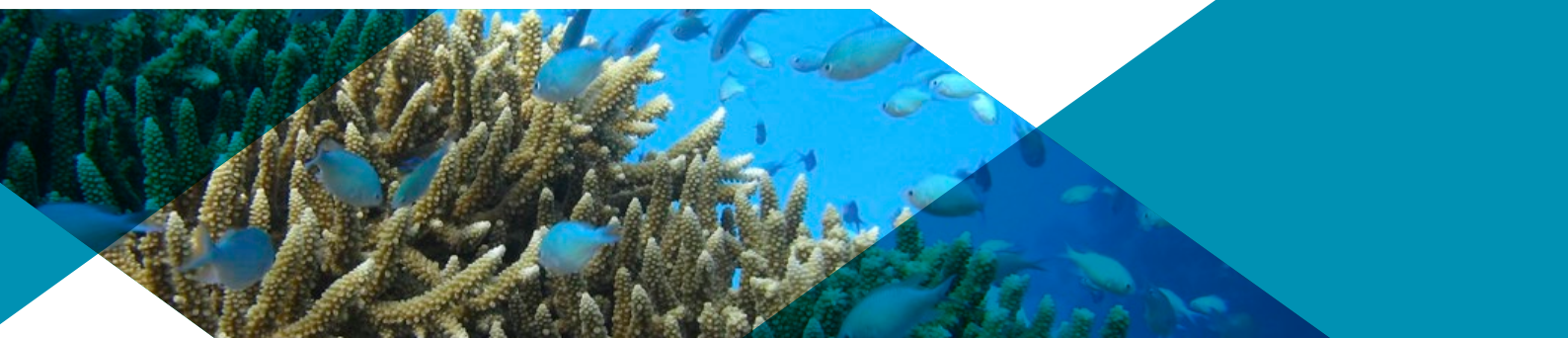
#### Action 4.1

Publish a guideline on assessing the ecosystem impacts of fishing activities, including the process for prioritising and undertaking ERAs. At a minimum, this should include:

- principles for prioritising ERAs according to risk and linked to national standards
- a formal approach for identifying and prioritising management actions to address ERA outcomes.

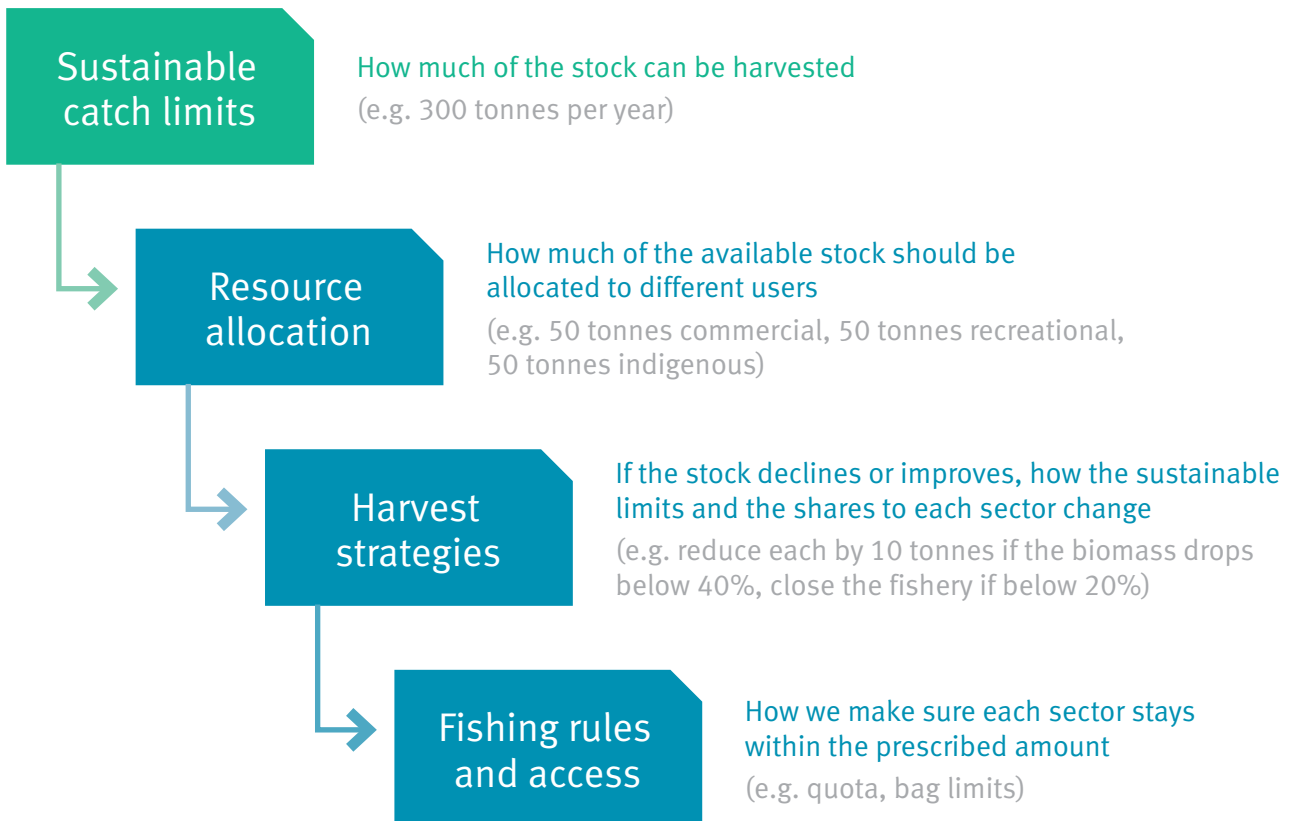
#### Action 4.2

ERAs to be undertaken for priority fisheries or species by the end of 2020 (including for example the East Coast Inshore Fin Fish Fishery, Gulf Fin Fish Fishery and Crab Fisheries), followed by the remaining fisheries.



## Reform of tools

Once sustainable catch limits are defined, a range of management tools are required to allocate access to fisheries resources and set rules for how catch can be adequately controlled to ensure these limits are not exceeded (see Figure 5). To achieve this, a suite of best practice tools (e.g. harvest strategies, a resource allocation policy and regular stock assessments) needs to be developed to deliver more responsive decision-making.



**Figure 5:** The tools needed to ensure sustainable catch limits are not exceeded



## 5. Resource allocation

Access to fisheries resources is complex and challenging. While it would be unreasonable to expect to eliminate all conflicts over the distribution of fisheries resources, adopting a strategic, transparent approach to allocation decisions will help reduce the frequency of conflicts and provide guidance to help resolve them.

If there is competition between sectors for fisheries resources, allocation of access should be based on maximising the economic, social and cultural value that Queenslanders receive from the sustainable use of our fisheries resources.

At times, it may be appropriate to consider reallocation of the proportional take between sectors. This will be done through a formal application process. The applicant will need to demonstrate the need for change and supply sufficient information to substantiate their case. A resource allocation policy will set the process and criteria to decide on any application to reallocate the proportional take between sectors. Reallocation will be a decision made by the responsible minister in order to reflect community interests regarding access to, and use of, fisheries resources.

### PRINCIPLES

- There is clarity about how resources are accessed and shared between different users.
- There is a stable and predictable approach to resource allocation.
- The economic, social and cultural value of fisheries resources are maximised.

### ACTIONS

#### Action 5.1

Develop a resource allocation policy to outline how decisions about allocation and reallocation of access will be made. At a minimum, it should include:

- a transparent and repeatable process with clear reasons for decisions
- opportunities for stakeholder input, with a particular requirement for engagement with affected stakeholders
- criteria for when and how to explicitly allocate fisheries resource access
- the value (economic or social) of the fishery or resource to Queensland
- a method to adequately quantify the benefits to the community
- solutions that are cost-effective and capable of being implemented (regional considerations will be taken into account)
- specific consideration of the Indigenous sector allocations

#### Action 5.2

Determine allocations as an explicit part of harvest strategies for individual stocks or regions.



## 6. Harvest strategies

A harvest strategy is a framework that specifies ‘pre-determined management actions in a fishery for a defined species necessary to achieve the agreed ecological, economic and/or social management objectives’.<sup>2</sup>

Key elements include a process for assessing the biological and economic conditions of the fishery, and decision rules about the corresponding management actions that control the intensity of fishing activity according to the assessment outcomes. Harvest strategies provide clarity about the overall fishery objective, fishery performance targets (see reform area ‘2. Setting sustainable catch limits’), triggers for management action and appropriate management responses. Examples of harvest strategy management actions might include the following:

- If the limit reference point (e.g. 20% unfished biomass) is triggered, the fishery should be closed.
- If a trigger point is exceeded and commercial catch is controlled by individual transferable quotas for commercial fishers and bag limits for recreational fishers, quota and/or recreational bag limits should be reduced.
- If a trigger point is reached, an area closure may be declared over key spawning areas.
- If a trigger level is reached, the stock may be subject to transitional arrangements over the next five years. During the transition, fishing on affected stocks need not be reduced immediately to zero. However, management actions should promote rapid rebuilding of the stock.
- If a trigger point is reached more intensive and data-rich stock assessments may be required to inform management actions.

Some Queensland fisheries stocks are managed according to predetermined decision rules, but no formal harvest strategies are currently in place. Harvest strategies will be developed for each fishery in collaboration with key stakeholders. In addition to the objectives and reference points, harvest strategies will summarise ecosystem risks, measures to minimise impacts on protected species, resource allocation arrangements and fishing rules, providing a complete summary of the arrangements for the fishery or stock.

### PRINCIPLES

- Queensland’s fisheries resources are managed in accordance with harvest strategies.
- Clear conditions are in place to initiate a review or change to management arrangements in a fishery if necessary.
- The process is as simple as possible to provide certainty for fishers and minimise administrative and legislative processes to ensure timely management actions.

### ACTIONS

#### Action 6.1

Develop a guideline on harvest strategies, including a process for how parameters should be set. At a minimum, this will include:

- defining the fishery and its overall objective
- defining reference points for fish stocks (target reference points, limit reference points and triggers for management action)
- defining performance indicators and monitoring activities, as well as the process for assessing fishery performance against objectives
- defining decision rules and appropriate management responses if triggers are reached
- a biennial review to ensure management arrangements remain effective.

#### Action 6.2

In consultation with fishery working groups and the expert advisory panel, develop harvest strategies for all major fisheries by the end of 2020, with a priority to develop trawl, crab and inshore fisheries strategies by the end of 2018.

<sup>2</sup> Sloan, SR, Smith, ADM, Gardner, C, Crosthwaite, K, Triantafillos, L, Jeffries, B & Kimber, N 2014, *National guidelines to develop fishery harvest strategies*, FRDC report—project 2010/061, Primary Industries and Regions, South Australia.

## 7. Fishing rules and access

Once the sustainable catch limits and allocation are set, fishing rules to control the total catch across sectors also need to be set. The types of rules must be suitable to the sector, the fishing methods used and, if appropriate, the region. Feedback from the green paper clearly outlined the need to review the current rules to modernise and streamline them in line with best practice regulatory principles.

Rules to manage access to fisheries resources can be either:

- output controls—which limit the amount of fish taken (e.g. bag limits or catch quotas)
- input controls—which limit the amount of effort (e.g. gear restrictions, vessel restrictions and area or seasonal closures).

As a general rule, fisheries should move to more output controls and quota as they more directly control catch and allow fishers to catch their allowable limit in the most efficient manner. This will require more sophisticated data and quota monitoring frameworks, which will need to be rolled out in parallel. In practice, even if output controls are the main management technique in place, some input controls such as gear, area or vessel limits may still need to be retained, but should be kept simple to reduce complexity of fisheries regulations.

To ensure catch can be limited, rules need to apply to individuals. There are a range of controls, but the preference should be directed towards individual tradeable quotas (in the case of the commercial sector) if feasible. Mechanisms for allocating access may be administrative (e.g. based on catch and effort data) or market-based (e.g. auctions).

In the commercial sector, there are still a range of licences that are not being actively used in some fisheries. This poses a risk, as those licences can be sold and activated, resulting in additional catch and effort being applied, particularly if the fishery is not quota-controlled. An ongoing latent effort policy will be developed to remove inactive licences and prevent increase in effort over time.

In many cases, there may be too many licences operating in particular fisheries. Consideration will need to be given to industry-led structural adjustment processes, to reduce the number of licence holders and improve sustainability and profitability. This will be done in close consultation with industry, as the remaining operators will ultimately benefit from the adjustment and should contribute financially.

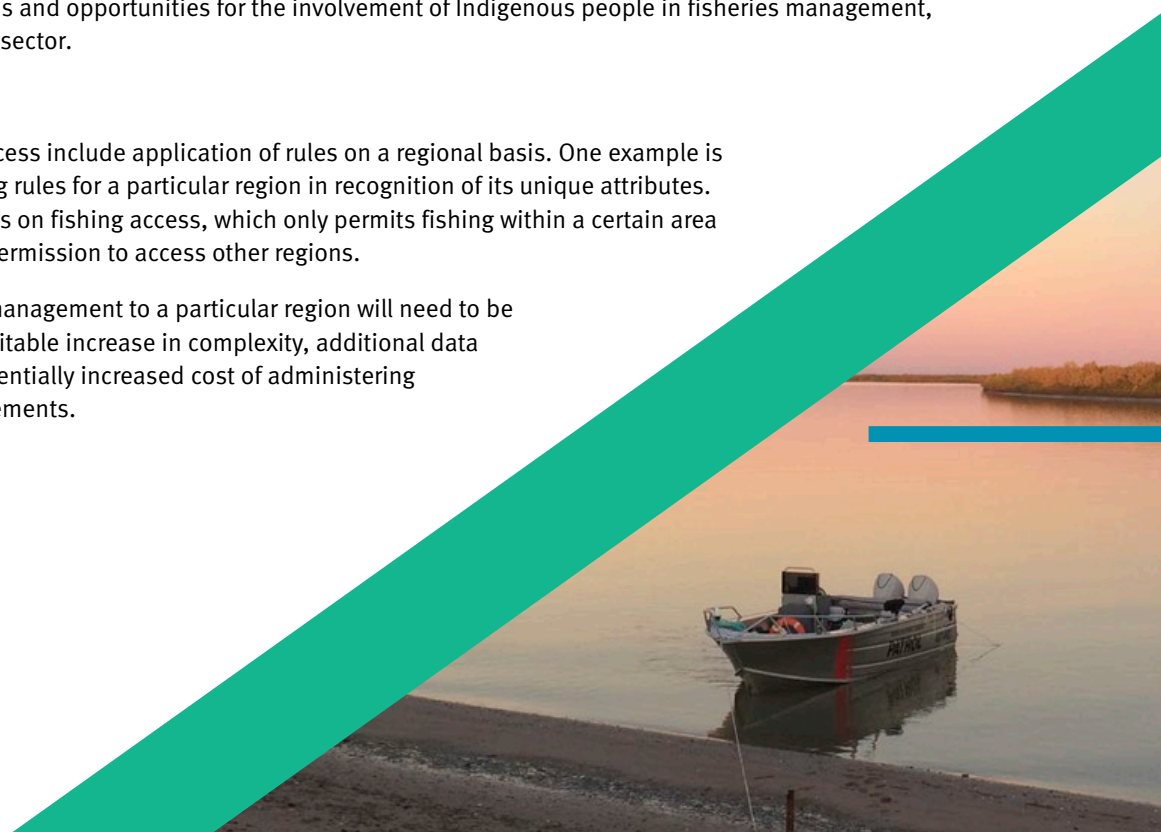
Recreational and traditional fishing must also be managed through a range of simple yet effective rules to ensure the total catch is limited.

The feedback from the green paper also highlighted the need for greater clarity around traditional fishing access rules and to improve the options and opportunities for the involvement of Indigenous people in fisheries management, including the commercial sector.

### Regional management

Options for controlling access include application of rules on a regional basis. One example is developing distinct fishing rules for a particular region in recognition of its unique attributes. Another is area restrictions on fishing access, which only permits fishing within a certain area unless fishers purchase permission to access other regions.

The benefits of tailoring management to a particular region will need to be balanced against the inevitable increase in complexity, additional data requirements and the potentially increased cost of administering multiple localised arrangements.



## PRINCIPLES

- Fishing rules adequately control catch to meet fishery-specific targets and cover all sectors (commercial, recreational, charter and traditional).
- A consistent approach to management arrangements is applied to each fishery (if possible), with a preference for output controls (wherever possible).
- Latent effort is managed to minimise risk of increased effort over time.
- Regionally specific management arrangements are put in place (if appropriate).

## ACTIONS

### Action 7.1

Review fishing rules, regulations and access arrangements as part of developing harvest strategies for each fishery.

### Action 7.2

Amend fisheries legislation to minimise regulation and ensure rules are clear and practical.

### Action 7.3

Implement an ongoing latent effort removal policy to ensure entitlements that aren't being used are not reactivated.

### Action 7.4

Help facilitate industry-led structural adjustment through a range of mechanisms (e.g. two-for-one licence requirements and industry-led buybacks).

### Action 7.5

Pilot regional management in a key location (e.g. Moreton Bay) to assess the benefits and limitations of regionally specific management arrangements.

### Action 7.6

Develop a traditional fishing policy to clarify arrangements and an Indigenous commercial fishing development policy to support Indigenous economic development in a way that supports sustainable fishing.

## 8. Responsive decision-making

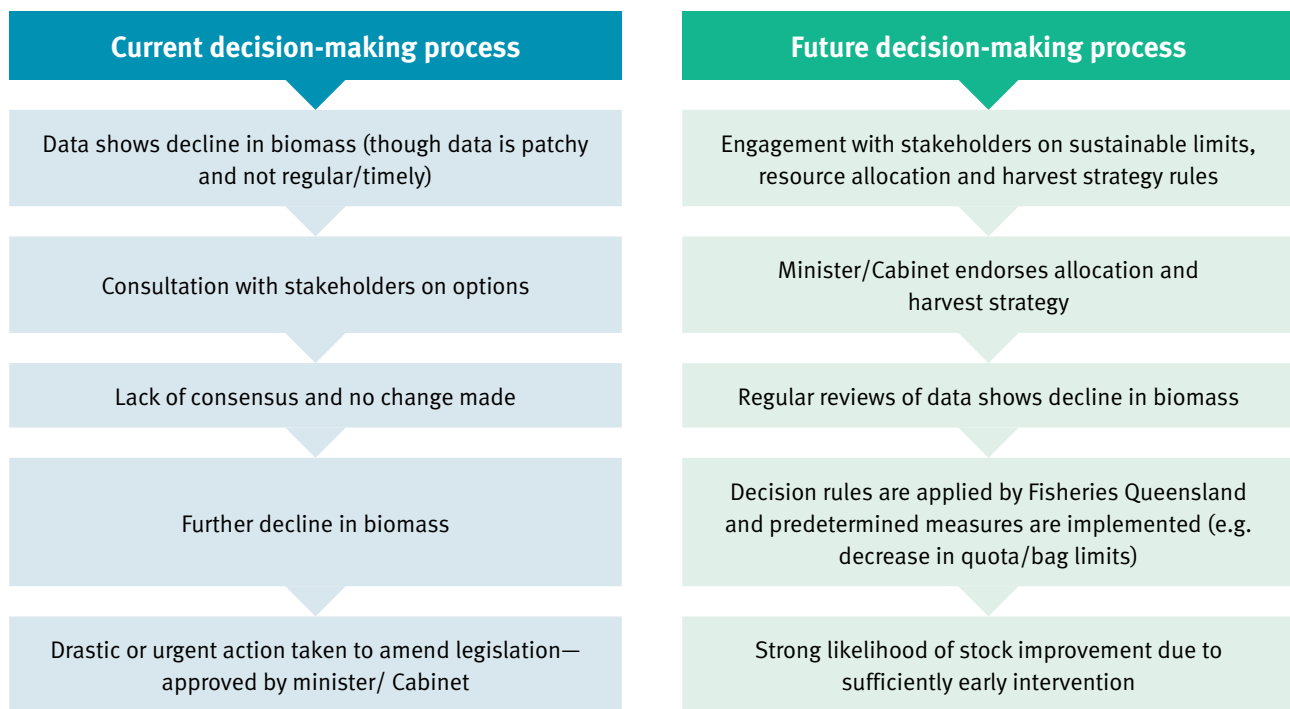
To help facilitate adaptive management of fisheries resources, a more flexible and responsive decision-making framework is needed so operational decisions can be made in a timely manner and are based on scientific evidence. Figure 6 outlines the difference between the current and future decision-making process. The *Fisheries Act 1994* and *Fisheries Regulation 2008* will be amended to clarify the roles of the responsible minister and Fisheries Queensland (as outlined in Table 2).





**Table 2: Decision-making roles of the responsible minister and Fisheries Queensland**

Type of decision	Examples	Level of decision-making
Objectives for fisheries management	Objectives in <i>Fisheries Act 1994</i>	Parliament and government (responsible minister and Cabinet)
Strategic direction for fisheries management on behalf of the community	Overseeing implementation of this Strategy Approval of resource allocation or reallocation	Government (responsible minister)
Day-to-day fisheries management decisions in line with the harvest strategy and technical decisions for the fishery	Decisions to increase or decrease total catch in line with the approved harvest strategy Decisions to close a fishery if a limit reference point is triggered	The management agency (Fisheries Queensland)

**Figure 6:** Current versus future decision-making processes

## PRINCIPLES

- Decision-making responds to changing conditions (e.g. environment and fish populations) in a timely manner but within defined strategic parameters.
- A clear process is in place for deciding when and how fisheries management arrangements are reviewed.

## ACTION

### Action 8.1

Amend the fisheries legislation (*Fisheries Act 1994* and *Fisheries Regulation 2008*) in 2018 to clarify the roles of the responsible minister and Fisheries Queensland, to ensure decision-making is at the appropriate level and is timely and evidence-based, and that rules can be changed via declaration as far as possible to ensure sufficient flexibility.

# Implementing reforms

## 9. Compliance

Fisheries resources and fish habitats are highly valued by the Queensland community. Therefore, an effective compliance regime is essential to maintain the integrity of the fisheries management system. One of the strongest responses to the green paper was support for an increase in compliance effort.

Fisheries compliance activities include monitoring and inspection of fishing activities, investigations into cases of alleged infringement and enforcement in the form of cautions, infringement notices or prosecution (if necessary). Education is a key component of achieving compliance. Fisheries Queensland actively educates the community about fishing rules through a range of educational resources, online content, social media and targeted communication campaigns for specific issues.

Good compliance is typically a balance between encouraging voluntary compliance and appropriate deterrence. This requires effective compliance tools and resources with sufficient powers, particularly to combat the black-market. The black market can affect sustainability because it is unquantified catch that undermines legitimate investment in the industry and poses potential health risks. Stronger powers will bring Queensland in line with recognised best practice.

Queensland is increasingly moving to intelligence-based compliance, which focuses on targeting non-compliant operators based on gathered intelligence, rather than randomly catching people breaking the rules. It also means that the highest risk areas of compliance are the focus, rather than ‘mum and dad’ recreational fishers. This is still balanced with maintaining a regular presence in the field.

### PRINCIPLES

- Compliance activities are underpinned by sophisticated risk assessments.
- An appropriate balance is maintained between an investigation-driven approach and an on-ground presence of compliance field officers.
- Use of electronic technology is maximised to achieve better outcomes with available resources.
- Powers are sufficient to combat illegal fishing activity, in particular black-market sales of seafood.

### ACTIONS

#### Action 9.1

Continue to refine strategic compliance plans to support implementation of this strategy.

#### Action 9.2

Boost compliance resources from 2017–18 onwards.

#### Action 9.3

Undertake a thorough review to strengthen enforcement powers, particularly in relation to serious offences and black-market sales of seafood.

#### Action 9.4

As part of the boost to compliance, establish a cultural liaison role for some Queensland Boating and Fisheries Patrol officers to support education and other community initiatives.

#### Action 9.5

Continue to promote cross-decking with other enforcement organisations (e.g. police, maritime safety and marine parks) and establish formal arrangements to facilitate data sharing and collaborative compliance effort.

#### Action 9.6

Require installation of vessel monitoring systems (VMS) on all commercial boats by 2020, with a priority to install VMS on net, line and crab boats by 2018.

## 10. Resourcing

Managing fisheries effectively requires significant resources, particularly for data collection, engagement and compliance.

Ideally, the community should receive a return for people accessing fisheries as a community-owned resource, with those who benefit paying an amount that is proportional to the benefits they receive. Currently, recreational and commercial fishers contribute approximately 40% of management costs through commercial licence fees and the recreational use fee on boat registrations (around \$5 million per year each). The balance of the funding is provided by the Queensland Government.

Additional funding is required to achieve both immediate management reform and ongoing management improvements. In the short term (over the next three years), additional government funding will enable critical reforms to fisheries management to commence.

Longer term, a resourcing strategy will be needed to ensure there is sufficient resourcing to continue delivering sustainable management of our fisheries into the future. A range of options will be considered, including an increase in the fees paid by fishers who benefit from fisheries resources. This could be achieved by increasing the existing recreational use fee that forms part of vessel registration and commercial fishing licence fees. Feedback from the green paper consultation indicated that a recreational fishing licence was strongly supported, provided the revenue is used to improve the recreational fishing experience (e.g. buyout of commercial net licences or more facilities). However, at this time the government does not support introduction of a recreational fishing licence.

### PRINCIPLES

- Management activities are adequately resourced and forward-planned.
- Those who benefit from access to fisheries resources pay an amount that is proportional to the benefits they receive.

### ACTIONS

#### Action 10.1

In the short term, increase government funding to Fisheries Queensland to implement the reforms set out in this strategy.

#### Action 10.2

In the longer term (by 2020), develop a resourcing strategy based on a beneficiary-pays system. This should include a review of the recreational use fee and commercial licence fees once harvest strategies are in place for key fisheries.



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# Implementation schedule

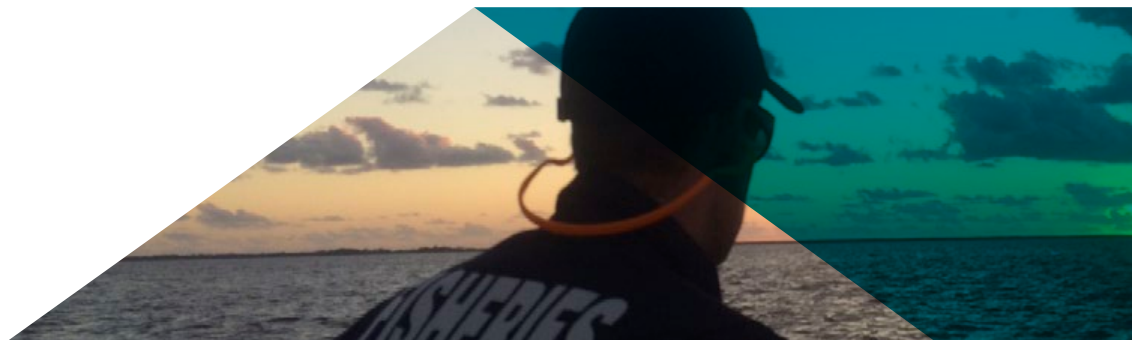
Milestone dates and new investment for all priority actions in this strategy are presented in Table 3. The arrows indicate when the actions will be undertaken.

**Table 3: Implementation schedule—milestones and new investment**

Reform area	Actions	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	Ongoing
		1. Improved monitoring and research	↑		↑	↑	↑	↑
2. Setting sustainable catch limits	1.1 Monitoring and research plan	↑						
	1.2 Additional biological monitoring			↑				
	1.3 Partnerships for novel monitoring technologies			↑				
	1.4 Data validation plan for quota management			↑				
	1.5 System for collecting economic and social data			↑				
3. Improved stakeholder engagement	2.1 Guideline for setting catch limits (see '6.1 Harvest strategy guideline')	↑						
	2.2 Regular stock assessments for each fishery			↑				
3. Improved stakeholder engagement	3.1 Establish expert panel	↑						
	3.2 Fishery-specific working groups						↑	
	3.3 Work with Indigenous groups through various forums to provide advice on fisheries issues						↑	
	3.4 More novel techniques (like online surveys)						↑	
	3.5 Review engagement mechanisms after two years							↑

Reform area		Actions						
		2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	Ongoing
4. Environmental risk assessments	4.1 Guidelines on assessing ecosystem impacts	↑						
	4.2 Environmental risk assessments (ERAs) to be undertaken for priority fisheries or species by the end of 2020 (including the inshore and crab fisheries)	↑		↑				
	– ERAs for remaining fisheries on a priority basis				↑			
5. Resource allocation	5.1 Establish a resource allocation policy	↑						
	5.2 Determine proportional allocations for each sector (see '6. Harvest strategies')							
6. Harvest strategies	6.1 Harvest strategy guideline	↑						
	6.2 Develop harvest strategies for trawl, crab and inshore fisheries by the end of 2018.	↑		↑				
	– Develop harvest strategies for remaining major fisheries by the end of 2020.				↑			

Reform area		Actions						
7. Fishing rules and access	7.1 Review fishing rules	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
8. Responsive decision-making	7.2 Amend legislation to ensure rules are clear and practical	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
7. Fishing rules and access	7.3 Latent effort removal	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
7. Fishing rules and access	7.4 Help facilitate industry-led structural adjustment	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
7. Fishing rules and access	7.5 Pilot regional management	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
7. Fishing rules and access	7.6 Develop a traditional fishing policy and Indigenous commercial fishing development policy	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						
8. Responsive decision-making	8.1 Amend fisheries legislation to ensure decision-making is at the appropriate level	2017-18	↑					
		2018-19	↑					
		2019-20	↑					
		2020-21						
		2021-22						
		2022-23						
		Ongoing						



Reform area		Actions								
9. Compliance	9.1 Continue to refine strategic compliance plans 9.2 Boost compliance effort 9.3 Strengthen enforcement powers—serious offences 9.4 Establish cultural liaison officer roles 9.5 Continue cross-decking and formalise collaborative arrangements with other enforcement organisations 9.6 Require vessel monitoring systems (VMS) on all commercial boats—primary vessels, with quota	2017–18	↑	↑	↑	↑	↑	↑	↑	
		2018–19								
		2019–20								
		2020–21								
		2021–22								
		2022–23								
10. Resourcing	10.1 Increase government funding to implement strategy reforms 10.2 Review existing fees	2017–18	↑	↑	↑	↑	↑	↑	↑	
		2018–19								
Strategy review	Review the strategy	2017–18								
		2018–19								
		2019–20								
		2020–21								
		2021–22								
		2022–23								
		Ongoing								





## More information

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