Australian Government

Australian Fisheries Management Authority

2011 Fishing Season

CORAL SEA FISHERY

Management Arrangements Booklet

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Executive Summary

This booklet details the management arrangements that apply for the Coral Sea Fishery (CSF) for the 2011 fishing season.

This Management Arrangements booklet is not intended to replace any other document relating to management of the CSF but is intended as a guide only. If you have any questions relating to management of the fishery please contact AFMA Direct on 1300 723 621. Additional contact details for relevant AFMA staff are provided towards the end of this booklet.

The CSF is a relatively small but diverse fishery, targeting a wide range of species with methods including line, trap, trawl and hand collection. Entry to the CSF is limited to the existing 16 fishing permits. The CSF covers waters from the east of Sandy Cape (Fraser Island) to east of Cape York. The fishery commences east of the Great Barrier Reef Marine Park and extends to the edge of the Australian Fishing Zone. It excludes the areas of the Coringa-Herald and Lihou Reef National Nature Reserves. Together the Nature Reserves cover approximately 17,000 square kms of coral reef habitat.

The fishery is managed by AFMA in consultation with a range of stakeholders under the *Fisheries Management Act 1991* (the Act). Policies such as harvest strategies, bycatch and discard plans and voluntary industry codes also contribute to the management of the fishery.

IMPORTANT NOTE

Every effort has been made to ensure that the information contained in this document is correct and accurate at the time of printing. However the information provided is intended to serve as a guide only, and therefore AFMA shall in no way be liable for any loss caused, whether due to negligence or otherwise, arising from the use of or reliance upon this document. The document is not intended to replace any operator's concession concerning the conditions under which they are required to operate. Depending on the conditions attached to a concession, some of the items discussed in this booklet may not apply to a particular fishing operation.

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~ Description of the fishery ~

The CSF lies east of the Great Barrier Reef Marine Park and extends to the edge of the Australian Fishing Zone (Figure 1). The fishery extends north from Sandy Cape (Fraser Island), to Cape York. It excludes the areas of the Coringa-Herald and Lihou Reef National Nature Reserves. Together the Nature Reserves cover approximately 17,000 square kms of coral reef habitat. The CSF often experiences adverse weather conditions which can make fishing difficult at certain times of the year.

Figure 1 Area of the Coral Sea Fishery

As detailed in the Table 1 below, the CSF is a diverse fishery employing a range of fishing methods to target a wide variety of species. Participation in the CSF is limited to 16 fishing permits; this means that new entrants to the fishery must transfer an existing CSF fishing permit into their name before entering the fishery. AFMA maintains a register of all Commonwealth fishing permits on its website and provides a free service called QuotaBoard where people can advertise things like fishing permits wanted and for sale. These services and the forms necessary to arrange permit transfer and boat nominations can be found on the AFMA website, www.AFMA.gov.au.

Table 1: Overview of the Coral Sea Fishery

Sector	General Permit conditions
All Sectors	Multiple jurisdiction fishing trips not permitted except where an AFMA observer is on the boat and prior approval has been granted by AFMA Transhipping of fish not permitted Prohibited species: • tuna and tuna like species (*Scombridae, Bramidae* (pomfrets or ray's bream)) except for mackerels (genera *Scomberomorus, Scomber, Acanthorcybium, Grammatorcynus* and *Rastrelliger*) • billfish (families *Istiophoridae* and *Xiphiidae*) • any species listed under the EPBC Act • Humphead Maori Wrasse (*Cheilinus undulatus)* (except for Aquarium Sector permit holders who are authorised to take a total of 50 specimens during the season (25 per concession holder). Concession holders are required to record in the 'Comments' section of their logbook, the number of specimens taken per trip, their size and latitude/longitude information.) Protected species interactions must be reported to AFMA Landing requirements for sharks (where authorised to take shark). Specific requirements are provided on Page 15 Limits for deepwater shark (Dogfish, Gulper sharks, Lantern sharks, Sleeper sharks and Kitefin sharks): • total combined daily limit trunked weight of these species not exceeding 15kg • total combined per trip limit trunked weight of these species not exceeding 90kg for trips over 6 days Any sharks caught in addition to the above trip limits must be returned to the water as quickly and carefully as possible to ensure their survival Fish may only be sold to an AFMA licensed fish receiver (excluding the Aquarium Sector)

Sector	Number of Permits	Target species	Fishing method	Specific Permit Conditions	Reporting
Trawl and Trap Sector	2	Tropical finfish and crustaceans	Otter trawl (bony fish including crustaceans), demersal finfish traps (authorised to take bony fish only from the Class Osteichthyes)	**Trawl** Minimum net-mesh size (not less than 38mm) A Turtle Exclusion Device (TED) required when trawling for crustaceans Observer required (first trip of season & every 4th trip thereafter) **Trap:** Demersal finfish traps must not be used on the same trip as any other fishing method Traps must be constructed of metal only Limit on the number of traps (50) and size (1.8m x 1.8m x 0.8m) In case a trap is lost, all trap doors must be fitted with sacrificial anodes to allow trap doors to open once the anode disintegrates Must be set and hauled individually (not connected in a sequence) unless exemption from AFMA Must not be left unattended for longer than one month An AFMA approved observer required (first trip of the season and every fourth trip thereafter)	Logbook (Trawl): Commonwealth Eastern Finfish Trawl Daily Fishing Logbook (EFT01B) Logbook (Trap): Commonwealth Trap Fishing Daily Fishing Log (TRO1) CDR: Commonwealth Catch Disposal Record (SESS2A)

Sector	Number of Permits	Target species	Fishing method	Specific Permit Conditions	Reporting
Line and Trap Sector	8	Classes *Chondrichthys* (cartilaginous fishes) and *Osteichthyes* (bony fishes)	Demersal longlines, trotlines, droplines, handlines and demersal finfish traps. Automatic baiting is available for use with the longline method, subject to application and additional conditions being met.	**Auto Longline** An AFMA approved baiting system must be used and approval obtained from AFMA for the use of automatic baiting equipment on transfer of a permit or change of the nominated vessel Required to have a bird scaring device installed in accordance with the *Fisheries Management Regulations 1992* A maximum of 15,000 hooks may be used, stowed or secured on the boat Every shot using the automatic baiting gear must be set in waters deeper than 200 metres. However, where a fisheries observer is on board the boat, only 50% of all hooks using the automatic baiting gear must be set in waters deeper than 200 metres Must comply with the *Threat Abatement Plan for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations* (2006 TAP) An AFMA approved observer required (first trip of the season or after installing automatic baiting equipment and every fourth trip thereafter if using a "Mustad" system or every third trip if using a "Best Fishing Gear" system thereafter) **Other Line** Required to carry an AFMA observer on the first trip of the season and every fourth trip after that **Trap:** See 'Trawl and Trap' above for additional applicable permit conditions If intending to use demersal finfish traps on a fishing trip, all line equipment must be removed prior to leaving port unless an observer is on board	Logbook (Line): Line Fishing Daily Fishing Log (LN01A) Logbook (Trap): Trap Fishing Daily Fishing Log (TR01) CDR: Commonwealth Catch Disposal Record (SESS2A)

Sector	Number of Permits	Target species	Fishing method	Specific Permit Conditions	Reporting
Lobster and Trochus Sector	2	*Trochus niloticus* or *Tectus pyramis* and Tropical Spiny Rock Lobster (*Panulirus ornatus*)	Hand collection with or without underwater breathing apparatus.	Maximum of two (2) tender boats may be used with the nominated boat to hand collect trochus and/or lobster Allows the collection of 10 tonnes of unprocessed trochus and 10 tonnes of lobster tails (per operator) during the fishing season Size limits: Lobster (prohibited from taking lobster less than 125mm tail length); Trochus (prohibited from taking trochus that are less than 80mm or more than 125mm when measured after being taken at the widest part of the base of the shell) Move-on provisions apply where the mother ship must be moved at least 15 nautical miles to a new anchorage once one tonne of lobster tail or one and a half tonnes of trochus has been collected from a single reef during the fishing season	Logbook (Lobster & Trochus): Hand Collection Daily Fishing Log (HC01) CDR: Hand Collection Catch Disposal Record (HC02)

Sector	Number of Permits	Target species	Fishing method	Specific Permit Conditions	Reporting
Aquarium Sector	2	Classes *Chondrichthys* (cartilaginous fishes), *Osteichthyes* (bony fishes) and live rock	Cast, scoop and seine nets, and handlines with barbless hooks may be used with or without the aid of underwater breathing apparatus	Allows the collection of live fish (bony fish, sharks, rays, crustaceans, molluscs and other marine organisms including live rock but excluding corals, mammals, reptiles and birds) Fish collected for use in aquaria and must not be sold for human consumption *Gear restrictions*: Scoop net size (no more than 2 metres in any direction); maximum mesh size (25mm); hand/shaft length (less than 2.5 metres Cast net (no more than 6 metres in diameter; 28 mm maximum mesh size) Seine net (16 metres length limit; 25mm maximum mesh size and a drop of less than 3 metres) Live rock may only be taken by hand or by using hand held non-mechanical implements A maximum of two (2) tender boats may be used with the nominated vessel the use of chemicals (including anaesthetics) and explosives are prohibited When live rock has been collected, prior reporting to AFMA required at least two hours prior to the boat mooring or anchoring at port by email monitoring@afma.gov.au (or fax (02) 6225 5442 *Catch limits:* An annual catch limit of 20 metric tonnes per concession holder applies for live rock Catch limit (per operator for the season) of 25 live specimens of Humphead Maori Wrasse. Concession holders are required to record in the 'Comments' section of their logbook, the number of specimens taken per trip, their size and latitude/longitude information.	Logbook (Aquarium): Aquarium Fish Trip Logbook (AQ04) Coral, Shell Grit & Star Sand Fisheries Logbook (CS03) *Logsheets must be submitted to the Queensland Department of Employment, Economic Development and Innovation (QDEEDI) within one month of fishing activity*

Sector	Number of Permits	Target species	Fishing metho	Specific Permit Conditions	Reporting
Sea Cucumber Sector	2	Amberfish (*Thelenota anax*) Blackfish (probably *Actinopynga miliaris*) Black teatfish (*Holothuria whitmaei*) Greenfish (*Stichopus chloronotus*) Lollyfish (*Holothuria atra*) Prickly redfish (*Thelenota ananas*) Sand fish (*Holothuria scabra*) Surf redfish (*Actinapyga mauritiana*) White teatfish (*Holothuria fuscogilva*) Deepwater redfish (*Actinopyga echinites*) Elephant's trunk fish (*Holothuria fuscopunctata*) Curry fish (*Stichopus hermanni*)	Hand collection with or without underwater breathing apparatus.	Seasonal catch limits *per operator* (based on landed whole wet weight) for: • Black teatfish (500kgs) • White teatfish (2 tonnes) • Prickly redfish (10 tonnes) • Sandfish (500kgs) • Surf redfish (5 tonnes) • 5 tonnes of any combination of greenfish and lollyfish • 2.5 tonnes of any other species • 75 tonnes total allowable take of sea cucumber including the above limits Move-on provisions apply where the mother-ship must move at least 15 nautical miles to a new anchorage once five tonnes of any species or combination of species has been collected Must comply with the Rotational Zone Plan (additional information provided on Pages 23-25) under which a number of reefs have been identified over which a limited amount of fishing activity may be undertaken over a period A maximum of two (2) tender boats registered with the nominated boat may be used	Logbook (Sea Cucumber): Hand Collection Daily Fishing (HC01) CDR: Hand Collection Catch Disposal Record (HC02)

Catch

2009-10 Season

The CSF recorded a commercial harvest of approximately four tonnes (excluding Aquarium Sector take) for the financial year with an estimated value of $15,000. Live specimens taken by the Aquarium Sector totalled around 24,000 fish. Markets are largely domestic, however some sea cucumber and aquarium fish are exported.

Stock status

The Bureau of Rural Sciences' Fishery Status Report 2009 classified the CSF as uncertain when considering whether the fishery was overfished or whether overfishing was occurring. The exceptions to this uncertain status were Surf redfish, Sandfish, Lobster and Trochus which were all classified as not subject to overfishing. It is hoped that this uncertain status will be clarified through the Australian Bureau of Agricultural Resource Economics and Sciences' (ABARES) *Reducing Uncertainty in Stock Status* (RUSS) project for the CSF once the results become available at the end of 2011.

~ Management Arrangements ~

The *Fisheries Management Act 1991* (the Act) and the *Fisheries Management Regulations 1992* provide the principal legal framework for the management of the CSF.

A limited number of fishing permits are granted each year under the Act; these permits are subject to conditions set out in section 32(5) of the Act as well as conditions specified on the permits. Conditions depend on the sector and the particular permit may include limits on the number of persons able to fish under the permit at any time, gear restrictions, species size limits, trigger limits and total allowable catch limits (TACs) as well as spatial controls.

Through an approach known as ecosystem based fisheries management (EBFM), AFMA aims to minimise the impacts of Commonwealth managed fisheries on all aspects of the marine ecosystem. AFMA's adoption of EBFM is a significant departure from traditional fisheries management with the focus shifted from the direct management of target species to also considering the impacts on bycatch species, protected (TEP) species, habitats, and communities. This approach is supported through a range of policies such as harvest strategies, bycatch and discard plans and voluntary industry codes of practice. Management of the fishery is designed to be precautionary with more detailed analysis as fishing activity increases. This approach effectively minimises cost to the fishery while fishing activity and risks of impact are low and increasing the level of assessment as fishing increases.

~ Consultation processes ~

AFMA consults a range of stakeholders about any development, implementation and review of fisheries management arrangements in the CSF. An annual Stakeholder meeting is also held at least once a year (typically in March/April) to discuss issues relevant to the management of the fishery. AFMA gives notice of any amendments to management arrangements to the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC).

There is an overlap of species and management issues with adjoining Queensland State fisheries. Where appropriate, AFMA consults with Queensland State fisheries managers, and Great Barrier

Reef Marine Park Authority (GBRMPA) managers in developing and implementing management arrangements for the CSF.

~ Target and bycatch species ~

A wide range of species are taken in the CSF. The species caught will vary depending on the methods used as well as the areas and time fished. In the past, fishing has in some cases been exploratory in nature. At other times fishing is extremely targeted. Due to the variability in species caught and fishing effort across the different fishery sectors, the distinction between target and bycatch species can be difficult to make. AFMA is currently developing measures to address bycatch and discarding in all fisheries including the CSF. Work on measures specific to the CSF commenced in 2009 and will continue to respond to high ecological risks identified through AFMA's risk assessment processes and to quantify and minimise overall bycatch in the fishery. All catch including discarded catch is recorded in logbooks and by observers.

Prohibited species

All permits in the CSF prohibit the taking or carrying of the following tuna and tuna like species:

- fish of the family *Scombridae* except fish of the genera *Scomberomorus*, *Scomber, Acanthocybium*, *Grammatorcynus* and *Rastrelliger* (commonly known as mackerels)
- fish of the families *Istiophoridae* and *Xiphiidae* (commonly known as billfish)
- fish of the family *Bramidae* (commonly known as pomfrets or ray's bream).

All permits excluding aquarium sector permits prohibit the take of *Cheilinus undulatus* (commonly known as Humphead Maori Wrasse). Any incidental take of this species must be returned to the water carefully and as quickly as possible.

Landing requirements for sharks

There are specific landing requirements for sharks (where authorised to take shark):

- for all sharks of the Class *Chondricthyes*, except skates, rays, angel sharks and spurdogs, the dorsal, pectoral or caudal (tail) fins, or the caudal lobe must not be removed
- for Angel sharks and Dogfishes, the dorsal and caudal (tail) fins must not be removed
- for Skates and Rays, the skin or fillet or pectoral fins must not be removed
- for Banjo sharks, the skin or fillet, pectoral fins or tail must not be removed
- for Elephant fish the second dorsal fin or tail must not be removed
- shark livers may not be carried, retained or landed without the carcass.

Deepwater shark limits

The following limits apply for deepwater shark (Dogfish, Gulper sharks, Lantern sharks, Sleeper sharks and Kitefin sharks):

- a total combined daily limit trunked weight of these species not exceeding 15kg

- a total combined per trip limit trunked weight of these species not exceeding 90kg for trips over 6 days

Any sharks caught in addition to the above trip limits must be returned to the water as quickly and carefully as possible to ensure their survival.

Hand collection

The Lobster and Trochus, Aquarium, and Sea Cucumber Sectors employ methods which are highly selective and able to avoid bycatch species.

The main lobster species targeted are *Panulirus ornatus* and *P. versicolor* and to a lesser degree *P. pennisiulatus*.

The main trochus species in the CSF are *Trochus niloticus* and *Tectus pyramis* (which is smaller and has a lower value than *T. niloticus* (Wells and Bryce, 1988)).

There are over 100 different species that are harvested by the Aquarium Sector, but the majority of the harvest comes from damselfish, butterflyfish, angelfish, wrasse, anemone fish, surgeonfish, blennies and gobies. Species targeted vary over time as a response to changing market demands. Live rock (limestone covered with living coralline algae and other encrusting species) is also collected by hand or with hand-held, non-mechanical implements.

The species of Sea Cucumber which are harvested in the CSF can vary depending on market demands. A list of species targeted in the CSF is outlined in Table 1 of this document.

Line trap and trawl

The distinction between target and bycatch species taken by line, trap and trawl fishing is less clear. The CSF is an opportunistic fishery targeting a wide range of species. Less commercially valuable species are discarded.

Variations to fishing gear and its operation as well as the areas fished mean that catch compositions can vary significantly; in this respect the fishery can at times be viewed as exploratory.

Line, Trawl and Trap Sector operators are required to use:

- a turtle exclusion device when trawling for crustaceans
- nets with a specified minimum mesh diameter when trawling to limit bycatch
- bird scaring devices when using automatic or random baiting equipment
- specifically designed traps

to minimise bycatch and discarding in the fishery.

~ Harvest strategies – an overview ~

The *Commonwealth Fisheries Harvest Strategy Policy 2007* and associated Guidelines provides a consistent framework for applying an evidence-based, precautionary approach to setting harvest levels on a fishery by fishery basis. Harvest strategies set out the management actions necessary to achieve defined biological and economic objectives in a fishery. Harvest strategies contain:

- a process for monitoring and conducting assessments of the biological and economic conditions of the fishery

- rules that control the intensity of fishing activity according to the biological and economic conditions of the fishery (as defined by the assessment). These rules are referred to as decision rules.

Harvest strategies for the CSF were finalised in December 2007. AFMA, in consultation with industry and other stakeholders, developed four separate harvest strategies for the CSF: Line, Trap and Trawl Sector; Aquarium Sector; Sea Cucumber Sector; Lobster and Trochus Sector. These harvest strategies prescribed a range of reference points, or triggers, that allow controlled development of the fishery by requiring increased assessment and management actions with increasing fishing effort or catch. Triggers detect changes in the fishery based on catch composition, spatial distribution of catch and assessments of fishing catch and effort. The extent, and therefore cost, of the management response to a trigger being reached is linked to the potential risk to the fishery and level of uncertainty it presents. The harvest strategies were implemented at the start of the fishing year in July 2008.

The first trigger point and decision rule aims to detect and determine why the change has occurred, its extent and possible implications, and appropriate management responses.

Reaching a higher level trigger point requires fishing for the species to cease in the fishing year until an assessment is undertaken. Following assessment, targeting the species may be prohibited and trigger limits may be revised up or down.

Line trap and trawl

The harvest strategy for the Line, Trap and Trawl Sector of the CSF states that if any of the following conditions are met in a fishing season (1 July-30 June) a level one response will be initiated:

- catch of any species meets or exceeds the historic high level for that species (based on all permits over a season)

- cumulative catch of all species taken by all line trap and trawl permits in a season reaches 450 tonnes

- the take of white tip reef shark reaches 2.5 tonnes

- the take of grey reef shark reaches 13 tonnes

- the relative catch proportion of any species changes by 30% or more from the historical average and catch of that species is greater than one tonne for the season

- the relative catch proportion of any species declines between years by 10% or more over three consecutive seasons (overall catch per unit effort (CPUE) not exceeding 50% decline in total over three seasons).

A level one response includes:

- detailed logbook data analysis

- industry consultation to determine why the change has occurred and the perceived significance of the change

- increased data collection
- a revised risk analysis
- depending on the outcomes of the precautionary risk analysis, management responses may include spatial management and reduction of level two triggers.

A range of spatial and CPUE triggers are also employed; the following conditions will trigger a level one response if:

- the area fished changes by 40% or more
- 40% or more of the total catch is taken from a single area
- 40% or more of historically fished areas are not fished
- CPUE for any species declines by 50% or more over the last three consecutive seasons without another trigger being reached.

If a trigger is reached in conjunction with a new species being taken, this will be taken into account.

If the level one assessment cannot determine why the change has occurred or if it can be shown to be a risk to sustainability, then precautionary management responses will be introduced. These may include spatial closures, move on provisions and revised triggers.

If any of the following conditions are met in a season a level two response will be initiated:

- if any of the level one spatial or CPUE trigger conditions are accompanied by a 50% or greater overall decline in CPUE over the past three seasons, a level two response will be invoked (50% or greater inter-season decline for three consecutive seasons)
- cumulative catch of all species taken by all line trap and trawl permits in a season reaches 1,000 tonnes
- the relative catch proportion of any species changes by 30% or more from the historical average, catch of that species is greater than one tonne and there is a 50% or greater decline in CPUE over the last three seasons
- the relative catch proportion of any species declines between seasons by 10% or more over three consecutive seasons and there is a 50% or greater overall decline in CPUE over the last three seasons (50% or greater inter-annual decline for three consecutive seasons)
- the take of white tip reef shark reaches five tonnes
- the take of grey reef shark reaches 26 tonnes
- the CPUE for any species declines by 50% or more over the past three seasons without another trigger being reached.

If a level two trigger is reached AFMA, in consultation with the CSF expert group, will undertake a detailed assessment of the species which triggered the change. This may involve:

- assessment of stored otoliths and/or vertebrae

- catch curve analysis using collected age and size data, to estimate fishing mortality (F) and natural mortality (M)
- assessment of F/M (ratio) and/or spawner biomass per recruit (SBPR) empirically derived from catch curve analyses
- a time series of total mortality (F+M) may also be assessed
- Delury depletion curves (CPUE vs time) in combination with habitat mapping may also be used to estimate biomass for an area
- trends in CPUE, spatial and temporal catch and effort, length frequency and age of catch may also be assessed.

Total allowable catch limits may be established for particular species based on these analyses. Once assessments have been completed an appropriate action will occur, for example, changing trigger points and spatial management.

Until assessments are complete, triggers will remain at their current level and fishers must avoid catching the species which contributed to the trigger being hit; if this is not possible, trip limits will apply. The limits apply to the particular year in which the trigger was reached and may be revised up or down following completion of the assessment.

Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions also apply for these sectors. Demersal finfish traps must not be used on the same trip as any other fishing method authorised by this or any other fishing permit. On any trip where an AFMA observer is not present, one of the following gear types must be removed from the boat prior to departure: all demersal finfish traps; or at least one trawl otter board and all line fishing equipment.

Auto Longline

- A maximum of 15000 hooks may be used, stowed, or secured on board the boat at any time
- Provision for the use of automatic baiting equipment must be sought from AFMA on transfer of the permit or change of the nominated vessel.
- The boat nominated to the fishing permit must be fitted with an AFMA approved automatic baiting system.
- The permit holder must ensure that an appropriate bird scaring device is installed on the nominated boat in accordance with AFMA requirements.
- An AFMA approved observer must be used on the first commercial trip after installation of an AFMA approved automatic baiting system and thereafter every fourth trip if a “Mustad” automatic baiting system is used or every third trip if a “Best Fishing Gear” system is used.
- Every shot using the automatic baiting gear must be set in waters deeper than 200 metres. However, where a fisheries observer is on board the boat, only 50% of all hooks using the automatic baiting gear must be set in waters deeper than 200 metres.

- The permit holder or authorized agent is required to complete the Line Fishing Daily Fishing Log (LN01A), the Commonwealth Catch Disposal Record (SESS2A) and the Commonwealth Transit Form (CTF) for loads despatched using multiple vehicles.

- Fishing operators must comply with the *Threat Abatement Plan for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations* (TAP2).

Other Line (demersal longlines, trotlines, droplines, setlines and handlines)

- An observer must be carried on the first trip of the fishing season and every fourth trip thereafter.

- The take of *Cheilinus undulatus* (commonly known as Humphead Maori Wrasse) is prohibited (except for the Aquarium Sector). Any incidental take of this species must be returned to the water carefully and as quickly as possible.

- The permit holder or authorized agent must complete the Line Fishing Daily Fishing Log (LN01A), the Commonwealth Catch Disposal Record (SESS2A) and the Commonwealth Transit Form (CTF) if the load is dispatched using multiple vehicles.

Trap

- This method allows the use of finfish traps (constructed of metal only) set on the sea floor to take fish from the Class Osteichthyes (bony fishes only).

- Limits apply on the number (limit of 50) and size of traps used (1.8m x 1.8m x 0.8m).

- A trap must not be left unattended for any period in excess of one (1) month.

- In case a trap is lost, all trap doors must be fitted with sacrificial anodes to allow trap doors to open once the anode disintegrates.

- Traps must be set and hauled individually (not connected in a sequence), unless AFMA gives written approval for an exemption.

- Any species not belonging to the Class Osteichthyes (bony fishes) caught with use of a finfish trap must be released in a manner that best ensures its survival.

- The holder of the fishing permit may only sell or otherwise dispose of fish to the holder of a current AFMA Fish Receiver Permit.

- The permit holder must complete the Trap Fishing Daily Fishing Log (TR01), the Commonwealth Catch Disposal Record (SESS2A) and a Commonwealth Transit Form if dispatching the load using multiple vehicles.

- The permit holder or authorized agent must carry an observer on the first trip of the season and every fourth trip thereafter.

Trawl

- Permit holders are authorised to take bony fish (including crustaceans) by this method.

- A minimum net-mesh size applies (not less than 38mm at any part of the net).

- A Bycatch Reduction Device (BRD) is required when trawling for crustaceans.

- The fishing logbook titled Eastern Finfish Trawl Daily Fishing Logbook (EFT01B), the Commonwealth Catch Disposal Record (SESS2A) and the Commonwealth Transit Form if despatching the load using multiple vehicles, must be completed.

Lobster and Trochus

Under the harvest strategy for the Lobster and Trochus Sector, if 30 tonnes of lobster tails or 30 tonnes of trochus are landed in a fishing year (15 tonnes per operator), monitoring will increase and may include additional details such as size of individuals. An assessment of the stock will also be undertaken with consideration also given to adjacent fisheries (Queensland, Great Barrier Reef and Torres Strait Island). Assessments must be completed within 12 months and annual catch must not exceed 30 tonnes until the assessment is completed. If the assessment is not completed within 12 months, the TAC will be reduced to 30 tonne for lobster and 20 tonne for trochus for the subsequent year. Once the assessment is complete, the limits may be revised up or down.

Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions also apply to this Sector:

- a minimum tail length of 125 mm applies to lobsters and a slot limit (size range) of 80 – 125mm applies to trochus species

- once operators collect the lesser of three tonnes of lobster tails or five tonnes of trochus the mothership must move at least 15 nautical miles to a new anchorage. This provision aims to prevent localised depletion

- each permit specifies a maximum number of tender boats authorised to take fish using the boat specified in the permit (a maximum of two tender boats registered with the boat)

- relevant information about fish taken in the area of the Coral Sea Fishery must be fully recorded and submitted to AFMA in the Hand Collection Daily Fishing Log HC01, Hand Collection Catch Disposal Record (HC02) and the Commonwealth Transit Form if the load is despatched using multiple vehicles.

Aquarium

Under the harvest strategy for the Aquarium Sector, if any of the following conditions are met in a season a level one response will be initiated:

- a combined total of 200 fishing days are undertaken by Aquarium Sector permit holders

- a combined total of 40,000 individuals are landed by Aquarium Sector permit holders

- a combined total of 20 tonnes of live rock is landed by Aquarium Sector permit holders; where this limit has not been reached over the past three years, an assessment is to be undertaken within the following three years

- a combined total of 50 specimens of Humphead Maori Wrasse are landed by Aquarium Sector permit holders
- if a significant change has occurred in the relative catch proportion of any species group, the number of specimens landed is greater than 500 and no other trigger has been reached relating to this species group.

The catch proportions of various functional groups are also assessed in the Aquarium Sector. These functional groups were developed due to the wide range of species and changing catch levels in response to market demands. Functional groups include, but are not limited to:

- angelfish
- damsel fish
- gobies
- surgeon fish
- wrasses.

A level one response may involve:

- detailed logbook data analysis
- industry consultation to determine why the change has occurred and the perceived significance of the change
- a revised risk analysis.

If a combined total of 50 specimens (25 per permit holder) of Humphead Maori Wrasse (HMW) are taken by Aquarium Sector permit holders then all take of HMW is to cease in the fishing season until a detailed assessment has been undertaken.

If a combined total of 40 tonnes of live rock is landed by Aquarium Sector permit holders then all take of live rock is to cease in the fishing season until a detailed assessment has been undertaken.

Following any assessment AFMA may revise catch limits, implement spatial closures, trip limits, move on provisions and/or increase monitoring for any species or areas within the fishery.

Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions also apply to this Sector:

- Live fish taken under the permit may only be collected for use in aquaria and must not be sold for human consumption.
- Take must be by hand, barbless hook and line and by scoop net; fish may also be herded into collection areas with the use of cast, scoop and seine nets or hand held rod.
- Restrictions apply on the size of scoop nets (no more than two metres in any direction, maximum mesh size of 25mm and handle/shaft length must be less than 2.5 metres).
- Restrictions apply on the size of cast nets (no more than 6m in diameter; maximum mesh size of 28mm).

- Restrictions apply to the size of seine nets (no more than 16m in length, maximum mesh size of 25mm and a drop of less than 3m).
- Live rock may only be taken by hand or using hand-held non-mechanical implements; landing requirements require prior reporting to AFMA (2 hours prior to entering port) on the total weight of live rock collected.
- A maximum of two tender boats nominated to the mother ship may be used.
- The use of chemicals and explosives is prohibited (including anaesthetics).
- The permit holder or authorised agent must complete the Queensland Aquarium Fish Trip Logbook (AQ04) or the Queensland Fisheries Coral, Shell Grit and Star Sand Fisheries Logbook (CS04). Completed logsheets must be submitted within one month of activity to Queensland DEEDI.

Sea cucumber

Catch limits which will trigger an assessment of the fishery are specified in the harvest strategy for the Sea Cucumber Sector; these trigger limits are specified in Table 2 below. If any of these limits are reached, fishing for the relevant species must cease until the results from the assessment indicate that it is sustainable to do so.

An assessment may include consideration of the spatial distribution of catch and effort and species specific TACs. If data is insufficient to set TACs, then a cost effective abundance survey may be undertaken.

Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions also apply to this Sector:

- an annual quota limit per operator applies for each of the five sea cucumber species and for all species of sea cucumber (including the five species which have specific quota limits) as outlined in Table 2. The remaining uncaught proportion of the total allowable catch determines the catch limits for all other species of sea cucumber
- minimum size limit guidelines apply for sea cucumber which are implemented through a voluntary agreement with industry as outlined in Table 2
- a maximum number of two tender boats registered to a boat nominated to a permit may be used to carry and tranship fish to the nominated boat.
- Move-on provisions apply where the mother-ship must move at least 15 nautical miles to a new anchorage once five tonnes of any species or combination of species has been collected. This provision aims to prevent localised depletion
- a Rotational Zone Plan is in place under which a number of reefs have been identified over which a limited amount of fishing activity may be undertaken over a period as specified in Table 3
- the Hand Collection Daily Fishing Log (HC01) and the Hand Collection Catch Disposal Record (HC02) must be completed.

Table 2 Catch limits (based on landed whole wet weight) for the Sea Cucumber Sector in the CSF

Common name	Species	Minimum size limit	Annual quota per permit	Total Allowable Catch
Black teatfish	*Holothuria whitmaei*	25 cm	500 kg	1 tonne
White teatfish	*Holothuria fuscogilva*	32 cm	2 tonnes	4 tonnes
Sand fish	*Holothuria scabra*	16 cm	500 kg	1 tonne
Prickly redfish	*Thelenota ananas*	30 cm	10 tonnes	20 tonnes
Surf red fish	*Actinopyga mauritiana*	15 cm	5 tonnes	10 tonnes
Any combination of greenfish and lollyfish	Greenfish – *Stichopus chloronotus* Lollyfish – *Holothuria atra*	15cm	5 tonnes	10 tonnes
Any other single species		15 cm	5 tonnes	10 tonnes
All species of the Order Aspidochirotida		15 cm	75 tonnes (including the take of the above species)	150 tonnes (including the take of the above species)

Table 3 Rotational Zone Plan

2011/12		2012/13		2013/14	
Days permitted	Zone	Days permitted	Zone	Days permitted	Zone
15	Holmes Reefs	15	Wreck Reefs	15	Flinders Reefs
15	Diamond Islets	5	Tregrosse Reefs	15	Willis Islets
10	Kenn Reefs	5	Moore Reefs	10	Osprey Reef
5	Frederick Reefs	5	Mellish Reefs	5	Diane Bank
2	Bougainville	5	Cato Island Reef	2	Malay Reef
2	Flora Reef	5	McDermott Bank	2	Abington Reef
		2	Dart Reef		
		2	Heralds Surprise		
		2	Shark Reef		

Reefs within the Coral Sea Fishery have been divided into 21 zones with a total of 144 fishing days. These zones are to be fished in accordance with the fishing plan outlined in Table 3.

The total days (144) allotted to all permit holders in the sea cucumber hand collection sector of the Coral Sea Fishery are to be fished on a competitive basis. It is the permit holder's responsibility to ensure that they do not exceed the number of days allotted.

Table 4 Rotational Zone Co-ordinates

		A			B			C			D			
Reef name	**Days**	**Lat min**			**Lat max**			**Long min**			**Long max**			**Chart**
		dd	**mm**	**ss**	**dd**	**mm**	**ss**	**dd**	**mm**	**ss**	**dd**	**mm**	**ss**	
Abington Reef	2	18	2	0	18	7	30	149	34	30	149	39	0	4602
Bougainville Reef	2	15	28	30	15	31	30	147	5	0	147	8	30	616
Cato Island Reef	5	23	14	30	23	15	30	155	31	30	155	34	30	611
Dart Reef	2	17	23	0	17	25	30	148	10	0	148	13	0	615
Diamond Islets	15	17	24	0	17	41	0	150	47	0	151	7	0	614
Diane Bank	5	15	42	0	16	18	0	149	28	0	149	45	0	617
Flinders Reefs	15	17	22	30	17	53	30	148	16	0	148	36	0	615
Flora Reef	2	16	43	30	16	46	30	147	41	30	147	46	30	615
Frederick Reefs	5	20	55	0	21	2	0	154	20	30	154	24	30	612
Heralds Surprise	2	17	18	30	17	20	0	148	26	0	148	29	30	615
Holmes Reefs	15	16	22	30	16	33	0	147	47	30	148	6	0	615
Kenn Reefs	10	21	5	30	21	17	0	155	42	0	155	48	0	611
Malay Reef	2	17	54	0	18	0	0	149	17	0	149	23	30	4602
McDermott Bank	5	17	10	30	17	18	0	147	47	0	147	55	30	4602
Mellish Reef	5	17	20	30	17	26	30	155	50	0	155	53	0	611
Moore Reefs	5	16	0	0	16	3	30	149	7	30	149	11	0	4602
Osprey Reef	10	13	47	30	14	1	30	146	32	30	146	43	0	616
Shark Reef	2	14	4	0	14	12	0	146	45	30	146	52	30	616
Tregrosse Reefs	5	17	41	0	17	48	0	150	29	30	150	47	0	4602
Willis Islets	15	16	6	0	16	19	0	149	56	0	150	3	0	617
Wreck Reefs	15	22	9	30	22	13	30	155	9	0	155	29	30	611

Each of the 21 zones within the Coral Sea Fishery has a corresponding series of co-ordinates as specified in Table 4:

- each collection zone has a northern and southern boundary as described in columns A and B respectively
- each collection zone also has a western and eastern boundary as described in columns C and D respectively.

Deduction of fishing days

For the purpose of deducting fishing days for each zone the following rules will apply:

A fishing day is defined as being in a zone between the hours of 0900 and 1500. If 3 or less hours are spent in the zone between the hours of 0900 and 1500 then a half fishing day must be recorded.

If a strong wind warning is issued the holder should write SWW in their logbook only if no fishing took place. No day will be deducted in this case.

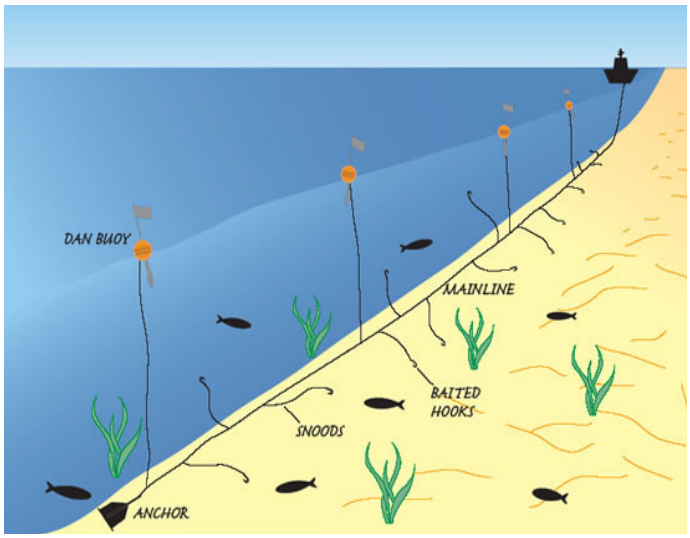
~ Fishery sectors – gear and method descriptions ~

Descriptions from Kiolola et al, 1993.

Line and Trap Sector

Line and Trap Sector permits allow the use of demersal longline, setline, dropline and trotline methods. Permit conditions aim to minimise interactions with protected species and include the use of tori lines, hook and depth limits and Observer coverage.

Demersal longline



A demersal longline consists of a sinking main-line constructed of 6-8mm diameter synthetic rope with snoods (branch lines) about 1 metre long attached at intervals of 6 – 10m. Each snood carries a hook at one end and is attached to the main-line at the other end either permanently or by means of a 'snood clip'.

The gear is divided into a number of 'sets' which each has a certain number of hooks. Each hook is baited before the gear is deployed into the water. The hooks together with the main-line and an anchor weight at each end are placed on the seabed. A buoy and dan pole with flag attached by way of buoy-line to the main-line at each end for retrieval of the gear. The main-line is hauled from one end over a roller mounted on the gunnels by a line hauler.

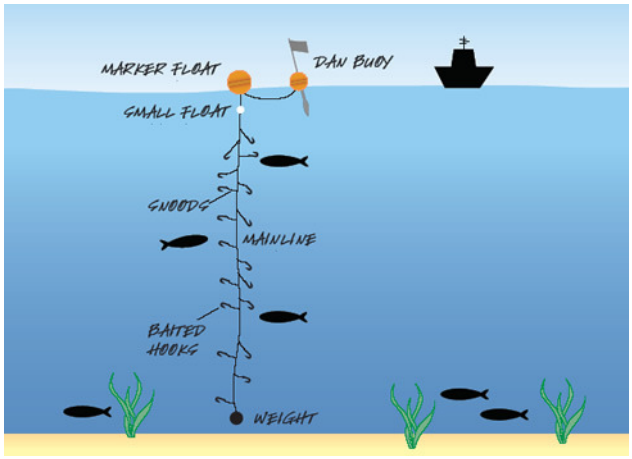
Demersal longlines can be set in deep water on the continental slope and in strong tidal currents where it is more difficult to set other gear.

Use of automatic or random baiting equipment with demersal longline gear is specifically prohibited unless otherwise stated in the permit conditions. AFMA will permit the use of such equipment by some operators in the fishery, subject to application and additional conditions such as conditions relating to bycatch reduction for seabirds. A minimum depth limit of 200 metres (unless an observer is on board) also applies to operators of automatic/random baiting equipment. At the time of writing, only one longline permit allows automatic/random baiting.

A trotline is very similar to the demersal longline described above. The main-line of a trotline has a small float attached to suspend it off the seabed, avoiding snagging on the bottom. The snoods (also called trots) are attached to the main-line in a similar way to demersal longlines at intervals of 6-10m. These snoods are weighted and hang vertically under the main-line and act like a series of short droplines.

Trotlines are deployed and retrieved in a similar way to demersal longlines. All hooks are baited before deployment with similar baits to demersal longlines.

Dropline

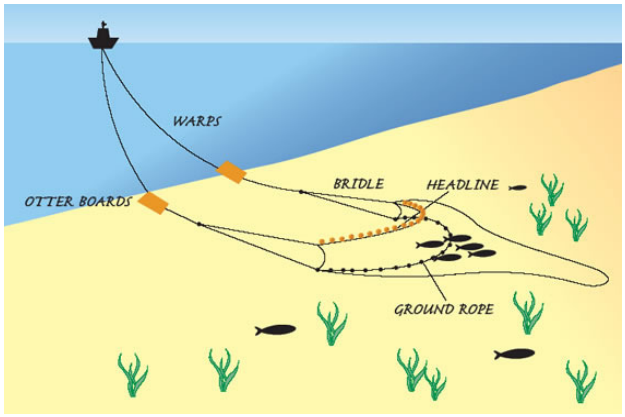


A dropline consists of a main-line, usually made of synthetic rope, set vertically in the water with a weight on the bottom and floats attached at the surface. Between 10 and 100 short snoods are either clipped or permanently attached to the main-line at regular intervals at one end and have a hook on the other.

The hooks are baited before the gear is deployed. Gear is deployed by dropping the weighted end of the main-line overboard and letting the main-line run off, either attaching the snoods as the line deploys or allowing permanently fixed snoods to run off 'shooting rails'. The gear is retrieved by a line hauler (powered winch) with the caught fish removed from the snoods as they come aboard.

Setline

Setline is the simplest form of fishing. A setline (or handline) is a line to which one or more lures or baits are attached. Setlines are set and retrieved manually, although electric or hydraulic motors are available to reduce labour.



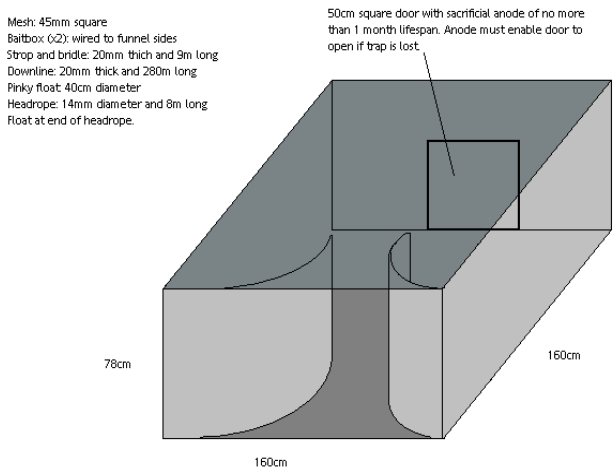
Trawl and Trap Sector

Demersal and midwater otter board trawl gear is used in this Sector to target bony fish and crustaceans. Demersal trawling is the term used to describe the fishing method where a net is towed along, or just above, the ocean floor in depths of water ranging from a few metres to 1,500 metres. A trawl net is attached to the vessel by two long wires, called warps which are attached to an otter board either side of the net. The net opening (mouth) is spread horizontally by the outward force acting on the otter boards as they are towed through the water. The bottom of the net opening is called the footrope and is heavier than the headline and normally in contact with the bottom. The footrope is often rigged with rubber rollers to minimise the damage to the seafloor and allow it to move across the substrate without becoming snagged. The top of the mouth (headline) is lifted vertically by a series of floats.

Otter trawling relies on the principle of herding fish inward from the otter boards and the sweep (wire from otter board to the headline and footrope) towards the mouth of the trawl net. Fish have a natural tendency to swim away from the otter boards, sweeps and net wings and fall backwards, towards the codend. The codend is the end of the net where the fish are caught. The size of the mesh in the codend is one of the most important factors in the size and shape of fish that are caught and those that escape.

A trawl shot involves the net being deployed from the stern of the vessel by way of winches. The net is then towed along the bottom, usually at around 3 knots for a period of time before being hauled up toward the vessel. The fish are contained in the codend, which is fastened with a rope to release the catch on the vessel deck.

Trawl Sector permit conditions aim to minimise interactions with protected species and specify a minimum net-mesh size and the use of Bycatch Reduction Devices (BRDs) when trawling for crustaceans.



Demersal finfish traps

(trap provisions included on all Line and Trap, and Trawl and Trap permits)

Fish traps are devices which fish enter voluntarily but from which they are prevented in some way from escaping. Fish are enticed into the trap either by bait or because the trap appears to provide some sort of refuge. Demersal finfish traps are set on the sea floor with a haul-in line, surface float and dan buoy to mark their position. Traps are left to fish from 20 minutes to 24 hours.

Galvanised steel traps are used in the CSF and there are limits on the number and size of traps used (no more than 50 traps; maximum trap size is 1.8 meters x 1.8 meters x 0.8 meters). All traps must be fitted with sacrificial anodes (of no more than one month life span fitted to trap doors) to avoid ghost fishing if the traps are lost. Traps in the CSF are typically set at between 60 and 120m depth, with most catch occurring between 80-100m depth.

Lobster and Trochus Sector

Lobster and Trochus Sector permits allow hand collection with or without the use of underwater breathing apparatus.

Aquarium Sector

Aquarium collection Sector permits allow operators to use their hands, barbless hook and line, cast nets and seine nets and/or scoop nets for herding and catching fish. Underwater breathing apparatus (such as SCUBA or Hookah equipment) may also be used. Gear restrictions are in place for this Sector and the use of chemicals and or explosives for taking fish is prohibited. Live rock may be collected by hand or by using hand held non-mechanical implements.

Each permit specifies a maximum number of tender boats (2) and a trigger limit of 200 days fished per year is in place. If fishing effort reaches this level an evaluation of the sustainability and impacts is undertaken.

Sea Cucumber Sector

Collection of Sea Cucumber may only be done by hand with, or without the use of underwater breathing apparatus.

~ Permits ~

Fishing permits

All CSF fishing permits are granted for the duration of the financial year (1 July – 30 June). Operators have three months to reapply for a permit following the expiration of their fishing permit. Operators must have a current fishing permit authorising their activity on board their boat. To discuss licensing arrangements for the CSF please contact AFMA during business hours on (02) 6225 5555 or AFMA Direct 1300 723 621.

Fish Receiver Permits

Some sectors of the CSF are required to unload their catch to a licensed Commonwealth Fish Receiver Permit holder. Where relevant, this requirement is stipulated in CSF fishing permit conditions.

Fish receiver permits are granted for 12 months duration. They cannot be transferred. An application form for a fish receiver permit can be obtained at: http://www.afma.gov.au/wp-content/uploads/2010/06/fr1.pdf, or by contacting AFMA on (02) 6225 5555 or 1300 723 621.

Fish Receivers are required to complete the Catch Disposal Record (CDR) within 50m of the point the consignment is unloaded, however this can be extended to 500m upon written application to AFMA for an exemption.

Scientific Permits

Scientific Permits are granted for the purposes of conducting scientific research in a specified area of the Australian Fishing Zone (AFZ) or in a specified fishery. An application made for the grant of a scientific permit must contain information that AFMA requires for proper consideration of the application.

Scientific Permits are granted for a maximum duration of six months and are not transferable. No application fee applies for a scientific permit and the necessary forms can be obtained at:

www.afma.gov.au/information/publications/forms/licensing/default.htm, or by contacting Licensing and Quota Management on (02) 6225 5555 or 1300 723 621.

~ Allocation between fishing sectors ~

Commonwealth fisheries

The Eastern Tuna and Billfish Fishery and the Southern Bluefin Tuna Fishery overlap the Coral Sea Fishery area of waters. These fisheries operate pelagically targeting Tuna and Tuna-like species. All CSF operators are prohibited from targeting or being in possession of Tuna or Tuna-like species. The Southern and Eastern Scalefish and Shark Fishery and Southern Squid Jig Fishery are immediately south of the CSF and the Torres Strait fisheries are immediately north of the CSF; these fisheries are managed separately to the CSF.

Recreational fisheries

Recreational Fishing in the CSF is managed by the Queensland Department of Employment, Economic Development and Innovation (QDEEDI). A number of charter operators run recreational fishing trips into the waters of the CSF. The fishery is remote and consequently only a small number of recreational trips are run each year. Catch from these trips is thought to be small.

Indigenous fisheries

Indigenous fishing in the CSF is managed by QDEEDI. Due to the CSF's distance from the coastline, the level of indigenous fishing in the CSF is thought to be minimal or non-existent. A project funded by the Fisheries Research and Development Corporation (FRDC) entitled the *National Recreational and Indigenous Fishing Survey* (Project No. 99/158) provided no additional information on indigenous fishing in the waters of the CSF.

State managed commercial fisheries

A number of commercial fisheries exist in Queensland state managed waters to the west of the CSF.

~ Levies ~

How much levy do I pay and when is it due?

If you own leviable concessions, you should receive a Levy Invoice.

The Levy Invoice states:

- when levy is due and payable
- how much levy you are required to pay
- whether the levy is payable in instalments
- the penalty that applies should the levy be unpaid by the due date
- who to contact for enquiries.

Each operator should receive one *Levy Invoice* for all their fishing concessions.

How do I pay my levy?

Operators can make payments by cheque, money order, direct deposit, or electronic funds transfer (EFT) from their bank account to AFMA, or by phone and internet banking (BPAY), and by credit card by faxing back the completed strip on the first page. EFT and Direct deposit details are listed on the remittance slip on the reverse of the first page. If you decide to pay your levy using BPAY please contact AFMA's Senior Licensing Officer on 1300 723 621 for details.

What if I can't pay my levy by the due dates?

AFMA will suspend a fishing concession if a levy remains unpaid 14 days after the due date in accordance with Fisheries Management Paper Number 6 - *Procedure for handling unpaid or overdue levy or charge for Commonwealth domestic fishing concessions*. After a concession has been suspended, AFMA is able to negotiate alternative arrangements to pay the levy amount. If a concession holder wishes to enter into an arrangement to pay, they must write to the manager of licensing.

Please note that if you do not pay the total levy payable by the due date a penalty of 20% per annum (calculated daily) will be applied for each day the levy remains unpaid. This penalty fee is required under the Act and occurs even if an arrangement has been entered into.

If your Levy Invoice states that you can pay the levy by instalments, each instalment must be paid by the due date. If AFMA receives any instalment after the instalment date falls due, then the whole of the levy will become due and payable immediately. If this occurs, you will incur an interest penalty of 20% per annum (calculated daily), applied against the amount of the levy outstanding, until it is paid in full.

~ Carriage of fishery observers ~

The observer's role is to collect independent, accurate and reliable data on Commonwealth fishing operations, catches and interactions with the environment by the vessel and its fishing gear.

This is achieved through:

- collection of vessel activity and catch data
- collection of data for implementing harvest strategies, research programs, supporting marine management and other issues relevant to environmental awareness and management
- monitoring compliance of the vessel with its fishing agreements.

The role of the observer is not one of a fisheries officer. **Observers have NO AUTHORITY to direct fishing operations of the vessel or act in an enforcement role.** However, observers are required to report illegal fishing activity.

A fishing operator is **required to carry an AFMA observer upon request by AFMA**. An Operators' obligations for carrying an observer are detailed in the fishing permit. The cost of observers is met by industry through levies. CSF fishing operators must also comply with the following minimum observer coverage requirements as stated on their fishing permit. It is the responsibility of the concession holder to monitor their observer coverage and notify AFMA at least 72 hours prior to departure to arrange for an observer as necessary.

Line and Trap Sector and Trawl and Trap Sector: Operators in these sectors are required to carry an observer on their first trip of the period starting 1 July – 30 June, and every fourth trip thereafter, covering at least 25% of all shots and trap lifts each year. Auto longline fishing operations are required to carry observers for one in every four trips (or one in every three trips if using certain types of random/automatic baiting gear).

Sea Cucumber Sector, Aquarium Sector and Lobster and Trochus Sector: There is no prescribed minimum observer coverage for these sections with coverage being as directed by AFMA.

~ Catch data ~

Catch data is collected for the CSF via logbooks and verified by CDRs and observer coverage. The small number of operators in the CSF may prevent the public release of some data under the current AFMA Information Disclosure Policy.

~ Integrated Computer Vessel Monitoring System (VMS) ~

It is the concession holder's responsibility to ensure that any vessel nominated to their concession is fitted with an Integrated Computer Vessel Monitoring System (VMS) of a category specified in the register of AFMA approved units. This register can be found at: http://www.afma.gov.au/industry/vms/approved.htm.

The VMS unit must remain switched on at all times including when the boat is in port or engaged in State fishing. The concession holder must ensure the VMS is reporting correctly before going out to sea for the first time and that no interference occurs with the correct operation of the VMS unit. On becoming aware of a problem with the VMS functioning, the concession holder must advise AFMA as soon as practicable via:

Phone: 02 6225 5369 (if prompted, follow instructions on the voice mail)

Mobile: 0419 205 329

Fax: 02 6225 5440

Email: VMSreporting@afma.gov.au

If the VMS is not operating or is malfunctioning the boat must remain in port until the VMS is inspected, repaired if necessary and AFMA has received confirmation from an authorised technician that the Automatic Location Communicator (ALC) is functioning normally.

Please refer to the VMS conditions on your permit for more information.

Manual Reporting

If a nominated vessel's VMS unit stops reporting, the concession holder will be required to manually report the vessel's position at a frequency specified by AFMA**.**

The manual position reports should include:

- the vessel's name
- the vessel's distinguishing symbol
- the vessel's present latitude and longitude (in degrees and minutes)
- the date and time.

Manual position reports are to be made by:

Phone: 02 6225 5369 (if prompted, follow instructions on the voice mail); or
Fax: 02 6225 5440; or
Email: VMSreporting@afma.gov.au

Directions to return to port

Depending on the circumstances, and in accordance with its enforcement decision principles as outlined in the Domestic Compliance and Enforcement Policy, if a nominated boat's VMS unit stops reporting AFMA may determine that it is appropriate to issue a Direction under

section 84(1)(k) of the *Fisheries Management Act 1991*. This Direction will require the boat to immediately return to, and remain in, port until such time as AFMA is satisfied the problems with the VMS unit have been rectified.

Temporary switch off (TSO) arrangements

A TSO is a formal arrangement that allows a unit to be legitimately switched off. If a nominated vessel is undergoing maintenance, berthed for an extended period or in other exceptional circumstances that render VMS operation impractical, the concession holder can apply for a TSO by filling out an 'Application for VMS Temporary Switch Off' form and sending it to AFMA via:

Fax: 02 6225 5440
Email: VMSreporting@afma.gov.au
Mail: Data Processing
AFMA
PO Box 7051
CANBERRA BC ACT 2610

Further information can be found on the AFMA website at:
http://www.afma.gov.au/industry/vms/default.htm

~ Accreditation under the Environment Protection and Biodiversity Conservation Act 1999 ~

The CSF is assessed by SEWPAC under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on a regular basis. The objective of this assessment is to ensure the fishery is sustainable. Once assessed the fishery may be declared a Wildlife Trade Operation (WTO) and exempt from export controls of the EPBC Act.

The CSF has been accredited under the EPBC Act as an approved WTO for the period 20 November 2010 to 19 November 2013. The WTO is subject to a number of conditions that AFMA must meet or progress during the life of the WTO.

~ Protected species, threat abatement plans, recovery plans, domestic and international agreements ~

The incidental catch (or bycatch) of seabirds during oceanic longline fishing operations was listed as a key threatening process on 24 July 1995. Under Commonwealth legislation (now the EPBC Act), a *Threat Abatement Plan for the Incidental Catch (or bycatch) of Seabirds During Oceanic Longline Fishing Operations* was prepared and approved by the Minister for the Environment on 2 August 1998. A review of this Threat Abatement Plan (TAP) was carried out under subsection 279(2) of the EPBC Act and a new TAP was approved in 2006. The provisions of the 2006 TAP apply to all longline fisheries managed by the Commonwealth Government including the CSF.

The 2006 TAP was prepared in consultation with the Longline Fishing TAP Team to meet the requirements of the EPBC Act and to coordinate national action to alleviate the impact of longline fishing activities on seabirds in Australian waters.

The 2006 TAP remains in force until a revised TAP is approved by the Minister.

Protected species

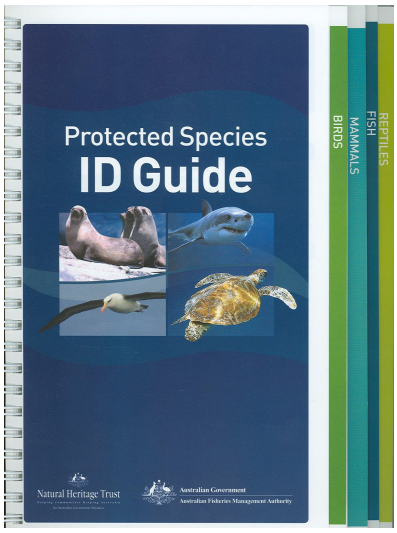
Operators are required to report all interactions with protected species. Any operator that interacts with a protected species (as listed in Part 13 of the EPBC Act), and is acting in accordance with the management arrangements for the fishery, will not commit an offence. However, failure to report an interaction with a protected species is an offence under the EPBC Act.

What is a protected species?

The EPBC Act establishes four different categories of protected species in Commonwealth areas. These provide for the recovery of populations and/or the long-term conservation of a species. A species that is a member of the following categories is a protected species:

1. Listed threatened species or listed threatened ecological community generally include species with low population numbers, those that have had a reduction in habitat or distribution, or are subject to an increase in other threats to the species survival.
2. Listed migratory species are listed to meet Australia's obligations under certain International treaties (such as the Convention on Migratory Species) which require that we provide protection for species listed in the Convention.
3. Listed marine species are listed to provide general protection to Australia's marine native wildlife to reduce the likelihood of population decline. It is an offence to kill injure, trade, take, keep or move native wildlife without a permit or other authorization.
4. All cetaceans are listed to uphold Australia's strong international, regional and national measures for the protection of this group of animals.

There are many species of animals that are classified as protected. Of relevance to Commonwealth managed fisheries, all cetaceans, seabirds, sea snakes, turtles, seals and sea lions, sygnathids (sea horses, sea dragons and pipefish), sawfishes (green and freshwater), crocodiles and dugongs are protected. There are also a small number of sharks (great white, grey nurse) and other fish listed under the EPBC Act. A full listing of protected species is available on the SEWPAC website (www.environment.gov.au).



Protected species Identification Guide

To help operators accurately report their protected species interactions, AFMA has produced a protected species identification guide. This guide covers the range of protected species that AFMA managed fisheries do, or have the potential to, interact with during their normal fishing operations. The guide provides pictures of these species along with an indicative distribution and key biological information. All CSF boats have been provided with a copy of this identification guide – if you would like a free copy, please contact AFMA's Environment Section on 1300 723 621.

What is an interaction with a protected species?

'Interaction' means any physical contact an individual (person, boat or gear) has with a protected species that causes death, injury or stress to the individual directly resulting from fishing activities. This includes any collisions, catching hooking, netting, entangling, or trapping of a protected species.

Reporting interactions with protected species

CSF line, trawl, trap, and hand collection operators (other than Aquarium) are required to report interactions with protected species in their Commonwealth logbook. Aquarium operators must report interactions with protected species in the 'comments' section of their relevant Queensland Logbook (AQ04 or CS03 at time of printing). Completed original logsheets for any fishing activity conducted by line, trawl, trap and hand collection operators (other than Aquarium) must be submitted to AFMA. Aquarium operators are now required to submit their completed logsheets to the Queensland Department of Employment, Economic Development and Innovation (QDEEDI) who now provide the logbook service for this sector.

Operators who interact with a protected species and are using a Commonwealth logbook are required to circle 'Yes' in the box at the bottom of the logsheet and then fill out the Listed Marine and Threatened Species form. These forms are located at the back of the logbook and, once filled out, should be returned to AFMA with the relevant log page.

All interaction reports provided to SEWPAC since 1 April 2006 to date are available on the AFMA website at: http://www.afma.gov.au/managing-our-fisheries/environment-and-sustainability/protected-species/

Further information on interactions with protected species can be obtained from AFMA's Environment and Research section by calling 1300 723 621 or emailing Sally.McCarthy@afma.gov.au.

Retaining seabirds incidentally killed during oceanic longline fishing operations

In line with the second *Threat Abatement Plan for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations* (2006 TAP), AFMA requires that all seabirds killed on pelagic or demersal longlines in the AFZ are:

- brought aboard the vessel
- retained on board the vessel in a manner which will limit decay of the specimen and meet AQIS requirements
- reported in the Listed Marine and Threatened Species form in the logbook
- reported to the senior environment officer listed above upon returning to port
- appropriately stored until arrangements are made to transport it to an analysis facility.

The collected seabirds undergo a necropsy to validate species, subspecies, provenance (where possible), cause of death, age, sex and breeding status.

To facilitate appropriate handling of dead seabirds in preparation for analysis, AQIS approved seabird collection kits can be obtained through AFMA by contacting Sally McCarthy, Environment and Research Section on 1300 723 621 or emailing her at Sally.McCarthy@afma.gov.au.

~ Impacts of the fishery on the ecosystem ~

Ecological Risk Assessments

AFMA aims to minimise the impacts of Commonwealth managed fisheries on all aspects of the marine ecosystem. AFMA's adoption of the ecological component of Ecologically Sustainable Development (ESD) is a significant departure from traditional fisheries management with the focus shifted from the direct management of target species to also considering the impacts on bycatch species, protected (TEP) species, habitats, and communities.

Key to AFMA's implementation of the ecological component of ESD has been to develop and implement an ecological risk management (ERM) framework. The framework details a robust and transparent process to assess, analyse and respond to the ecological risks posed by Commonwealth managed fisheries.

The ERM framework progresses through a number of steps and involves a hierarchy of risk assessment methodologies progressing from a comprehensive but largely qualitative analysis at Level 1 to a quantitative analysis at Level 3. This approach means low risk activities can be screened out and attention can be focused on more intensive and quantitative analyses of those activities assessed as having a greater environmental impact on AFMA managed fisheries.

The initial assessment stage involves the development of a qualitative ecological risk assessment (ERA) for each individual fishery. ERAs assess the impact, direct and indirect, that a fishery's activities may have on the marine ecosystem. These assessments provide the foundation for further risk assessment and analysis. ERAs have now been completed (to varying degrees – either Level 1, 2 or 3) for all major Commonwealth managed fisheries.

Eight Level 1 SICA assessments ERAs were completed for the CSF in 2006. Due to low effort, low catch data and a lack of in-depth information about species abundance and distribution within the CSF, it was not practical to conduct a Level 2 Ecological Risk Assessment for the Effect of Fishing (ERAEF). Instead, it was agreed that a qualitative risk analysis would be undertaken. This assessment would be divided into two parts: the first part to qualitatively assess the risks that the CSF poses to all chondrichthyans (sharks and rays) and TEP species. This analysis was completed in 2008. CSIRO has been commissioned to conduct additional analysis at the species level for chondrichthyans and TEPS. The second part assesses the risks that the CSF poses to target, bycatch and discarded species using the results from ABARES' *Reducing Uncertainty in Stock Status* (RUSS) project when the results become available at the end of 2011.

Nature of impacts on the ecosystem

Impacts identified by the various ERAs performed for CSF sub-fisheries included:

- translocation of species
- anchoring/mooring and other anthropogenic activities as a habitat hazard
- other fisheries in the region as a community hazard
- fishing activity with and without capture disturbing physical processes and impacting on habitats and target and byproduct species
- gear loss
- provisioning (providing food resources) for TEP and other species

- discarding as a hazard to target and byproduct species
- concerns regarding exploitation levels of certain species.

Management action taken to reduce impacts, and results

The results of the ERA will be used by AFMA and the Coral Sea Fishery expert group (comprising scientists, concession holders and other interested stakeholders) to focus on the development and implementation of an ERM strategy specific for this fishery. It will comprise a priority list of species compiled from those identified through the Level 1 SICA assessment and from the qualitative risk analysis of target, bycatch and discard species to be undertaken towards the end of 2011/early 2012.

Those species will be managed either through fishery specific arrangements or under one or more of the following policies or measures:

- the Commonwealth Harvest Strategy Policy and Guidelines and applicable Harvest Strategy
- non-key commercial species (byproduct) policy
- Bycatch and Discard Program
- the Australian Government's *Chondrichthyan guide for fisheries managers*
- TEP species under various international plans of action, recovery plans etc.

The ERM strategy will clearly identify how each species or group of species may be managed under the policies or measures described above.

ERM strategies to address those remaining species identified as at medium or low risk may be implemented at a later date. Due to limitations in the ERA methodology for assessing the impacts of fishing operations on habitats and communities, as is the case for other fisheries, AFMA will defer the development of an ERM strategy for these components until more refined and meaningful results become available.

~ Spatial issues ~

Two Marine Protected Areas, Coringa-Herald National Nature Reserve and Lihou Reef National Nature Reserve, exist within the bounds of the CSF and cover an area of approximately 17,000 square kilometres. No commercial fishing is permitted in these reserves and management provisions are in place to detect any illegal fishing in these waters.

Provisions are in place for the Lobster and Trochus and the Sea Cucumber Sectors which require fishing operators to move their mother-ship once a specified amount of quota or effort is reached. These measures help prevent localised depletion within the fishery.

Permit conditions implement a 3-year rotational harvesting strategy for bêche-de-mer on 21 reefs within the Coral Sea. Further details are provided on pages 23-25.

Auto-longliners must fish in waters deeper than 200m unless an observer is on board. If an observer is on board 50% of hooks engaging the automatic baiting gear may be set shallower than 200m.

A Memorandum of Understanding (MoU) has been negotiated between the Coral Sea Fishers' Association (CSFA) and the Cod Hole and Ribbon Reef Operators Association (CHARROA). Under the MoU, the CSFA has agreed not to hook fish within 2 km of particular reefs in the CSF (Osprey Reef, Bouganville Reef, Flora Reef, Dart Reef and Heralds Surprise Reef) in order to preserve iconic species of importance to tourist operators. In addition, a circular area with 0.75 nautical mile radius around CHARROA moorings at Osprey Reef, namely North Horn and

Admiralty Anchor is protected from all fishing of sharks, rays, potato cod, Maori wrasse, Queensland groper, anemones and anemone fish.

~ Acronyms ~

ABARES	Australian Bureau of Agricultural Resource Economics and Sciences
AFMA	Australian Fisheries Management Authority
AFZ	Australian Fishing Zone
ALC	Automatic Location Communicator
AQ04	Aquarium Fish Fishery Logbook
BRD	Bycatch Reduction Device
CDR	Catch Disposal Record
CHARROA	Cod Hole and Ribbon Reef Operators' Association
CPUE	Catch per Unit Effort
CS03	Coral, Shell Grit and Star Sand Fisheries Logbook
CSF	Coral Sea Fishery
CSFA	Coral Sea Fishers' Association
SEWPAC	The Department of Sustainability, Environment, Water, Population a Communities
EFT	Electronic Funds Transfer
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ERA	Ecological Risk Assessment
F	Fishing Mortality
FRDC	Fisheries Research and Development Council
GBRMPA	Great Barrier Reef Marine Park Authority
M	Natural Mortality
MoU	Memorandum of Understanding
QDEEDI	Queensland Department of Employment, Economic Development and Innovation
RUSS project	*Reducing Uncertainty in Stock Status* project
SBPR	Spawner Biomass Per Recruit
SCUBA	Self Contained Underwater Breathing Apparatus
TAC	Total Allowable Catch Limit
TAP	A Threat Abatement Plan (TAP) for the Incidental Catch (or bycatch) of Seabirds During Oceanic Longline Fishing Operations was prepared and approved by the Minister for the Environment on 2 August 1998.
2006 TAP	A review of the 1998 TAP was carried out under subsection 279(2) of the EPBC Act and a new TAP was approved in 2006. The provisions of the 2006 TAP apply to all longline fisheries managed by the Commonwealth Government. The TAP is currently under review however the 2006 TAP remains in force until a revised TAP has been approved by the Minister.

TEP species	Threatened, Endangered and Protected species
The Act	*The Fisheries Management Act 1991*
TSO arrangements	Temporary Switch Off arrangements
VMS	Vessel Monitoring System
WTO	Wildlife Trade Operation

~ Contacts ~

AFMA

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Internet links

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AFMA Website: www.afma.gov.au

CSF Management Team

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Licensing and Quota Management

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Queensland Department of Employment, Economic Development and Innovation (QDEEDI) 132 523 or (07) 3404 6999

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