

Sustainable Fisheries Strategy

2017–2027

Queensland Ocean Beach Fishery

Status report for assessment and approval under protected species
and export provisions of the *Environment Protection and
Biodiversity Conservation Act 1999*

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1 Introduction

Commercial net fishing occurs in various forms along the length of the Queensland coastline. Licence holders use a range of different nets and techniques to target a variety of species in estuarine creeks, ocean beaches and offshore waters. Net fishing operations are managed under series of symbols each associated with a unique set of management arrangements.

This submission has been prepared by the Queensland Department of Agriculture and Fisheries (DAF) on behalf of commercial fishers participating in ocean beach net fishing in Queensland. The submission is provided for assessment under Part 13 and Part 13(A) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), following requirements outlined in Appendix B of the *Guidelines for the Ecologically Sustainable Development of Fisheries – 2nd Edition*.

The submission seeks approval for the “Queensland Ocean Beach Fishery” to be declared as an approved Wildlife Trade Operation under Part 13 and Part 13(A) of the EPBC Act. This is the first submission for a separate assessment of ocean beach net fishing operations in Queensland and has been prepared with support of licence holders in the fishery. Ocean beach netting has previously been assessed along with gill net fishing, tunnel net fishing and line fishing as a sub-component of the broader East Coast Inshore Finfish Fishery (ECIFFF). The ECIFFF was first declared as an approved Wildlife Trade Operation in November 2005, based on a submission that described the fishery as follows;

“The Queensland Inshore Finfish Net Fishery (ECIFF) is a multi-species fishery with commercial operators targeting a range of finfish species using a variety of different net methods. The majority of the species harvested are taken from inshore waters, including rivers and creeks, however, some species such as sharks are also taken from offshore waters using mesh nets. The area of the ECIFF includes all tidal waters along Queensland’s East Coast east of 142°09’E Long., near Crab Island (approx. 11.0°S Lat.), to the Queensland/New South Wales border (approx. 28°10’S, 153°34’E). Although this document assesses the fishery as a whole, there are significant differences between tropical and sub-tropical regions of the ECIFF. Some species are taken predominantly in northern, tropical, waters (for example barramundi, threadfins, grey mackerel and tropical sharks) and others taken almost exclusively in southern, sub-tropical, waters including mullet, tailor, bream, flathead and whiting. Commercial fishers may only operate in the ECIFF if they hold a primary commercial fishing vessel licence endorsed with one of the following fishery symbols: “N1”, “N2”, “N5” “N6”, “N7”, “N8” “K1”, “K2”, “K3” “K4”, “K5”, “K6” “K7” “K8”. These fishery symbols authorize the use of various nets to take finfish within areas prescribed under the Qld Fisheries Regulations. “N1”, “N2”, “N7” and “N8” symbols allow commercial net fishing using various nets along the whole east coast. The “N5” symbol allows fishing in a limited area from Baffle Creek southward to Kauri Creek (Fig. 1.1). “K” fishing symbols allow commercial netting along ocean beaches from the NSW border to the northern tip of Fraser Island”

Subsequent reassessments of ECIFFF occurred in 2008, 2011, 2014 and 2018, all of which continued to assess and approve the fishery as a single entity based on the description above. On September 30th 2020, the approved Wildlife Trade Operation Declaration for the ECIFFF was revoked, effectively removing permission for export of all product from the fishery. Due to the variety of fishing operations occurring in the fishery, the impact of this decision on licence holders was highly variable.

The key target species for the ocean beach fishery is mullet, and mullet constitute approximately 80-90% of the retained product in the fishery. Mullet roe forms a significant export market for participants in this component of the fishery. The method used in ocean beach fishing involves active hauling and retrieval of seine nets (non-meshing) from the shoreline. Because the nets are set around visible schools of fish and immediately hauled, the fishery is more targeted than gill net fishing. As such, licence holders in the ocean beach net fishery have supported a QDAF proposal to seek a separate assessment of their operations to support ongoing export of product from their fishery.

2 Fishery Description

Licence holders participating in the Queensland ocean beach fishery deploy seine or haul nets from specifically defined ocean beaches to target schooling fish species along sections of the coast from the New South Wales border, north to Fraser Island. Beach seine nets are operated with one end anchored on the shoreline. The other end is towed around a school of fish and returned to the beach. Fish caught within the sweep of the net are then hauled into shallow waters or back onto the beach where they are sorted. The fishery is spatially divided into eight areas, which correspond to eight commercial fishing licence symbols which are required to operate in the fishery (K1-K8). Each of the 8 K symbols align with a specific fishery area, and maps of these areas are publicly available at <https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/licences/fisheries-symbols>

Detailed management arrangements for the fishery are documented in Schedule 4, Part 1 of the *Fisheries (Commercial Fisheries) Regulation 2019*. Divisions 1-8 define applicable fishery symbols (K1 to K8) and eight separate fishery areas. Authorisations and conditions for the fishery are described in Division 9. These arrangements are also publicly available at <https://www.legislation.qld.gov.au/view/pdf/asmade/sl-2019-0178>

The fishery may be described as specimens that are, or are derived from, fish taken in the Queensland Ocean Beach Fishery as defined in the management regime for the fishery symbols K1-K8 in force under the *Fisheries Act 1994* (Queensland) and *Fisheries (General) Regulation 2019*, *Fisheries (Commercial Fisheries) Regulation 2019*, *Fisheries Declaration 2019* and *Fisheries Quota Declaration 2019* (Queensland).

Seine nets are only permitted for use under the K1-K8 fishery symbols. Ocean beach fishers are only permitted to use a seine net in designated ocean beach fishing areas between 1 April and 31 August (inclusive) each year. Seine nets used in this fishery must be no longer than 500m in length, a mesh size of at least 12mm but no more than 70mm and a drop of at least 150 meshes for at least half of their length. The nets are actively hauled and retrieved, reducing risks associated with prolonged entanglement.

Licence holders possessing a K1 – K8 fishery symbol are also permitted to use any net described under the N1 fishery symbol including in areas other than the Ocean Beach fishery. ***This submission only applies to the use of seine nets in the ocean beach fishery during the ocean beach fishing season***, and does not include the use of other nets, or fishing in other areas that may otherwise be authorised under the K licence symbols.

2.1 Species and catch

The primary target species for the ocean beach fishery is sea mullet *Mugil cephalus*, a schooling, migratory species that are harvested when they move out of estuaries and congregate along ocean beaches during their annual spawning season. Sea mullet and other mullet species account for more than 90% of the total ocean beach fishery catch. However, any fish, other than barramundi, regulated coral reef fin fish and snapper, may be taken. Common inshore and estuarine species including tailor, dart, bream, whiting, garfish and various bait fish species are also commonly retained in the fishery. Species groups that formed 99.5% of the total reported catch (by weight) for the period 2016-2020 are described in Table 1. Details of species that formed the remaining 0.5% of the catch for this period are provided in Appendix 1.

Table 1. Summary of annual reported catch for species forming approximately 99.5% of total harvest in the Queensland Ocean Beach Fishery 2016-2020

Reported Catch (t)	2016	2017	2018	2019	2020	Total	Percentage
Mullet - unspecified	609.25	665.43	709.08	265.12	581.04	2829.92	85.86
Mullet - sea/flathead	94.52	108.27	36.68	3.46	12.15	255.08	7.74
Tailor	17.65	24.51	17.85	16.81	21.01	97.83	2.97
Dart - unspecified	1.83	6.47	4.15	4.98	3.63	21.06	0.64
Bream - unspecified	3.8	3.76	1.65	2.52	2.06	13.79	0.42
Bait fish	0.4	0.09	0.03		8.7	9.22	0.28
Whiting - unspecified	1.92	3.02	1.39	2.01	0.8	9.14	0.28
Shark - spinner	0.12	5.52	1.95	0.23	1.21	9.03	0.27
Pilchard/sardine - unspecified	4.19	0	0	0	1.6	5.79	0.18
Garfish - unspecified	2.52	1.97	0.27	0.3	0.35	5.41	0.16
Mackerel - school	0.17	0.43	0.86	0.39	2.18	4.03	0.12
Trevally - unspecified	0.19	0.16	1.45	0.44	1.79	4.03	0.12
Bonito - unspecified	0	3.6	0.03	0	0.23	3.86	0.12
Hardyhead	2.48		0.01	0	1.25	3.74	0.11
Scad - unspecified	0.01	0.03	0.02	0	3.04	3.1	0.09
Trevally - golden	0	0.04	2.95	0	0	2.99	0.09
Other species	2.94	4.34	2.72	2.11	5.93	18.04	0.55

2.2 Licences and effort

The ocean beach fishery has less active symbols and a smaller footprint than the large mesh net component of the broader east coast net fishery (i.e. N1, N2 and N4 symbols). The ocean beach

fishery operates in waters between Fraser Island and the Queensland / New South Wales border and access is spatially divided between eight areas corresponding with symbols used in the fishery (K1-K8). The number of symbols permitted for use in each of the eight fishery areas is presented in Table 1 below, numbering 36 in total.

Table 2. Number of licences permitted for use in the Queensland Ocean Beach Fishery during the period 2016-2020.

Fishery area	Symbol	Licences
Net (Ocean Beach - Area 1)	K1	2
Net (Ocean Beach - Area 2)	K2	3
Net (Ocean Beach - Area 3)	K3	4
Net (Ocean Beach - Area 4)	K4	1
Net (Ocean Beach - Area 5)	K5	7
Net (Ocean Beach - Area 6)	K6	3
Net (Ocean Beach - Area 7)	K7	4
Net (Ocean Beach - Area 8)	K8	12
Total		36

3 Draft Harvest Strategy

Ocean beach netting is a sub-component of the broader East Coast Inshore Fishery (ECIF). The ECIF is a complex, multi-species, multi-gear fishery that harvests approximately 100 species along the east coast of Queensland.

In September 2020, QDAF released a draft harvest strategy for the East Coast Inshore fishery, which is available at <https://daf.engagementhub.com.au/draft-east-coast-inshore-fishery-harvest-strategy>. Consultation on the harvest strategy closed on 31 January 2021. The harvest strategy is complemented by a draft protected species management strategy for the fishery. The draft harvest strategy identifies five separate management areas and classifies net caught species into three tiers:

Tier 1: Key species identified as driving fishing behaviour within the fishery. These species are subject to individual transferrable quotas (ITQs), a Total Allowable Commercial Catch (TACC) and managed regionally. For recreational fisheries, these species have in-possession and size limits.

Tier 2: Species with high commercial and recreational importance, typically reflective of the target and co-caught species within the fishery. These species are subject to a competitive TACC and managed regionally. For recreational fisheries, these species have in-possession and size limits.

Tier 3: All other species are monitored using catch triggers to ensure that increasing or shifting fishing pressure does not present an unacceptable level of risk. For recreational fisheries, some of these species will have in-possession and size limits while all others are captured by the general in-possession limit.

In the draft harvest strategy, the fishery areas for all the K symbols (K1-K8) are within management region 5. Tier one and two species vary between the five management regions. Sea mullet and tailor are classified as Tier 2 species in management region 5.

The harvest strategy, which also sets out performance measures and decision rules for the fishery will be finalised during 2021 following consideration of submissions from the public consultation process.

4 Status of target stocks

4.1 Sea mullet (*Mugil cephalus*)

Sea mullet are a schooling, migratory species that occur along the west and east coasts of Australia. Despite some interest from specialist anglers in the recreational sector, the vast majority of sea mullet harvest occurs in commercial fisheries. Lovett et. al. (2018) report that commercial sea mullet harvest on the east coast is divided between N.S.W and Queensland in a ratio of approximately 65:35%.

Sea mullet stocks on the east coast of Australia are subject to periodic formal stock assessments and the status of the species is monitored in the national Status of Australian Fish Stocks (SAFS) program (see <https://fish.gov.au/>). Stock assessments and the SAFS assessments are prepared cooperatively between jurisdictions. The SAFS program assesses the status of the east coast mullet stock, which extends from central Queensland to eastern Victoria. The assessment considers harvest and management arrangements in Queensland and N.S.W. The most recent SAFS Report, published in 2018 classified sea mullet as a sustainably harvested species on the Queensland east coast. This assessment will be updated in the 2020 SAFS report, due for publication in early 2021. The species has been also classified as sustainable in similar assessments dating back to 2014 (see a summary at https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/status-queensland-fish-stocks/queensland-stock-status-results?SQ_VARIATION_1425228=0).

The most recent formal stock assessment report for sea mullet was published in 2018 and is publically available at <http://era.daf.qld.gov.au/id/eprint/6757/>. This assessment estimated the biomass of sea mullet in 2016 was approximately 50% of the unfished biomass for the species. The assessment provided estimates of maximum sustainable yield and a recommended total allowable catch that would allow the stock to recover to a long-term target biomass of 60% by 2027. The sea mullet stock assessment is scheduled to be updated in 2021.

4.2 Tailor (*Pomatomus saltatrix*)

Similar to sea mullet, tailor are a migratory species that move along ocean beaches on the west and east coasts of Australia. However, unlike sea mullet, there is significant recreational take of tailor. Commercial tailor catches from the Queensland ocean beach fish fishery ranged from 16.81-24.51t in the period 2016-2020, forming approximately 3% of the total retained catch by weight.

The management regime for tailor includes a Total Allowable Commercial Catch (TACC) limit and the sustainability of the stock has been confirmed through regular stock assessments. Tailor were also classified as a sustainable species in the 2018 SAFS report and previous similar assessments. A tailor stock assessment was published in 2017 and is publically available at <http://era.daf.qld.gov.au/id/eprint/5689/>. The most recent tailor stock assessment was completed in

2020 and is available for viewing at <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/stock-assessment-program>

4.3 Other species

A number of other species retained in the ocean beach fishery are also subject to periodic stock assessments and status evaluations including yellowfin bream, whiting and school mackerel. Given the prevalence of mullet in the ocean beach catch, the ocean beach fishery makes a comparatively small contribution to the total catch of these species.

Further information about the Fisheries Queensland stock assessment program, a schedule of upcoming assessments and links to published stock assessments are available at <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/stock-assessment-program> Details of status assessments under the national SAFS program are available at <https://fish.gov.au/>

5 Data collection and monitoring

The primary source of effort and catch data in the ocean beach fishery is commercial logbooks. Commercial fishers have a legal obligation to report daily information about their fishing activities. All net fishers must contribute data about their day's catch, the location fished, the gear used and any interactions with species of conservation interest. Fisheries Queensland uses this data to assess and monitor the status of individual species and fisheries in Queensland. Further information and a copy of the fishery specific logbook are available at <https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/reporting-requirements/logbooks> A fish species identification guide and other support material are available online for fishers at <https://www.daf.qld.gov.au/fish-identification-information/fish-species-guide>

Vessel tracking is mandatory in the ocean beach fishery (i.e symbols K1-K8). Commercial fishers must use a Fisheries Queensland approved vessel tracking unit and comply with the installation and maintenance standard when configuring, installing and maintaining vessel tracking equipment. All approved units must be purchased from an approved provider and associated with an approved polling rate and data plan. Vessel tracking data can be used to validate commercial catch and effort from log books, inform annual harvest strategy performance and to update ecological risk assessments for all fisheries. Further information about vessel tracking in Queensland fisheries is available at <https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/vessel-tracking>

The Queensland Department of Agriculture and Fisheries (QDAF) has an ongoing state-wide fisheries monitoring program. Ongoing monitoring programs currently being delivered by QDAF include;

- Collection of frames from commercial and recreational fishers to provide length and age data;
- Collection of other samples from commercial fishers, seafood processors, seafood wholesalers and retail outlets;
- Regular boat ramp surveys;
- Regular state-wide recreational fishing surveys

An interactive overview describing key elements of the QDAF monitoring program is available at <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/interactive-map> including links to information about sub-components of the program

The fishery monitoring program collects targeted biological data for a range of species including sea mullet and tailor, as well as some other species retained in the ocean beach fishery. Details of all the species-specific monitoring programs are publically available at <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/monitoring-reporting/commercial-fisheries/species-specific>

Monitoring of sea mullet stocks has been ongoing in Queensland since 1999 based on samples collected largely from the commercial sector. Data sets collected in this program include length, age and sex of retained fish. Approximately 1000 mullet are aged annually to describe the age structure of the stock. Tailor stocks have also been monitored in Queensland since 1999, including data collected from recreational and commercial fishers. Similar to mullet, data are compiled on length, sex and age of retained fish. Data from both these monitoring programs support status assessments in the SAFS program and formal stock assessments described previously.

Recreational fishing data for fish including species retained in the ocean beach fishery are collected via boat ramp surveys and in the statewide recreational fishing telephone / diary survey. Charter operators also record catch information in logbooks, which are included as recreational harvest. Details of recreational fishing monitoring programs are available at <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/monitoring-reporting/recreational-fishing>

The Queensland boat ramp survey program collects catch and effort data from recreational anglers returning from fishing trips. The program was progressively expanded from 2015 and is currently operating at 48 boat ramps. Surveys are conducted at each ramp 5 times a month with 3 weekdays and 2 weekend shifts. Survey shifts are 4 hours in length starting at 9am or 12pm. Time of day and day of week are randomly allocated within a month for each ramp with severe weather days not surveyed. More than 2,900 surveys are conducted statewide each year. The time series of data from this program is being used to improve stock status assessments and stock assessments for key target species.

The Queensland statewide recreational fishing survey series commenced in 1997 and provides recreational fishing catch and effort data. The 2019–20 statewide recreational fishing survey was conducted by the Social Research Centre, who contacted more than 8,500 households across Queensland via landline and mobile numbers between February and April 2019. Recipients were asked if they fished recreationally in the last 12 months, and if they intended on fishing recreationally in the next 12 months. Households that intended to fish were invited to take part in the 12-month recreational fishing activity logbook phase. More than 2,100 recreational fishing households took part in the 12-month recreational fishing activity logbook phase. During this phase, participating fishers recorded their fishing activity and expenditure shortly after they went fishing, either by a phone call from our interviewers, or logging the activity via the online survey portal.

Action 1.3 in the Sustainable Fisheries Strategy commits to 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. Since rollout of the Strategy, there are now a number of ongoing projects contributing to this commitment. The Advance Queensland innovation project to develop real time automated monitoring of catch and effort through cameras, sensors and image

recognition technology (see further details at <https://advance.qld.gov.au/sbir-recipients>) has now completed the proof of concept stage. QDAF has incorporated outcomes from the projects into the design and implementation of a broad data validation plan. Design and implementation of the data validation program has commenced with a dedicated project manager and procurement support in place. An internal Working Group and Steering Committee have been established to oversee the program. Priority actions for 2021 will be to finalise and seek approval for the revised data validation plan, seek public consultation on a draft data validation policy, plan for operationalising pilot studies, identify suitable E-monitoring systems, and scope necessary regulatory reforms required to enable full implementation of the validation programs. Ocean beach netting is more targeted and selective than net fishing with stationary nets. As such, the ocean beach will be a lower priority for implementation of independent data validation than other net fisheries, which have a wider variety and higher volumes of by-catch.

QDAF has now collated its reporting functions (logbooks, real time reporting, vessel tracking, and data validation) into a single team to streamline the collection and validation of commercial catch information. The following validation activities are now in place:

- real time reporting for all ITQ species
- range checks between logbook data and vessel tracking
- cross checking between logbooks and VMS data
- Quarterly catch & effort logbook compliance audits conducted to identify and follow up on missing logbook returns.

Action 1.5 commits to the development and implementation of a practical and cost-effective system for collection of economic and social data. Economic and social indicators for recreational fishing are being already collected as part of the state-wide recreational fishing survey. An external contractor has been engaged and is preparing economic and social indicators for the commercial and charter fishing sectors. They will report on the 2019 and 2020 financial years both regionally and state-wide.

Fisheries data are available publically via the QFish system (at <http://qfish.fisheries.qld.gov.au/>), but some restrictions are placed on the availability of data obtained through here to protect confidentiality. Data can also be extracted from the system on request via the Fisheries Data Coordinator.

Research priorities and monitoring requirements for net fishing including ocean beach fisheries and also set out in the draft east coast inshore harvest strategy. These will assist QDAF to develop collaborative research programs to meet key needs.

6 Bycatch and interactions with Species of Conservation Interest (SOCI)

Ocean beach fishers predominantly target schools of mullet or tailor using seine nets deployed from and actively hauled back to shore. Bycatch largely comprises undersize target species and a range of other species that occur along inshore ocean beaches.

Commercial fishers are required to report all interactions with species of conservation interest (SOCI) and the fate of released animals (i.e. released alive or dead) in the dedicated SOCI logbook. Since 2003, there have been limited reports of a SOCI interacting with a seine net in the ocean beach

fishery. In total, 33 SOCI-seine net interactions have been reported through the logbook system; the majority of which were with green turtles (Table 3).

In all 33 instances, the animal was successfully released from the seine net and reported as a live release. High post-interaction survival rates can be attributed to a number of factors including:

- comparatively short fishing events e.g. <30 minutes to set and retrieve the net;
- the use of smaller mesh sizes to minimise the entanglement risk;
- net attendance provisions that require the net to be operated by a minimum of one commercial fisher and two to four assistant fishers; and
- an improved capacity to remove a SOCI from a seine net without excessive handling / while still in the water.

Table 3. Reported SOCI-seine net interactions reported from the Ocean Beach Fishery between 2003 and 2019.

Year	Apparatus	Species	Number	Release Fate
2004	Seine Net	Loggerhead Turtle	1	Alive
2004	Seine Net	Green Turtle	18	Alive
2004	Seine Net	Cormorant (unspecified)	1	Alive
2005	Seine Net	Green Turtle	10	Alive
2015	Seine Net	Sea Snake	1	Alive
2019	Seine Net	Green Turtle	3	Alive

7 Ecological Risk Assessment

The Queensland Sustainable Fisheries Strategy committed to developing an Ecological Risk Assessment Guideline (Action 4.1) and preparing ERAs for key fisheries by the end of 2020 (Action 4.2). The ERA Guideline and published ERA reports are publically available at the link below <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/ecological-risk-assessments>

The ERA Guideline describes a tiered system of assessing fishing related risks, commencing with a scoping study (to describe the fishery) and a whole-of-fishery or 'Level 1' ERA report. Level 1 ERAs assess fishing related risks to broad ecosystem components using qualitative methods. By the end of 2020, DAF published 10 Level 1 ERAs, including a Level 1 ERA for the East Coast Inshore Finfish Fishery. This report assessed risks from all forms of netting, including ocean beach nets.

The DAF ERA Guideline specifies that ecosystem components ranked as high risk in Level 1 ERA reports are progressed to species-specific, semi-quantitative Level 2 ERA assessments. In the ECIFFF, DAF is preparing separate ERA reports for each of the main three types of net operations;

ocean beach, tunnel net and large mesh gill nets. The Level 2 Ocean Beach ERA has been drafted and will be published following a review and approvals process. This ERA assesses fishing related risks to specific target and non-target species from ocean beach fishing. The Level 2 ERA will inform measures to mitigate any unacceptable risks from the ocean beach fishery.

8 References

Lovett, R.A., Prosser, A.J., Leigh, G.M., O'Neill, M.F. and Stewart, J. (2018) *Stock assessment of the Australian east coast sea mullet (Mugil cephalus) fishery 2018*. Technical Report. State of Queensland.

9 Appendix

Appendix 1

Summary of reported catch 2016-2020 in the Queensland Ocean Beach Fishery

	2016	2017	2018	2019	2020	Total (t)
Mullet - unspecified	609.25	665.43	709.08	265.12	581.04	2829.92
Mullet - sea/flathead	94.52	108.27	36.68	3.46	12.15	255.08
Tailor	17.65	24.51	17.85	16.81	21.01	97.83
Dart - unspecified	1.83	6.47	4.15	4.98	3.63	21.06
Bream - unspecified	3.8	3.76	1.65	2.52	2.06	13.79
Bait fish	0.4	0.09	0.03		8.7	9.22
Whiting - unspecified	1.92	3.02	1.39	2.01	0.8	9.14

	2016	2017	2018	2019	2020	Total (t)
Spinner shark	0.12	5.52	1.95	0.23	1.21	9.03
Pilchard/sardine - unspecified	4.19				1.6	5.79
Garfish - unspecified	2.52	1.97	0.27	0.3	0.35	5.41
Mackerel - school	0.17	0.43	0.86	0.39	2.18	4.03
Trevally - unspecified	0.19	0.16	1.45	0.44	1.79	4.03
Bonito - unspecified		3.6	0.03		0.23	3.86
Hardyhead	2.48		0.01		1.25	3.74
Scad - unspecified	0.01	0.03	0.02	0	3.04	3.1
Golden Trevally		0.04	2.95			2.99
Yellowtail Kingfish		1.5	0.02	0.45		1.97
Australian anchovy				0.01	1.5	1.51
Bream - tarwhine	0.6	0.53	0.04	0	0.31	1.48
Black bream (luderick)	0.79	0.3	0.28		0	1.37
Milk, Sharpnose & Hardnose Sharks	0.05	0.23	0.67		0.4	1.35
Giant herring					1.05	1.05

	2016	2017	2018	2019	2020	Total (t)
Flathead - unspecified	0.32	0.06	0.16	0.04	0.02	0.6
Queenfish - unspecified	0.06	0.12	0.05	0.32	0.05	0.6
Bonefish		0.6				0.6
Milkfish	0.09		0.41		0.03	0.53
Blacktip whaler shark			0.32		0.17	0.49
Blacktip and Graceful Whalers	0.31	0.18				0.49
Ponyfishes		0	0.01	0.03	0.41	0.45
Bream - butter	0.03	0.06	0.01	0.22	0.09	0.41
Dart - snub nosed					0.36	0.36
Tuna - mackerel	0.03	0.06		0.08	0.19	0.36
Tuna - unspecified			0.07	0.09	0.18	0.34
Pigeye & Bull Sharks				0.19	0.12	0.31
Shark - graceful					0.31	0.31
Shark - whaler unspecified	0	0.24				0.24
Longtoms				0.1	0.09	0.19

	2016	2017	2018	2019	2020	Total (t)
Kingfish - unspecified			0.03	0.15		0.18
Herring - koningsberger's	0.01	0.01	0.04	0.05	0.05	0.16
Jew fish - mulloway			0.02	0.01	0.13	0.16
Mullet - tiger / flat tail	0.03			0.13		0.16
Snapper (squire)		0.15	0.01	0		0.16
wedgefish unspecified			0.05	0.02	0.08	0.15
Catfishes			0.05	0.1	0	0.15
Grey mackerel	0.01	0.01	0.06	0.04	0.03	0.15
Barramundi	0.14					0.14
Drummer - unspecified	0.13	0.01	0			0.14
Spinefoot			0.13		0.01	0.14
Shark - scalloped hammerhead	0.01	0.06	0.02	0.01	0.02	0.12
Squid - unspecified		0.07	0.02		0.02	0.11
Mackerel - spotted	0	0.03	0.05	0	0.03	0.11
Tuna - long tail				0.01	0.1	0.11

	2016	2017	2018	2019	2020	Total (t)
Fish - unspecified	0.04	0.06				0.1
Blacktip reef shark			0.09			0.09
Jewfish - unspecified	0.07	0.01	0.01			0.09
Silver biddies	0.02		0.01	0.02	0.04	0.09
Threadfin - king	0.08		0.01			0.09
Mullet - diamond scale					0.08	0.08
Stingray unspecified	0.02			0.03		0.05
Grunter - unspecified	0.04	0	0			0.04
Kingfish - black			0.02		0.01	0.03
Threadfin - blue	0.01	0.02				0.03
Wahoo			0.03			0.03
Emperor - grass		0	0	0.01	0.01	0.02
Hammerhead shark	0.02					0.02
Shark - fossil			0.01		0.01	0.02
Shark - Snaggletooth and Weasel		0.02				0.02

	2016	2017	2018	2019	2020	Total (t)
Smooth Hammerhead					0.02	0.02
Crab - unspecified	0.01					0.01
Eel (marine)			0.01			0.01
Jew fish - silver	0.01					0.01
John dory		0.01				0.01
Northern Bluefin Tuna					0.01	0.01
Shark - sorrah			0.01		0	0.01
Threadfin - unspecified	0.01					0.01
Grand Total	741.99	827.64	781.09	298.37	646.97	3296.06

Appendix 2 Links to supporting documents

Document	Link
Fisheries (Commercial Fisheries) Regulation 2019	https://www.legislation.qld.gov.au/view/pdf/asmade/sl-2019-0178
Fishery Working Group	https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/sustainable-fisheries-strategy/fishery-working-groups
Harvest Strategy	https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/harvest-strategy
Ecological Risk Assessment and Scoping Study	https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/ecological-risk-assessment
Completed Stock Assessments	https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/stock-assessment-program
Stock Status Assessments	https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/stock-status-assessment
Queensland Fishery Summary Report	https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/queensland-fisheries-summary-report