

Sustainable Fisheries Strategy

2017–2027

Discussion paper Reform of the east coast inshore fishery

Why is reform needed?

The Queensland Government released the Sustainable Fisheries Strategy 2017 - 2027 (the strategy) in June 2017, paving the way for Queensland to have a world-class fisheries management system. The strategy recognises Queensland's current fisheries management system is cumbersome, costly to administer, inflexible and increasingly ineffective at ensuring sustainability of our fisheries. It is not keeping up with community expectations or supporting the viability of Queensland's commercial fisheries or modern fisheries management practices.

A key action is to implement harvest strategies for all fisheries by 2020, with a priority on east coast inshore, trawl and crab initially. A harvest strategy is a framework that specifies pre-determined management actions for a defined species necessary to achieve the agreed ecological, economic and/or social objectives (e.g. how much catch quota or bag limits should go up or down depending on the biomass of the fish stock).

The east coast inshore fishery is one of the most complex in Queensland. It covers dozens of species along the east coast and multiple types of commercial gear (mesh net, ocean beach haul, tunnel net, line, and bait net). Many of the main species in the fishery are also targeted by recreational fishers. The number of commercial licences in the fishery has been reduced significantly in recent years, with more than 120 licences removed. Less than large 200 mesh net licences remain. There are also 22 tunnel net licences and 36 ocean beach licences and around 280 bait net licences.



Positives for the fishery

- no significant sustainability concerns for most target species
- 120 licences removed in the last five years
- less than 200 large mesh net licences remaining
- lots of closures in place (spatial and seasonal)
- most size limits allow species to breed at least once
- important fishery socially - enjoyment and local seafood.



Issues

- protected species interactions
- some target species concern (eg some species of shark, but not all)
- need to improve gear selectivity
- netting rules are highly complex, giving little flexibility or room for innovation
- conflict between sectors
- black marketing of some species (eg black jew)
- some species not protected by any size or bag limit and catches are increasing (e.g. squid and sweep)
- complex size and bag limits.

The fishery is important to many Queenslanders – it supports many small fishing businesses and provides fresh local seafood like barramundi, flathead, mullet and small mackerels. It also supports recreational fishing for many bread and butter species like bream and whiting and sport fishing for species like the iconic barramundi, jewfish, mangrove jack, giant trevally and others.

Unfortunately, the fishery does not have the fundamental management structure in place to allow for a harvest strategy that responds to changes in stock abundance or other circumstances. For example, if

there were concerns about barramundi, it would not be possible to constrain the catch or effort on that particular species to rebuild the stock. The fishery will require management reform before a harvest strategy can be developed.

Current management is based on a series of very complex input controls (e.g. mesh and net sizes, net numbers specific to areas, and spatial closures) to control commercial catch. There are a multitude of closures including marine park closures, dugong protection areas, seasonal closures (e.g. barramundi), and fishery closures (e.g. river mouths). Recreational catch is controlled through a series of size and bag limits, although there are a number of fish species with no size limits or recreational possession limits.

While there are currently no significant sustainability concerns for most target species (e.g. barramundi, mackerels, whiting, mullet) in this fishery, there are a number of stocks where further information and management is required to ensure sustainability throughout the fishery (e.g. some species of shark). Stakeholders regularly identify concerns around localised depletion and the need to manage stocks at a finer scale than the entire east coast.

There are concerns about the level of interaction with threatened, endangered and protected (TEP) species like turtles, dugong and dolphins. It will be important in future management arrangements to demonstrate that the fishery poses no unacceptable risks to protected species or bycatch through a range of mechanisms like more selective gear technology, more innovative management and promotion of better fishing practices. This will also be critical to maintaining *Commonwealth Environment Protection and Biodiversity Act 1999* approvals that enable product export and exempt fishers from prosecution for interactions with protected species.

Community support and confidence in the management of this fishery is required to ensure ongoing access to fisheries resources by all sectors, particularly commercial fishers and their customers. Better and more accurate data are needed to build confidence in the fishery. It is important to set a clear vision for the future of this fishery to effectively and sustainably manage the catch of all fishers and reduce conflict between stakeholders.

About the Queensland east coast inshore fishery

The east coast inshore fishery is Queensland's largest fishery, by geographical size, extending across all tidal waters along Queensland's east coast eastward of 142°E near Crab Island (approximately 11°S) on Cape York, to the New South Wales border. It is also the most diverse fishery, supporting a range of commercial, recreational, charter and Indigenous fishing activities.

The commercial sector is Queensland's third most valuable commercial fishery, targeting a wide range of fish species. The most common commercial gear type is mesh net, however some species are also taken commercially by hook and line (e.g. school mackerel).

Recreational fishing also provides an important source of enjoyment with a majority of Queensland's 642 000 fishers who access the inshore fishery annually to catch common species like bream and whiting and sport fish like the iconic barramundi, jewfish, mangrove jack, giant trevally and others. Recreational fishing provides important social and economic benefits to Queenslanders. A section of the recreational community also targets inshore fin fish species using spears and spear guns.

Aboriginal and Torres Strait Islander communities commonly use traditional subsistence fishing methods (including netting) for traditional and customary purposes.

The fishery is heavily influenced by environmental drivers (e.g. rainfall, broader climate trends, temperature, river flow, water extraction and water quality) with many species depending on critical environmental factors

to enable spawning, recruitment and migration. Coastal development, agricultural practices and runoff water quality and habitat degradation also impact this fishery heavily.

Draft fishery objectives – where we want the fishery to be

Fishery objectives are designed to set out the direction and aspirations for the fishery. Effective harvest strategies rely on ecological, social and economic objectives that have been set in consultation with stakeholders to determine what the harvest strategy is trying to achieve. While each fishery is different, the strategy and the *Fisheries Act 1994* (the Act) specify certain policy objectives and targets that must be achieved. Ecological objectives will have priority over socio-economic objectives. The draft fishery objectives have been developed with advice from the east coast inshore working group.

Ecological objectives	Social and economic objectives	Management objectives
<ul style="list-style-type: none"> • achieve Sustainable Fisheries Strategy biomass objectives for target and by-product species • minimise risk of localised depletion • understand fishery interactions and impacts on bycatch, TEP species • demonstrate there is no unacceptable risk to bycatch, TEP species and the ecosystem • actively pursue testing and implementation of new and effective technologies to minimise ecological risks. 	<ul style="list-style-type: none"> • maximise commercial economic benefits for all sectors • maximise value of the commercial product • increase certainty and security of access for commercial fishers • increase recreational fishing satisfaction • improve the social benefits of the fishery to the community • ensure availability of locally caught seafood in Queensland • maintain Aboriginal and Torres Strait Islander communities' access for traditional fishing • reduce competition and conflict within and between sectors • reduce waste and bycatch. 	<ul style="list-style-type: none"> • ensure fisheries management is meeting the expectation of the sectors and community • improve data to inform management decisions and undertake assessments • manage excess capacity to improve socio-economic benefits and minimise the risk of overfishing • reduce complexity of fishing rules.

Ecological objectives

Achieve Sustainable Fisheries Strategy 2017 – 2027 biomass objectives for target and by-product species

This objective is identified in the strategy to achieve specific biomass targets for stocks. The aim is to achieve at least 40-50% of the original unfished biomass by 2020 and 60% by 2027. The specific targets for each target and by-product species will be outlined in the operational components of the harvest strategy. While biomass estimates can be obtained for many species, direct estimates of biomass may be more difficult for many other species and proxies, such as catch rates, may need to be used. It is recognised that many inshore species are linked to environmental drivers like river flow and this needs to be taken into account.

Minimise risk of localised depletion

Localised depletion describes significant and persistent reduction in the abundance of a species over a defined area, compared with the abundance of the species over its whole stock. It occurs when more fish are removed from an area by fishing than can be replaced by recruitment, movement and migration.

Species that are targeted most and don't move very much are most vulnerable. The situation will be made worse if the whole stock is below biomass target levels because there are less fish to move into the depleted area. Localised depletion can be hard to measure because of the fine-scale data requirements. The aim of this objective is to reduce the vulnerability of target and by-catch species to localised depletion from fishing.

Understand fishery interactions and impacts on bycatch, TEP species

Continuous improvement is required to better understand fishing interactions with bycatch and TEP species like dugong, turtle and dolphins. A key information source will be environmental risk assessments, a commitment under the strategy, which will identify fishing risks that require further management. This objective is necessary to provide community confidence that fishing is a low risk. It also addresses the *Environment Protection and Biodiversity Conservation Act 1999* and current wildlife trade operation conditions for improved reporting and data validation.

A key component is the need for validating relevant data and information (catch logbooks, species of conservation interest logbooks) to improve understanding of fishery interactions on bycatch and TEP species, and also demonstrate there are no unacceptable risks. The implementation of vessel tracking, a data validation plan and investigation of novel technologies (e.g. cameras / digital observers / citizen science / apps) will be a critical to achieving this objective.

Demonstrate there is no unacceptable risk to bycatch, TEP species and the ecosystem

Some components of the fishery have significant bycatch and TEP issues that are well recognised and they must be actively managed within community expectations to ensure fishing doesn't threaten population viability. It will be important to demonstrate there are no unacceptable risks.

Actively pursue testing and implementation of new and effective technologies to minimise ecological risks

This objective is about minimising the risk of fishing and actively seeking and promoting solutions to minimise bycatch, primarily focussed on avoiding interactions with TEP species through gear and management innovation, education and novel technologies. Innovation should be encouraged in terms of gear technology to improve selectivity (similar to the arrangements with bycatch reduction devices in the trawl fishery). Attendance rules, soak times, avoidance strategies and other fishing practices are important and should be better communicated through training to ensure adoption.

Socio-economic objectives

Maximise commercial economic benefits for all sectors

The fishery is economically important, particularly in regional communities where other employment opportunities may be limited. Maximising fishing economic benefits is linked to the objective to build fish stocks to around 60% of the original unfished biomass by 2027. A higher biomass not only supports resilience, but also supports optimal fishing efficiency. The intent being that commercial and recreational fishers will get a better rate of return for their effort that is only possible when a larger biomass of fish is available.

There should also be sufficient return on investment to encourage commercial fishers to improve their operations and innovate. Ensuring flexibility so fishers can respond to the availability of fish at different times, environmental conditions and market issues is important in supporting the return on investment and viability of the fishery and support businesses (e.g. seafood wholesalers and retailers, fishing equipment freight and ice supplies).

The recreational sector also supports regional economies and onshore businesses such as tackle and boating shops and hire services. Where fishers travel to locations to fish there are also benefits to accommodation and food supply businesses. Fishers (and non-fishers accompanying them) are also likely to support other tourism businesses.

The commercial benefits from charter fishing businesses are similar to those of the recreational sector. Charter fishing also creates additional small businesses which themselves use a diverse range of local services (e.g. accounting, banking, repair).

Consideration should also be given to providing indigenous communities economic development opportunities from fishing, which in some communities is one of the few options available.

Maximise value of the commercial product

This objective is intended to encourage the highest value of the commercial product, by ensuring it is caught at the best size for market preferences, when supply is required and in the best condition. A clean, green, sustainable image of the fishery will also promote higher value. It is also acknowledged that the market needs a continuity of supply and critical mass of fishers to sustain the amount of product and increase value.

Increase certainty and security of access for commercial fishers

Many commercial fishers find it difficult to invest in their fishery for the long term because of uncertainty in management. Having clear operating conditions and security of access will allow fishers to increase their stewardship of the resource.

Increase recreational fishing satisfaction

The strategy has a clear target to increase the satisfaction of recreational fishers, including those who fish recreationally with charter operators. Satisfaction may range from just being on the water, to being able to catch a quality fish, to being able to feed their family.

Charter fishing operators also benefit commercially from satisfied customers who are more likely to provide return business and recommend the experience to others.

Improve the social benefits of the fishery to the community

This objective aims to recognise the flow-on effects and benefits for regional communities from fishing. These include direct employment as well as a range of support services that might otherwise cease to exist if fishing were not present. This is particularly important in regional areas where many diversified small businesses rely on income generated by fishers during quieter times of the year.

Ensure availability of locally caught seafood in Queensland

The availability of locally caught seafood is important to the community, particularly those unable to catch it for themselves. Seafood supply is also an important part of Queensland's way of life. The east coast inshore fishery supplies a range of seafood and this objective intends to recognise the value of locally caught seafood in Queensland.

Maintain access of Aboriginal peoples and Torres Strait Islanders' access for traditional fishing

Access to traditional fishing is important to many Aboriginal peoples and Torres Strait Islanders as a way of remaining connected to culture and providing a source of food. The purpose of this objective is to ensure that Aboriginal peoples and Torres Strait Islanders' access to fisheries resources is recognised in Queensland and Indigenous communities are involved in the sustainable management of fisheries.

Reduce competition and conflict within and between sectors

Reducing competition and conflict within sectors allows for more efficient and enjoyable fishing which would be further enhanced with management options preventing a race to fish. There is often conflict between sectors (e.g. recreational and commercial) over how the resource is shared and accessed. Mechanisms to reduce this conflict and recognise the importance of each of the sectors will be needed.

Reduce waste and bycatch

This objective aims to maximise the value and improve social perceptions by reducing waste and bycatch. It recognises that the management of a fishery can have undesirable outcomes for waste and bycatch if it is not actively monitored and adjusted to change fisher behaviour.

Management objectives

Ensure fisheries management is meeting the expectation of the sectors and community

The community wants to have confidence in the management of the fishery. This includes appropriate monitoring, stakeholder engagement, compliance and responsive management. The community also expects that government agencies will work together on shared issues like ecosystem health, which is critical to productive fisheries.

Improve data to inform management decisions and undertake assessments

This objective is identified in the strategy and is intended to improve the accuracy, reliability and timeliness of data and stock assessments to support sustainable fisheries management. The department developed a monitoring and research plan to prioritise information needs and this will be critical to achieving this objective.

Manage excess capacity to improve socio-economic benefits and minimise the risk of overfishing

This objective recognises that from time to time excess capacity within a fishery will have adverse impacts on sustainability as well as the capacity to achieve the socio-economic objectives for the fishery. To achieve this objective the catch of all sectors must be set based on sustainable limits.

Reduce complexity of fishing rules

The rules in place for this fishery are highly complex and need to be simplified. The volume of fisheries regulation should be reduced and fishing rules should be clear and practical.

Matters to consider

Do you agree with the proposed fishery objectives?

Would you recommend any changes? If yes, what and why?

Splitting the fishery up – proposed management regions

The strategy requires that fisheries be divided into management 'units'. A management unit may be the target species, biological stock boundaries, a geographical boundary related to the fishery, gear or combination of these. In most, but not all cases, the unit will be based on specific geographical regions that

allow for management arrangements to be applied at the appropriate scale the strategy states that the preference is to manage to the stock level. Setting the management regions to the appropriate scale is important to ensure that future management actions are responsive (e.g. being able to adjust quota or effort units in one region up or down rather than the entire east coast).

The management region will become the scale at which harvest strategies are set up and the fishery is structured (e.g. if the fishery moves to quota or effort units, these would be allocated to each of the regions and adjusted up and down with the stock). This avoids blunt management changes like closing the entire fishery if there are concerns about a particular species in a particular area.

Management regions based strictly on a single species stock boundary are not currently practical for this fishery because of the large number of species targeted, multiple species in a single area, limited selectivity associated with gear used and limited information available about some stock structures. There are also regional considerations to take into account to maximise socio-economic outcomes for the fishery.

The draft management regions for the east coast inshore fishery are based on input from the east coast inshore working group (Table 1). They were drafted by looking at the stock boundaries for various species. They are designed to be a practical 'best fit' given the complex nature of the fishery and the species it targets.

Consideration was also given to having two offshore management regions (north and south). However, there are issues with an inshore / offshore split. The species caught further from shore such as shark and the various mackerel species are also caught close to shore and splitting quota, total allowable commercial catches or effort quotas would be difficult for these species. There is significant difficulty in defining a practical, enforceable 'line' between inshore and offshore, based on depth or location.

Consideration could be given at a future time to splitting off Moreton Bay as a separate management region, depending on the recommendations from the trial of regional management which is to be piloted in Moreton Bay.

A map is at **Attachment 1** displaying the possible boundaries.

Management region	Map No.	Possible boundary	Species covered
Far north	1	10°30'S north of Cape York to 15°00'S, just north of Cooktown	barramundi, threadfin, shark, grey mackerel, other species
North	2	15°00'S, just north of Cooktown to 18°30'S, near Lucinda	barramundi, threadfin, queenfish, shark, grey mackerel, other species
North / central	3	18°30'S, near Lucinda to 20°30'S, near Cape Conway	barramundi, threadfin, shark, grey mackerel, queenfish, other species
Central	4	20°30'S, near Cape Conway to 22°30'S, near Rockhampton	barramundi, threadfin, shark, grey mackerel, other species
South / central	5	22°30'S, near Rockhampton to 24°30'S, Baffle Creek	barramundi, threadfin, shark, grey mackerel, other species
South	6	24°30'S, Baffle Creek to the Queensland / NSW border	barramundi, threadfin, bream, whiting, flathead, mullet, tailor, shark, small mackerels, other species

Table 1: Draft management regions for the east coast inshore fishery

The catch and effort data for each of the proposed management regions are presented in Table 2. While the number of line licences reporting catch of east coast inshore species is greater than the number of net licences, the net catch makes up approximately 95% of the catch. The proportion of catch of inshore species by net shows an increasing trend from north to south (e.g. net catch makes up 63% in the far north and 97% in the south). The table also shows the different regionally important species by proposed management region.

Management Region	Effort (number of licences reporting catch)	Effort (total days where catch reported)	Total catch (tonnes)	Top five species (most to least, by weight)
Far north	Net – 11 Line – 39	Net – 204 Line – 642	Net – 31 t Line – 18 t	blacktip sharks, barramundi, garfish, grey mackerel, king threadfin
North	Net – 36 Line – 104	Net – 1705 Line – 1789	Net – 189 t Line – 46 t	queenfish, king threadfin, barramundi, blue threadfin, mullet
North / central	Net – 57 Line – 73	Net – 2143 Line – 1785	Net – 443 t Line – 39 t	grey mackerel, barramundi, blacktip shark, queenfish, blue threadfin
Central	Net – 51 Line – 84	Net – 1778 Line – 1933	Net – 232 t Line – 54 t	barramundi, king threadfin, grey mackerel, blue threadfin, javelinfish
South / central	Net – 47 Line – 76	Net – 1542 Line – 568	Net – 190 t Line – 15 t	barramundi, mullet, blue threadfin, grey mackerel, king threadfin
South	Net – 163 Line – 164	Net – 11814 Line – 3563	Net – 2631 t Line – 83 t	mullet, whiting, bream, garfish, school mackerel

Table 2: Catch and effort in the proposed east coast inshore fishery management regions.

Note: Data includes fish caught under the approximately 280 N11 fishery symbols using various nets of less than 45 mm mesh size, for bait and human consumption in addition to the 86 N1 and 94 N2 symbols (2016 data).

Matters to consider

Do you agree with the draft management regions?

Do you think there is a better way to split the fishery up? If yes, how?

Draft management options

Many of our fisheries do not have the right management structure in place to allow for a harvest strategy that responds to changes in stock abundance or other circumstances. Collectively, the fishery objectives,

management regions and management options will set up the fishery for a harvest strategy. The strategy clearly states the preference is to move to output controls, like quota, wherever possible.

The complexity of the east coast inshore fishery means that management options must be carefully considered to avoid outcomes that are inconsistent with the fishery objectives. A range of options have been developed (see Figure 1 below) with input from the east coast inshore working group. Options that would not achieve the objectives of the strategy, for example 'do nothing', have not been included.

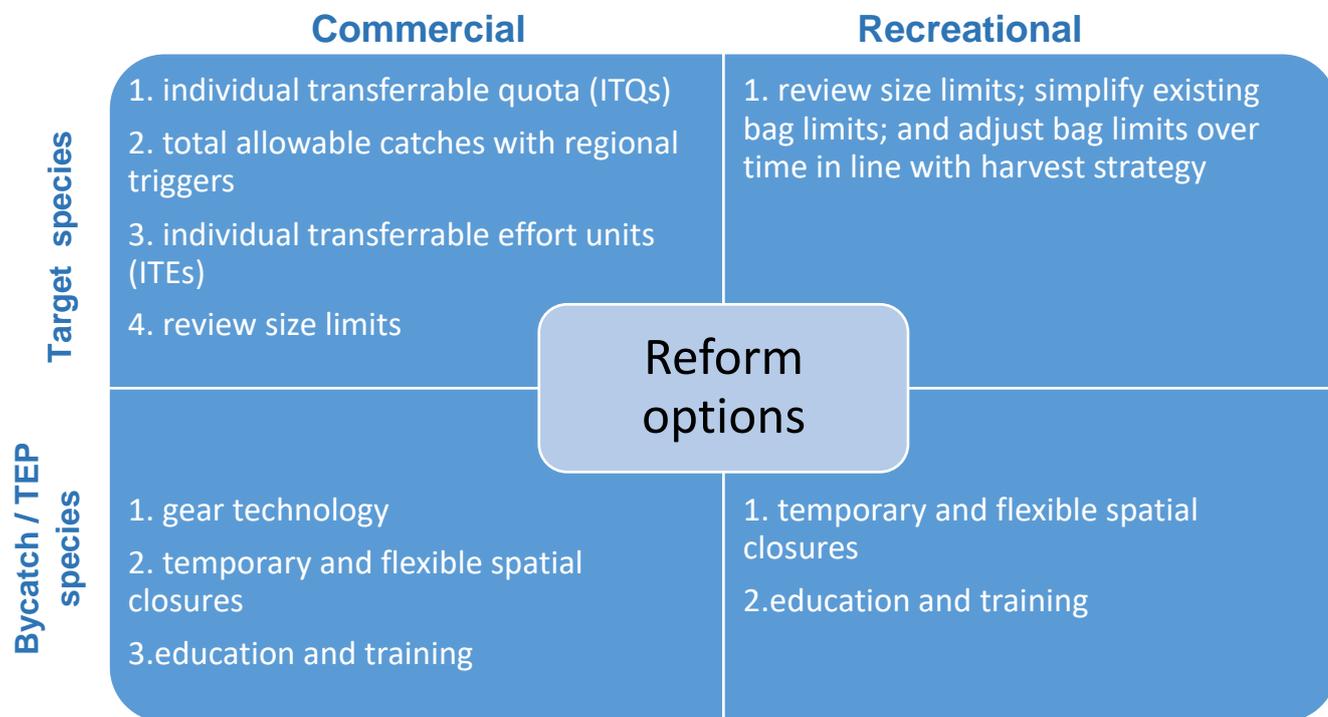


Figure 1: Summary of management options

Option 1: Individual transferable commercial quotas (ITQs)

Total Allowable Commercial Catches (TACCs) would be set for key species or groups of multiple species. Where existing TACCs are in place (e.g. shark, grey mackerel, spotted mackerel, tailor) these would be used. For other species, TACCs could be established using existing catch levels. Individual quota units would then be allocated to individual commercial fishers. This could be done using catch history or other mechanisms (see next section). The general view is that there is not a need for further significant reductions in catch or licence numbers, given the reduction in licences over the years and the fact that most target species are considered sustainable.

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> - greater certainty for commercial fishers - ability to remove some input controls and reduce complexity of netting rules - simpler to enforce - already have some TACCs that can be built upon - less risk of a race to fish - can adjust the total allowable commercial catch up and down 	<ul style="list-style-type: none"> - may limit access to species where quota not held - questions around how to allocate quota - potential waste when quota is reached or not held for some species - potential for consolidation of quota. - risk of high grading of the catch - costs of management are potentially higher 	<p>Do you support this option?</p> <p>What key species (e.g. barramundi, mullet, shark etc) or species groups (e.g. like "other species" in reef line) should quota apply to?</p> <p>What input controls could you remove or change if this option was implemented?</p>

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> by adjusting the catch value of a quota unit which limits overall catch no issues with latent effort. 	<ul style="list-style-type: none"> current TACCs (for example grey mackerel) are based on 30-40% biomass targets so would need to be reviewed over time to meet 60% biomass target by 2027. 	<ul style="list-style-type: none"> How would you address flexibility concerns? How would you avoid waste and bycatch once quota is exhausted?

Option 2: Total allowable commercial catches with regional triggers

This option would include establishing total allowable commercial catches (TACCs) for all major species with triggers based on catch/effort in each of the management regions. This would be similar to existing TACCs (grey mackerel, shark, spotted mackerel, tailor) but also include regional triggers where catch would be stopped once it got to a certain point.

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> no allocation process to commercial fishers is required some TACCs already in place (e.g. grey mackerel, shark, tailor) and commercial fishers have a level of familiarity with this option no consolidation of quota simpler than quota and can account for diverse businesses (some with small catches) can adjust TACCs with seasons / stock biomass less expensive to manage than quota and potentially less cost to fishers. 	<ul style="list-style-type: none"> risk that there is a race to fish not as much security of access for commercial fishers and limited control on where fishing effort is applied fishers can't plan their business activities across the year to maximise value requires more input controls than the ITQ option wouldn't be able to remove as many netting rules as with ITQs. limited management options once TACC is reached (i.e. fishing stops in a region/state-wide) current TACCs (for example grey mackerel) are based on 30-40% biomass targets so would need to be reviewed over time to meet 60% biomass target by 2027 risk of high grading of the catch. 	<ul style="list-style-type: none"> Do you support this option? How would you address race to fish concerns and associated effort shifts? How would you avoid waste and bycatch once TACC targets for stocks/sectors are reached? What key species / species group should TACC apply to?

Option 3: Individual transferable effort units (ITEs) for commercial fishers

A total allowable effort (TAE) would be set for the whole fishery (e.g. days, net length, soak time etc.) with individual effort units allocated to fishers based on the management regions. This would be similar to how the trawl fishery is managed.

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> reduces effort and amount of time that nets are in water so could help reduce risks of interactions with protected species species flexibility 	<ul style="list-style-type: none"> less gear flexibility and requires more input controls than other options to sustainably manage the fishery not constraining the catch itself 	<ul style="list-style-type: none"> Do you support this option? What effort units would be the most appropriate (e.g. days, net length and soak time)?

<ul style="list-style-type: none"> – less waste – use vessel tracking to deduct effort units – can adjust the total allowable effort up and down. 	<ul style="list-style-type: none"> – difficult to allocate effort units as there is no historical vessel tracking data – difficult to manage species in trouble without reducing effort overall – more complex monitoring and validation required. <p>Difficulty in standardising “effort units” across multiple gear types (i.e. what constitutes a “day”, “net” or other unit).</p> <p>A ‘day’ effort unit is probably too coarse and may require finer scale measure in the future.</p>	<p>How would you constrain effort if some species are being overfished while others are not?</p>
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Option 4: Review size limits (all sectors), simplify existing bag limits, and adjust bag limits over time in line with harvest strategy

This option will include reviewing size at maturity information to ensure that the latest science is used to set size limits at the right level.

Bag limits will be reviewed to ensure they are simple. Wholesale changes or reductions to bag limits are not proposed, but consideration may be given to introducing:

- combined possession limits for commonly caught species
- a total possession limit or general possession limit for species that do not have a possession limit (e.g. slimey mackerel, sweep)
- boat limits (particular for species prone to black marketing e.g. jewfish).

As part of this, size and possession limits would be compared and contrasted with adjacent jurisdictional limits on shared stocks.

Consideration could also be given to the setting of total allowable *recreational* catch for key species, to meet biomass targets. Combined with commercial total allowable catch this could provide a mechanism to control the *total* catch from all sectors. Changes to possession limits for individual species would be adjusted over time (up or down) as part of harvest strategies to keep catch within the total allowable recreational catch but only after any triggers and rates of adjustment are approved through the harvest strategy process. For example, if the biomass of a species declined and hit a trigger, the bag limit (and commercial effort or quota) would be reduced to a pre-determined level to help the stock recover. If biomass increased above a target the opposite would occur (i.e. increase total allowable commercial and recreational catch and associated quota/bag limits etc).

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> – opportunity to ensure most target species are given an opportunity to breed at least once before being taken – recreational possession limits are the main way recreational catch can be controlled within sustainable limits – allows size limits to be updated to reflect current research (e.g. 	<ul style="list-style-type: none"> – size limits only work where most undersized / oversized fish that are released, survive – not practical to have individual size limits for all species – recreational catch data gaps mean the link between possession limits and annual catch is difficult to quantify 	<p>What species are you concerned about the size and / or possession limit?</p> <p>If an overall recreational possession limit was introduced, what should it be?</p>

allow fish to spawn at least once).	– there is a wide range of views about what represents fair possession limits.	
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Option 5: Gear technology

Net rules would be reviewed to align with the management options and reduce complexity associated with the current management requirements.

Bycatch reduction devices (e.g. acoustic pingers to alert marine mammals, net types, break away panels etc.) would be required and innovation encouraged (similar to trawl).

This option could also allow the trial of different net types to improve selectivity and minimise interactions with TEP (e.g. consider allowing tunnel netting, arrow traps, ring nets in more areas etc. if demonstrated to be more selective).

Consideration would also be given to new technologies like apps to monitor and help avoid high risk species.

Technology innovation could also include ‘digital observers’ (e.g. cameras on boats to validate information on TEP interactions).

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> – improved selectivity and bycatch reduction would improve outcomes for target species and the broader ecosystem – proactive avoidance of high risk species would improve outcomes and contribute to social licence. 	<ul style="list-style-type: none"> – gear technology improvements are likely to take significant time to develop and trial. – gear trials can be difficult to quantify, particularly where they relate to low occurrence events. 	<p>Do you support this option?</p> <p>What changes to netting regulations and gear technology innovations should be looked at?</p> <p>Should new net types be allowed in other areas if they are more selective (e.g. tunnel netting in north Queensland)?</p>

Option 6: Temporary or flexible spatial closures

Temporary closures could be established to respond to risks in a more timely way without locking them in permanently. For example implementing a temporary closure of an area for three months to avoid unacceptable risks to protected species.

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> – allows a quick response to any fishery risks, issues or events that arise – lower cost and simpler to implement than permanent legislative changes – may avoid permanent closures in some cases and could be used as a ‘trade off’ to allow the temporary opening of other closed areas. Note: it could not change GBRMPA or State 	<ul style="list-style-type: none"> – setting guidelines would require significant consultation – may be difficult to quickly make fishers aware of the changes – have to manage conflict of fishers moving out of their traditional areas and into new areas. 	<p>Do you support temporary closures?</p> <p>What sort of events should trigger temporary closures?</p> <p>Do you support potentially opening older fishery closures as a trade-off to closing more sensitive areas as long as there is a nett benefit overall?</p>

marine park zoning or current net free zones.		
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Option 7: Better education and training

This option would involve greater effort on education and training, including potentially bringing back the requirement for commercial fisher training in how to handle protected species. It could also include behaviour change programs to increase adoption of best practices.

Pros	Cons	Matters to consider
<ul style="list-style-type: none"> - encourages stewardship - ensures new entrants are able to appropriately deal with TEP interactions - education can also extend to recreational fishers. 	<ul style="list-style-type: none"> - practicalities of training – hands on or online - costs. 	<p>Do you support restoring the commercial fishers protected species training course?</p>

Allocation method options

When introducing catch or effort-based quota management to a fishery, allocation is usually one of the most contentious issues facing managers and industry. This is because it is about ‘who gets what’.

Historically, initial commercial fishing allocations in Queensland and other Australian jurisdictions have relied on administrative methods based on catch history. Experience has shown that catch history methods are resource intensive (requiring decision makers, catch history verification), lengthy (due to opportunities for formal appeal) and problematic (as fishers have doubted the integrity of the catch history used).

In considering management options it is also important to consider allocation methods. The following allocation methods are commonly used by fisheries managers both in Australia and internationally:

- equal allocation
- historical catch
- auctions
- mixture of the above options.

During discussions with the East Coast Inshore Working Group it became clear that if quota or effort units were established, the preference would be to use catch history to allocate and that lessons should be learned from past processes. In this circumstance, information other than just logbook information would be needed to validate data (e.g. tax records, receipts etc.). This could be blended with nominating which regions fishers want quota or effort units in, or nominating which years catch history they would prefer to use (e.g. choose three preferred years from the last 10).

During discussions with the East Coast Inshore Working Group it also became clear that any catch limits should initially be set based on recent catches and allocated based on individual fisher’s catch history, as most target species were considered sustainable and a significant number of licences have already been removed from the fishery in recent years.

Matters to consider

Which allocation option do you prefer?

Are there other allocation options that could be considered?

Allocation requires confidence in the data being used. What options for data validation do you recommend? For example, if catch history is used, how should the information be validated – receipts, tax records?

There are some concerns about consolidation of quota in a small number of hands. If quota or effort units are adopted should holdings by individuals or companies be restricted in some way (e.g. to people with a symbol; or maximum holdings)? If yes, provide examples and why, taking into account the laws designed to restrain trade.

Next steps

While there have been initial discussions on management and allocation method options for the priority fisheries, no decisions have been made. This discussion paper is the basis for the initial round of engagement on the management of the east coast inshore fishery.

The feedback from this discussion paper will be provided to the East Coast Inshore Working Group to provide advice on a preferred management option and develop a draft implementation plan, including any allocation, for review by the Sustainable Fisheries Expert Panel in July 2018. The expert panel communique is made available online to all stakeholders and will outline the result of their review.

If the preferred management option and draft implementation plan is endorsed by the expert panel, the working group will commence work on the draft harvest strategy.

There will be plenty of opportunity for individuals and groups to provide further input over the next 12 months, including:

In mid-2018: Discussion paper on proposed changes to modernise the Act, to provide for more responsive decision making and address issues like black marketing

In late 2018: Consultation on draft harvest strategies which will set out the pre-determined management actions for a defined species necessary to achieve the agreed ecological, economic and/or social objectives. This will include an implementation plan on how harvest strategies can be operationalised and for commercial fishers will outline any allocation processes.

In Early 2019: Consultation on proposed changes to the fisheries regulation to implement the proposed management changes that have been developed in consultation with stakeholders and reflect the new approach using harvest strategies.

How to provide feedback

This discussion paper is designed to provide all stakeholders with the opportunity to have a say about the future management of the east coast inshore fishery.

You can provide feedback by completing the online survey at daf.qld.gov.au/sustainablefisheriesstrategy.

Submission of feedback closes **Sunday 20 May 2018**.

Stakeholders can also give feedback when Fisheries Queensland staff visit regional centres in April and May 2018.

For more information, visit daf.qld.gov.au/fisheries or call 13 25 23.

Attachment 1 – Map displaying draft management regions

