

Coral Sea Fishery

Management Arrangements Booklet
2016/2017 Season



Australian Government

Australian Fisheries Management Authority

AFMA Coral Sea Fishery

Edited and revised in 2016 by the Australian Fisheries Management Authority (AFMA).

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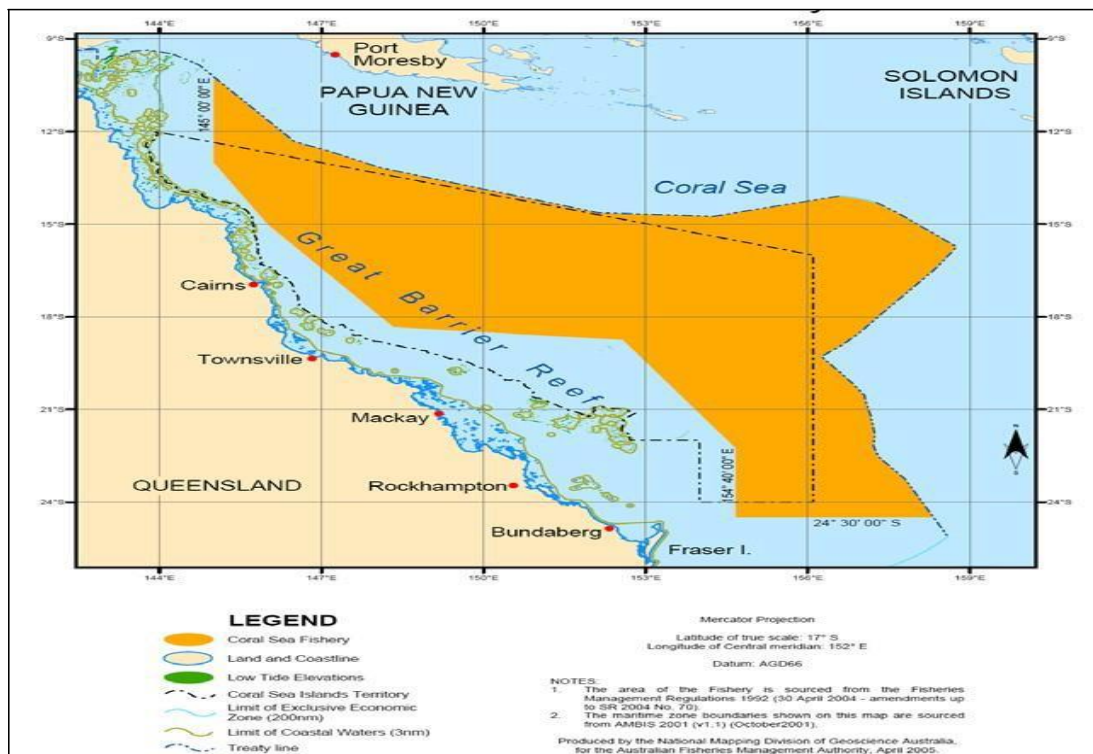
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1 Description of the Fishery

The Coral Sea Fishery (CSF) is managed by Australian Fisheries Management Authority (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.

This *Coral Sea Fishery Management Arrangements Booklet* is a guide to the management arrangements that will apply to Coral Sea Fishery (CSF) concession holders in the 2016-17 fishing year (1 July 2016 to 30 June 2017).

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 lies east of the Great Barrier Reef Marine Park and extends to the edge of the AFZ (Figure 1). The fishery extends north from Sandy Cape (Fraser Island), to Cape York. The CSF often experiences adverse weather conditions which can make fishing difficult at certain times of the year.



2 Management Arrangements

The CSF is managed through a combination of input and output controls as prescribed in the:

- *Fisheries Management Regulations 1991 (the Act)*
- *Fisheries Management Regulations 1992*
- CSF Harvest Strategies developed in accordance with the *Commonwealth Fisheries Harvest Strategy Policy 2007* and implemented in 2008
- Conditions on fishing permits.

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. 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 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 species, habitats, and communities. This approach is supported through a range of policies such as harvest strategies, bycatch and discard workplans 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.

2.1 Sectors of the fishery

The CSF is a multi-sector, multi-species fishery. The species caught 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. The fishery is comprised of the following sectors:

- Trawl and Trap Sector
- Line and Trap Sector
- Lobster and Trochus Sector
- Aquarium Sector
- Sea Cucumber Sector

Table 1 provides an overview of the different sectors of the fishery including target species, methods, permit conditions and reporting requirements.

3 Consultative arrangements

AFMA consults a range of stakeholders about any development, implementation and review of fisheries management arrangements in the CSF. AFMA gives notice of any amendments to management arrangements to the Department of the Environment as the condition of the WTO accreditation.

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 managers in developing and implementing management arrangements for the CSF.

The CSF Stakeholder Group includes all concession holders and researchers directly involved in the fishery. The Stakeholder Group was established to seek advice on management and research in the fishery.

4 Prohibited species

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

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

All permits, except for Aquarium Sector permits, prohibit the take of Humphead Maori Wrasse (*Cheilinus undulatus*). Any incidental take of this species must be returned to the water carefully and as quickly as possible.

Permit holders must not retain deepwater dogfishes of the following species: Harrison's Dogfish (*Centrophorus harrissoni*), Endeavour Dogfish (*C. moluccensis*), Southern Dogfish (*C. zeehaani*) and Greeneye Spurdog (*Squalus chloroculus*). Any incidental take of these species taken alive, must be returned to the water carefully and quickly.

4.1 Landing requirements for sharks

When authorised to take shark, there are specific landing requirements:

- for all sharks of the Class *Chondrichthyes*, 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.

Table 1 - Overview of the Coral Sea Fishery

Sector	General Permit conditions
<p>All sectors</p>	<p>Multiple jurisdiction fishing trips not permitted except where an AFMA observer is on the boat and prior approval has been granted by AFMA.</p> <p>Transshipping of fish not permitted.</p> <p>Prohibited species:</p> <ul style="list-style-type: none"> • tuna and tuna like species (Scombridae, Bramidea (pomfrets or rays bream)) except for mackerels (<i>genera Scomberomorus, Scomber, Acanthorcybium, Grammatorcyrus and Rastrelliger</i>) • billfish (families Istiophoridae and Xiphiidae) • any species listed under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) • Humphead Maori Wrasse (<i>Cheilinus undulates</i>), 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. <p>To further restrict the impacts of fishing on deepwater sharks, in 2013-2014 permit conditions were changed to prohibit the take of deepwater dogfishes of the following species – Harrisons Dogfish (<i>Centrophorus harrissoni</i>), Endeavour Dogfish (<i>C. moluccensis</i>), Southern Dogfish (<i>C. zeehani</i>) and Greeneye Spurdog (<i>Squalus chloroculus</i>) by all sectors. The condition also outlines that in the event deepwater dogfishes of the species specified are taken above, these species must be returned to the water carefully and quickly.</p> <p>Protected species interactions must be reported to AFMA.</p> <p>Fish may only be sold to an AFMA licensed fish receiver (excluding the Aquarium Sector).</p>

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)	<p>Trawl</p> <ul style="list-style-type: none"> • 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). <p>Trap</p> <ul style="list-style-type: none"> • 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) on boat and maximum 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 an exemption is provided by 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). 	<p><u>Logbook (Trawl)</u> Commonwealth Eastern Finfish Trawl Daily Fishing Logbook (EFT01B)</p> <p><u>Logbook (Trap)</u> Commonwealth Trap Fishing Daily Fishing Log (TR01)</p> <p><u>CDR</u> Commonwealth Catch Disposal Record (SESS2B)</p>

Sector	Number of Permits	Target species	Fishing method	Specific Permit conditions	Reporting
Line and Trap Sector	2	Classes Chondrichthys (cartilaginous fishes) and Osteichthyes (bony fishes)	Demersal longlines, trotlines, droplines, handlines, setlines and demersal finfish traps. Automatic baiting is available for use with the longline method, subject to application and additional conditions being met.	<p>Auto longline</p> <ul style="list-style-type: none"> • 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. • 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. • Use a bird scaring device as specified in permit conditions. • Must comply with the Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations. • 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). <p>Other Line</p> <ul style="list-style-type: none"> • Required to carry an AFMA observer on the first trip of the season and every fourth trip after that. <p>Trap</p> <ul style="list-style-type: none"> • 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. • 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. • Any species caught not belonging to the Class <i>Osteichthyes</i> (bony fish) must be released. 	<p><u>Logbook (Trawl)</u> Commonwealth Eastern Finfish Trawl Daily Fishing Logbook (EFT01B)</p> <p><u>Logbook (Trap)</u> Commonwealth Trap Fishing Daily Fishing Log (TR01)</p> <p><u>CDR</u> Commonwealth Catch Disposal Record (SESS2B)</p>

Sector	Number of Permits	Target species	Fishing method	Specific Permit conditions	Reporting
Lobster and Trochus Sector	2	Trochus (<i>Trochus niloticus</i> and <i>Tectus pyramis</i>) Tropical spiny Rock Lobster (<i>Panulirus ornatus</i>)	Hand collection with or without underwater breathing apparatus.	<p>Maximum of two tender boats may be used with the nominated boat to hand collect trochus and/or lobster.</p> <p>Quota Allows the collection of 10 tonnes of unprocessed trochus and 10 tonnes of lobster tails (per operator) during the fishing season.</p> <p>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).</p> <p>Move-on rules Once one tonne of lobster tail or one and a half tonnes of trochus has been taken from any reef within the fishery, no further fishing may be undertaken within a 15 nautical mile anchorage during the fishing year.</p>	<p><u>Logbook (Lobster & Trochus)</u> Hand collection Daily Fishing Log (HC01)</p> <p><u>CDR</u> Hand collection Catch Disposal Record (HC02)</p>

Sector	Number of Permits	Target species	Fishing method	Specific Permit conditions	Reporting
Aquarium Sector	2	<p>Classes <i>Chondrichthys</i> (cartilaginous fishes), <i>Osteichthyes</i> (bony fishes) and live rock.</p> <p>The majority of the harvest comes from: damselfish, butterflyfish, angelfish, wrasse, anemone fish, surgeonfish, blennies and gobies.</p>	<p>Cast, scoop and seine nets, and handlines with barbless hooks may be used with or without the aid of underwater breathing apparatus.</p> <p>Hand collection.</p>	<ul style="list-style-type: none"> • Allows the collection of live fish (bony fish, sharks, rays, crustaceans, molluscs and other marine organisms including live rock but excluding corals, mammals, reptiles, birds and specifically prohibited shark species). • Fish collected for use in aquaria and must not be sold for human consumption. • Scoop net size (no more than 2 metres in any direction; 25mm maximum mesh size; 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). • A maximum of two tender boats may be used with the nominated vessel. • The use of chemicals (including anaesthetics) and explosives are prohibited. • Annual catch limits (per concession holder): <ul style="list-style-type: none"> ▪ 20 metric tonnes for live rock. Live rock may only be taken by hand or by using hand held non-mechanical implements ▪ 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. • 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. 	<p><u>Logbook (Aquarium)</u></p> <p>Aquarium Fish Trip Logbook (AQ04)</p> <p><u>Coral, Shell Grit & Star Sand Fisheries Logbook (CS03)</u></p> <p><i>Logsheets must be submitted to the Queensland Department of Agriculture, Fisheries and Forestry (DAFF) within one month of fishing activity</i></p>

Sector	Number of Permits	Target species	Fishing method	Specific Permit Conditions	Reporting
Sea Cucumber Sector	2	<p>Amberfish (<i>Thekenota anax</i>)</p> <p>Blackfish (probably <i>Actinopynga miliaris</i>)</p> <p>Black teatfish (<i>Holothuria whitmaei</i>)</p> <p>Greenfish (<i>Stichopus chloronotus</i>)</p> <p>Lollyfish (<i>Holothuria atra</i>)</p> <p>Prickly redfish (<i>Thekenota ananas</i>)</p> <p>Sand fish (<i>Holothuria scabra</i>)</p> <p>Surf redfish (<i>Actinopyga mauritiana</i>)</p> <p>White teatfish (<i>Holothuria fuscogilva</i>)</p> <p>Deepwater redfish (<i>Actinopyga echinites</i>)</p> <p>Elephant's trunk fish (<i>Holothuria fuscopunctata</i>)</p> <p>Curry fish (<i>Stichopus hermanni</i>)</p>	Hand collection with or without underwater breathing apparatus	<p>Seasonal catch limits <i>per operator</i> (based on landed whole wet weight) for:</p> <ul style="list-style-type: none"> • black teatfish (500 kgs) • white teatfish (2 tonnes) • prickly redfish (10 tonnes) • sandfish (500 kgs) • surf redfish (5 tonnes) • any combination of greenfish and lollyfish (5 tonnes) • any other species (2.5 tonnes) • total allowable take of sea cucumber including the above limits (75 tonnes). <p>Once five tonnes whole wet weight of any mixture of sea cucumber species has been taken from any reef within the fishery, no further fishing may be undertaken within a 15 nautical mile anchorage during the fishing year.</p> <p>Must comply with the Rotational Zone Plan (additional information provided on pages 20-21). Reefs have been divided into 21 zones with a total of 164 fishing days (Table 2). These zones are to be fished in accordance with the fishing plan outlined in Table 3.</p> <p>A maximum of two tender boats registered with the nominated boat may be used.</p>	<p><u>Logbook (Sea Cucumber):</u> Hand Collection Daily Fishing (HC01)</p> <p><u>CDR:</u> Hand Collection Catch Disposal Record (HC02)</p>

5 Harvest strategies and permit conditions

AFMA, in consultation with industry and other stakeholders, developed four separate harvest strategies for the CSF:

- Line, Trap and Trawl Sector Harvest Strategy
- Lobster and Trochus Sector Harvest Strategy
- Aquarium Sector Harvest Strategy
- Sea Cucumber Sector Harvest Strategy.

The Harvest Strategies for the CSF were developed during 2007 and adopted in July 2008. The four CSF Harvest Strategies were reviewed in 2009 and 2010. The reviews considered the recommendations from the independent CSIRO management strategy evaluation of the CSF Harvest Strategies conducted in November 2009, and the Harvest Strategies triggers and responses to ensure they are both efficient and effective.

These Harvest Strategies prescribe 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 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.

AFMA intends to review the Harvest Strategies for the fishery, pending the outcomes of the Government's review of Commonwealth Marine Reserves.

5.1 Line Trap and Trawl Sector Harvest Strategy

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 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 per cent 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 per cent or more over three consecutive seasons (overall catch per unit effort (CPUE) not exceeding 50 per cent 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 per cent or more
- 40 per cent or more of the total catch is taken from a single area
- 40 per cent or more of historically fished areas are not fished
- CPUE for any species declines by 50 per cent 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 per cent or greater overall decline in CPUE over the past three seasons, a level two response will be invoked (50 per cent 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 per cent or more from the historical average, catch of that species is greater than one tonne and there is a 50 per cent or greater decline in CPUE over the last three seasons
- the relative catch proportion of any species declines between seasons by 10 per cent or more over three consecutive seasons and there is a 50 per cent or greater overall decline in CPUE over the last three seasons (50 per cent 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 per cent 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.

TAC 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.

5.1.1 Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions apply. 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.

5.1.2 Auto Longline

- 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.
- 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 board the boat at any time.
- 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 per cent of all hooks using the automatic baiting gear must be set in waters deeper than 200 metres.
- Provision for the use of automatic baiting equipment must be sought from AFMA on transfer of the permit or change of the nominated vessel.

- Fishing operators must comply with the *Threat Abatement Plan 2014 for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations*.
- The permit holder or authorised 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.

5.1.3 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 permit holder or authorised 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.

5.1.4 Trap

- Demersal finfish traps must not be used on the same trip as any other fishing method.
- 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).
- 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.
- Limit on the number (limit of 50) and size of traps used (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.
- Traps must be set and hauled individually (not connected in a sequence), unless AFMA gives written approval for an exemption.
- A trap must not be left unattended for any period in excess of one month.
- An AFMA observer is required on the first trip of the season and every fourth trip thereafter.
- 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

5.1.5 Trawl

- Permit holders are authorised to take bony fish and crustaceans by this method.
- A minimum net-mesh size applies (not less than 38mm at any part of the net).
- A Turtle Excluder Device (TED) is required when trawling for crustaceans.
- The fishing logbook titled Eastern Finfish Trawl Daily Fishing Logbook (EFT01C), the Commonwealth Catch Disposal Record (SESS2A) and the Commonwealth Transit Form if dispatching the load using multiple vehicles, must be completed.

5.2 Lobster and Trochus Sector Harvest Strategy

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 tonnes for lobster and 20 tonnes for trochus for the subsequent year. Once the assessment is complete, the limits may be revised up or down.

5.2.1 Applicable Permit Conditions

In addition to the requirements of the Harvest Strategy the following conditions apply:

- a minimum tail length of 125 mm applies to lobsters and a size range of 80-125mm applies to trochus species.
- Once one tonne of lobster tail or 1.5 tonnes of trochus has been taken from any reef within the fishery, no further fishing may be undertaken within a 15 nautical mile anchorage during the fishing year. This provision aims to prevent localised depletion.
- For each permit, a maximum of two tender boats may be used with the nominated boat to hand collect trochus and/or lobster.
- 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.

5.3 Aquarium Sector Harvest Strategy

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 and 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 are taken by Aquarium Sector permit holders then all take of Humphead Maori Wrasse 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.

5.3.1 Applicable Permit Conditions

In addition to the requirements of the Harvest Strategy the following conditions apply.

- 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 (two hours prior to entering port) on the total weight of live rock collected.
- A maximum of two tender boats may be used with the nominated vessel.
- 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 Department of Agriculture, Fisheries and Forestry.

5.4 Sea Cucumber Sector Harvest Strategy

The Harvest Strategy specifies catch limits which will trigger an assessment of the fishery (Table 2). If any of the 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.

Reefs within the CSF have been divided into 21 zones with a total of 164 fishing days. These zones are to be fished in accordance with the rotational zone fishing plan outlined in Table 3.

The total 164 days allotted to all permit holders in the sea cucumber hand collection sector of the CSF 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.

Each of the 21 zones within the CSF has a corresponding series of co-ordinates (Table 4).

5.4.1 Deduction of fishing days

For the purpose of deducting fishing days for each zone the following rules 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.

5.4.2 Applicable Permit Conditions

In addition to the requirements of the harvest strategy the following conditions apply.

- Seasonal catch limits per operator and minimum size limits apply 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.
- 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.
- Once five tonnes whole wet weight of any mixture of sea cucumber species has been taken from any reef within the fishery, no further fishing may be undertaken within a 15 nautical mile anchorage during the fishing year.
- Must comply with the rotation zone plan (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 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	<i>Holothuria whitmaei</i>	25 cm	0.5 kg	1tonne
White teatfish	<i>Holothuria fuscogilva</i>	32 cm	2 tonnes	4 tonnes
Sand fish	<i>Holothuria scabra</i>	16 cm	500 kg	1 tonne
Prickly redfish	<i>Thelenota ananas</i>	30 cm	10 tonnes	20 tonnes
Surf red fish	<i>Actinopyga mauritiana</i>	15 cm	5 tonnes	10 tonnes
Greenfish and lollyfish	<i>Stichopus chloronotus</i> and <i>Holothuria atra</i>	15 cm	5 tonnes	10 tonnes
Other single		15 cm	5 tonnes	10 tonnes
All species of the Order <i>Aspidochirotida</i>		15 cm	75 tonnes (including the take of the above species)	150 tonnes (including the take of the above species)

Table 3. Sea cucumber sector rotational zone plan

2016-2017		2017-2018		2018-2019	
Days permitted	Zone	Days permitted	Zone	Days permitted	Zone
15	Holmes Reef	15	Wreck Reefs	15	Flinders Reefs
15	Diamond Islets	5	Tregrosse Reefs	15	Willis Islets
10	Kenn Reefs	5	Moore Reefs	30	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		

Table 1 Sea cucumber sector rotational zone co-ordinates. Column A is the northern boundary, Column B is the southern boundary, Column C is the western boundary and Column D is the eastern.

Reef name	Days	A (north)			B (south)			C (west)			D (east)			Chart
		Lat min			Lat max			Long min			Long max			
		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 Reef	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 Reefs	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	30	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
Tregosse 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

6 Licensing

6.1 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.

6.2 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.

FRPs are granted for 12 months and cannot be transferred. An application fee must be paid to AFMA along with a completed application form.

Fish receivers are required to complete the catch disposal record (CDR) as per the instructions printed on the CDR immediately upon receipt of the consignment.

6.3 Scientific Permits

Scientific permits are granted for the purpose of conducting scientific research in a specified area of the AFZ or in a specified fishery.

AFMA will only grant a scientific permit if:

- **the application is made using the approved form**
- **it provides sufficient information for the application to be assessed**
- **the proposed activity is for a scientific research purpose**
- **is supported by a specific scientific research project plan.**

Scientific permits are granted for a maximum duration of six months, and are not transferable. Applications may take up to 10 days to be processed.

For further information on obtaining a scientific permit you can refer to the Fisheries Management Paper 11 which is located here: <http://www.afma.gov.au/wp-content/uploads/2014/12/fmp11.pdf> or alternatively contact AFMA Licensing and Data Services on 1300 723 621.

7 Levies

Operators who own fishing concessions that attract a levy will receive three separate invoices. Each invoice will be one third of the total annual levy amount payable on the fishing concessions you own on these dates. The invoice due dates are as follows:

Table 5 Payment due dates for levies

Levy amounts	
Invoice date	Payment due date
13 January 2016	10 February 2016
9 March 2016	6 April 2016
29 April 2016	27 May 2016

Note: Levies are issued by financial year not fishing season.

7.1 Payment of levies

7.1.1 How to pay

You can make your payments by BPAY, direct deposit to the National Australia Bank, credit card (by faxing in your card details or calling AFMA direct) or by cheque. All account details, biller code and contact details are included on the payment options page of your levy invoice. Please include the associated invoice/reference number with your payment so AFMA can ensure your payment is attributed correctly.

7.1.2 Need more time to pay your levy?

A concession holder can request to enter into an arrangement to pay an overdue levy. To request an arrangement to pay, a concession holder must contact AFMA as soon as possible on 1300 723 621 to discuss payment options. There is a \$220 administration fee to enter into an arrangement and unpaid amounts attract the penalty charge of 20 per cent annually. AFMA will suspend and may cancel fishing concessions if a levy remains unpaid and an arrangement has not been entered into. For further information, please refer to the [AFMA Levy Arrangements Guide for 2015-16 - Australian Fisheries Management Authority \(AFMA\)](#).

8 Observers

A fishing operator **must carry an AFMA observer upon request by AFMA**. 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.

8.1 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 per cent 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).

8.2 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.

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.

The master of the boat must provide the observer with adequate food and accommodation while the observer is on board the boat during trip. The master must allow the observer to have access to the parts of the boat which the observer reasonably requires access to, use facilities, take samples, operate equipment and provide assistance to the observer to the extent that is reasonably necessary for them to perform his or her functions.

The master is also required to give the observer the information that he or she reasonably asks for in relation to:

- the boat; or
- its equipment; or
- fish taken using the boat.

Further information can be obtained by calling the Observer Manager on (02) 6225 5506.

8.3 Role of the observer

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

This is achieved through:

- collection of boat activity and catch data (that is not obtainable through official logbooks)
- collection of data and samples for research programs, supporting marine management and other issues relevant to environmental awareness and fisheries management
- observer compliance of the boat with its fishing concession.

The role of the observer is not one of a fisheries officer. Observers have no authority to direct fishing operations of the boat or act in an enforcement role. However, observers are required to report their observations, including illegal fishing activity.

9 Compliance

9.1 Compliance overview

AFMA's compliance and enforcement program is ultimately designed to maintain the integrity of fisheries management arrangements and protect Australia's fishing resources. AFMA seeks to achieve a level of compliance consistent with its legislative objectives by maximising voluntary compliance and creating effective deterrents to non-compliance.

The main functions of the compliance program include:

- ensuring compliance with AFMA's domestic fisheries management measures
- ensuring licensed boats comply with fishing conditions within the AFZ
- ensuring that there are no unlicensed foreign boats operating in the AFZ
- managing port access for foreign boats
- surveillance and apprehension of foreign boats fishing illegally in the AFZ.

The National Compliance and Enforcement Program is conducted via the use of a risk based approach, which enables AFMA's resources to be targeted to the areas where they are most needed and where they will prove most effective. It involves a series of steps to identify and assess non-compliance risks and then apply appropriate enforcement actions to mitigate these risks.

Risk-based compliance has a range of benefits¹:

- **improved compliance outcomes** – AFMA can tailor or target compliance measures to effectively deal with the most significant non-compliance risks
- **efficiency gains** – the target of compliance measures to the most significant risks ensures resources are concentrated in the areas where they are most likely to improve compliance outcomes
- **greater industry support for compliance programs/measures** – risk management processes are widely understood by the fishing industry and the community as a whole.

In addition to the risk treatment model, it is essential that AFMA maintains a general deterrence program. By maintaining a presence at fishing ports (and at sea) AFMA discourages those members of the fishing community who do not wish to comply with the rules and regulations. It also reassures those who are complying that non-compliant activity is likely to be detected. Further, AFMA officers can assist those wishing to comply (but not knowing how) by providing advice and/or instructions on operators responsibilities.

9.2 Navigation regulations

Additional regulations were introduced regarding navigation in closures through an amendment to Part 9A of the Fisheries Management Regulations 1992.

Under the regulations a boat must maintain a speed over 5 knots when navigating in a closure. If the closure is in effect for less than 24 hours (such as daylight closures) the boat must either be stationary or travelling faster than 5 knots. A breach of the regulations is an offence of strict liability equal to 25 penalty units, or \$4 500.

Speed is calculated via the boat's vessel monitoring system. Therefore, it is recommended that the most direct route is taken when travelling through a closure so the boat does not appear to be navigating at less than 5 knots. If the boat is stationary within a closure, the boat is required to remain in that closure for greater than 30 minutes.

If the master of a boat is unable to comply with any of the navigation requirements due to an unforeseen emergency (e.g. crew safety, breakdowns etc.) then the master must contact AFMA as soon as possible to request an exemption from the regulation.

9.3 Vessel monitoring system (VMS)

9.3.1 VMS reporting

It is the concession holder's responsibility to ensure that any boat nominated to their concession is fitted with a VMS of a category specified in the register of AFMA approved units. This register can be found on the AFMA website under [List of approved units](http://www.afma.gov.au/wp-content/uploads/2014/02/AFMA_VMS_Type_Approved.pdf) (http://www.afma.gov.au/wp-content/uploads/2014/02/AFMA_VMS_Type_Approved.pdf).

¹ Source: Risk-based Compliance information is available at [The Better Regulation Office](http://www.betterregulation.nsw.gov.au) (www.betterregulation.nsw.gov.au).

The VMS unit must remain switched on at all times that the boat is nominated to a Commonwealth concession, including when 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) or;

Mobile: 0419 205 329; or

Fax: (02) 6225 5440; or

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.

9.3.2 Directions to return to port

Depending on the circumstances, and in accordance with its enforcement decision principles as outlined in the National Compliance and Enforcement Policy, if a nominated boat's VMS unit stops reporting AFMA may require the boat to immediately return to, and/or remain in port until such a time as AFMA is satisfied the problems with the VMS unit have been rectified.

9.3.3 Manual reporting

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

The manual position reports must include:

- the boat's name
- the boat's distinguishing symbol
- the boat'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

Mail: Data Processing

AFMA

PO Box 7051

CANBERRA BC ACT 2610

Further information can be found on the AFMA website under [Vessel Monitoring Systems www.afma.gov.au/services-for-industry/vessel-monitoring-systems/](http://www.afma.gov.au/services-for-industry/vessel-monitoring-systems/)

Note: Switching off a unit without first obtaining a TSO will constitute an offence. It is also an offence for a vessel to be moved, from the place stipulated under the TSO, without approval from AFMA.

9.4 Illegal/suspicious fishing – Call CRIMFISH – 1800 274 634

If you suspect illegal fishing operations are occurring or witness any suspicious activity involving fish or fishing type activity (e.g. selling fish off the back of vessels or vehicles whilst offering a reduced price, questionable landing sites etc.) you can either contact AFMA's Freecall CRIMFISH hotline on **1800 274 634** (1800 CRIMFISH) or you can contact AFMA's Duty Officer on 0419 205 329 (24 hours a day, 7 days a week) as soon as possible after you discover the event. More information is available on the CRIMFISH page on the AFMA website under [CRIMFISH](http://www.afma.gov.au/managing-our-fisheries/compliance-activities/1800-crimfish/) (www.afma.gov.au/managing-our-fisheries/compliance-activities/1800-crimfish/).

Reports may be made anonymously and all information received will be treated in the strictest confidence. Ideally any information supplied should be as detailed as possible to assist AFMA to investigate the incident and should include the following:

- the date, time and location that the activity took place
- the names of any verifying witnesses
- any photographs and/or other evidence
- if you sight a vessel you believe may be involved in illegal fishing please contact the AFMA National Surveillance & Response Unit, based at the Customs Boarder Protection & Command watchfloor on Freecall **1800 06 1800** (attended 24 hours a day, 7 days a week). Again all information received will be treated as strictly confidential.

10 Environmental Management

10.1 Bycatch and Discarding

The most recent CSF Bycatch and Discarding Workplan was implemented on 1 July 2010. It was developed in consultation with the CSF Stakeholder Group and incorporated the results of the Ecological Risk Assessment (ERA) process. Work to review and develop a new Bycatch and Discarding Workplan for the fishery is on hold until direction is provided on the Coral Sea Commonwealth Marine Reserve.

The Bycatch and Discarding Workplan 2010 to 2012 aimed to:

- respond to high ecological risks assessed through AFMA's ERA process
- avoid interactions with species listed under the EPBC Act
- quantify and minimise overall bycatch in the fishery over the long-term.

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

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

- a TED 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.

10.2 Accreditation under the EPBC Act

The CSF has been accredited by the Department of the Environment under the EPBC Act as an approved Wildlife Trade Operation (WTO) for the period 19 November 2013 to 17 November 2016. The WTO is subject to a number of conditions that AFMA must meet or progress within the WTO accreditation timeframe.

10.3 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.

10.3.1 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 authorisation.
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, syngnathids (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 Department of the Environment website at www.environment.gov.au.

10.3.2 What is an interaction with a protected species?

'Interaction' means: any physical contact an individual has with a protected species. This includes all catching, (hooked, netted, entangled) and collisions with an individual of these species.

10.3.3 Reporting interactions with protected species

CSF 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 Agriculture, Fisheries and Forestry 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.

Interaction reports provided to the Department of the Environment are available on the AFMA website at 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 Policy, Environment, Economics and Research section by calling 1300 723 621 or emailing Paul.Ryan@afma.gov.au.

10.3.4 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. The guide is also available at www.afma.gov.au/wp-content/uploads/2014/12/protected-species-id-guide.pdf.

10.3.5 Shark and Ray Handling Practices Guide

In December 2014 AFMA released the *Shark and Ray Handling Practices for commercial fisheries in southern Australia*, developed by AFMA and Monash University. The shark and ray species encountered in the CSF are different to those in the guide, however, they are subject to the same inherent biological risks. Operational practices can have a significant impact on the species' survival rate. The guide includes visual aids and outlines shark anatomy and fishing related injuries, correct handling of sharks and rays, research and species commonly encountered during fishing in southern Australia. The guide is available at www.afma.gov.au/wp-content/uploads/2014/11/Shark-and-Ray-Handling-Guide-WEB-VERSION.pdf.

10.3.6 Management arrangements for seabirds

In the CSF longline concession holders must abide by the *Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations* (TAP). A copy of the TAP can be found on the Department of the Environment website at www.antarctica.gov.au/data/assets/pdf_file/0017/21509/Threat-Abatement-Plan-2014.pdf.

In accordance with the TAP, AFMA requires that all seabird mortalities on pelagic or demersal longlines in the AFZ are:

- brought aboard the vessel if possible
- retained for scientific analysis on board the vessel in a manner which will limit decay of the specimen and meet the Department of Agriculture and Water Resources requirements (using a Department of Agriculture and Water Resources approved bird bag if available)
- reported in the Listed Marine and Threatened Species Form in the logbook
- reported to the AFMA upon return to port and appropriate arrangements are made to transport it to an analysis facility.

To facilitate appropriate handling of dead seabirds in preparation for analysis, the Department of Agriculture and Water Resources approved seabird collection kits can be obtained by contacting Paul Ryan, Policy, Environment, Economics and Research Section on 1300 723 621 or email paul.ryan@afma.gov.au.

10.3.7 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 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 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.

Eight Level 1 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 ERA for the effect of fishing. Instead, it was agreed that a qualitative risk analysis would be undertaken. Further risk assessment work was completed by CSIRO on all protected and chondrichthyan species. ABARES also assessed the risks that the CSF poses to target, bycatch and discarded species in the Aquarium Sector in the *Reducing Uncertainty in Stock Status (RUSS)* project.

10.4 Impacts on the ecosystem

Impacts identified by the various ERAs of the CSF sectors include:

- 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
- food resources for protected and other species
- discarding as a hazard to target and by product species
- concerns regarding exploitation levels of certain species.

10.4.1 Management action taken to reduce impacts

The results of the ERA will be used by AFMA and the CSF Stakeholder 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 assessment and from the qualitative risk analysis of target, bycatch and discard species.

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
- Bycatch and Discard Program
- the Australian Government's Chondrichthyan guide for fisheries managers
- protected 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.

10.5 Marine Protected Areas

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 once a specified amount of quota or effort is reached. These measures help prevent localised depletion within the fishery.

Permit conditions implement a three year rotational harvesting strategy for Sea Cucumber on 21 reefs within the Coral Sea (Table 3).

Auto-longliners must fish in waters deeper than 200m unless an observer is on board. If an observer is on board 50 per cent 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.

10.6 Coral Sea Commonwealth Marine Reserve

The Department of the Environment is the lead agency for marine bioregional planning issues. In November 2012 the then Minister for Sustainability, Environment, Water, Population and Communities announced Commonwealth Marine Reserves, including the Coral Sea Commonwealth Marine Reserve, would be implemented from July 2014.

A management plan for the Coral Sea Commonwealth Marine Reserve was approved in March 2013 and was to come into effect in July 2014.

The Australian Government announced a Marine Reserves Review to restore confidence in the Commonwealth marine reserve planning process.

The Marine Reserves Review will ensure the management of Australia's Commonwealth marine reserve network is based on scientific rigor and genuine consultation with communities and industries.

The Commonwealth Marine Reserves Review was conducted following the setting aside of the former Government's management plans that were scheduled to come into effect in July 2014.

The review delivers on the Government's election commitment for a '*More Competitive and Sustainable Fisheries Sector*' and will restore confidence in Commonwealth marine reserves by ensuring that management arrangements for the reserves reflect genuine and thorough consultation with stakeholders and are informed by the best available science.

The recommendations of the review will inform the development of new management plans for the South-west, North-west, North and Temperate East Commonwealth Marine Reserves Networks and the Coral Sea Commonwealth Marine Reserve.

The Fisheries Adjustment Assistance Package is on hold while the review and management planning processes are undertaken

The implementation of the Coral Sea Commonwealth Marine Reserve will have implications on fishing methods and sectors (i.e. reduced catch and effort). It is also anticipated that at the completion of the fishery adjustment package a smaller number of permit holders and sectors will be present in the CSF.

11 Contact

CSF Management	
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Intelligence	
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State Fisheries

New South Wales	
Department of Primary Industries and Fishing and Aquaculture	1300 550 474

Queensland	
Department of Agriculture and Fisheries	13 25 23 (within Queensland) or 07 3404 6999

South Australia	
Department of Primary Industries and Regions SA, Fisheries Division	08 8226 0995
FishWatch	1800 065 522
Tasmania	
Department of Primary Industries, Parks, Water and Environment	1300 368 550
Victoria	
Department of Environment, Land, Water and Planning	136 186
Western Australia	
Department of Fisheries	08 9482 7333
FishWatch	1800 815 507

Attachment 1 – Acronyms

AFMA	Australian Fisheries Management Authority
AFZ	Australian Fishing Zone
CDR	Catch Disposal Record
CPUE	Catch per unit effort
CSF	Coral Sea Fishery
EBFM	Ecosystem Based Fishery Management
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ERA	Ecological Risk Assessment
ERM	Ecological Risk Management
ESD	Ecologically Sustainable Development
F	Fishing mortality
FRP	Fish Receiver Permit
M	Natural mortality
MOU	Memorandum of Understanding
nm	Nautical Mile
QHS	Quota holding and catch summary
QTS	Quota transaction statement
SFR	Statutory Fishing Right
TAC	Total Allowable Catch
TAP	<i>Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i>
TED	Turtle Excluder Device
the Act	<i>Fisheries Management Act 1991</i>
TSO	Temporary switch off
VMS	Vessel Monitoring System WTO Wildlife Trade Operation

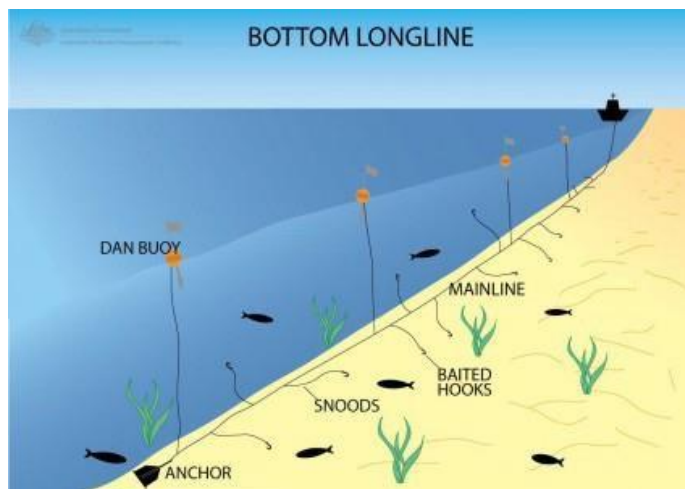
Attachment 2 - Gear and method descriptions

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.

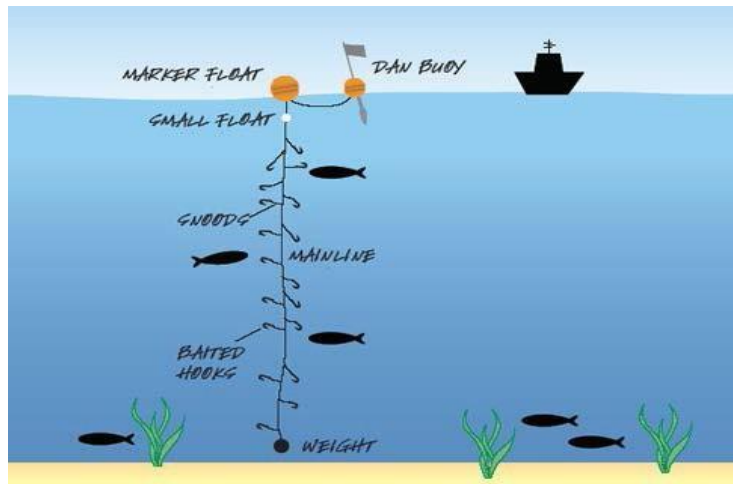
Use of automatic or random baiting equipment with demersal longline gear is specifically prohibited unless otherwise stated in the permit conditions. AFMA will permit the use of such equipment by some operators in the fishery, subject to application and additional conditions such as conditions relating 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 permitted 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.



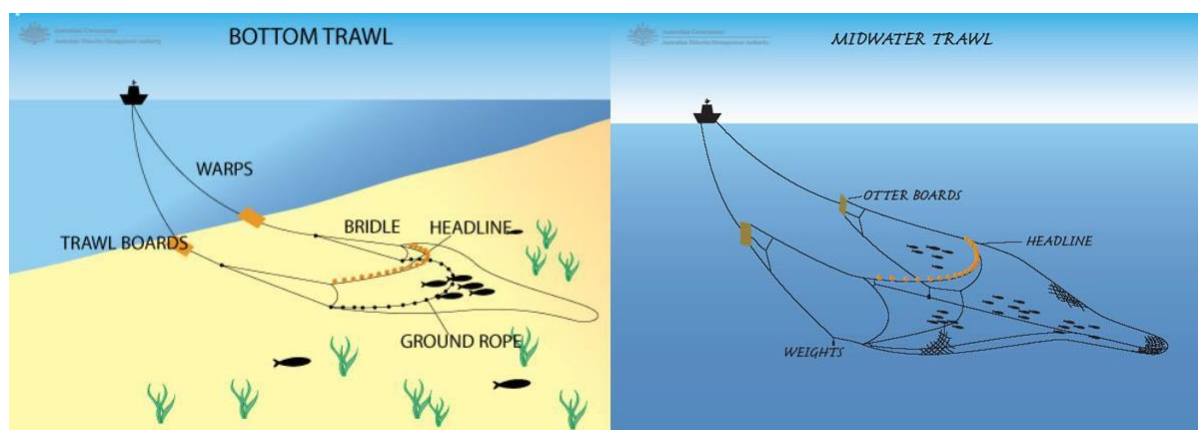
The hooks are baited before the gear is deployed. Gear is deployed by dropping the weighted end of the main-line overboard and letting the main-line run off, either attaching the snoods as the line deploys or allowing permanently fixed snoods to run off 'shooting rails'. The gear is retrieved by a line 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



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.

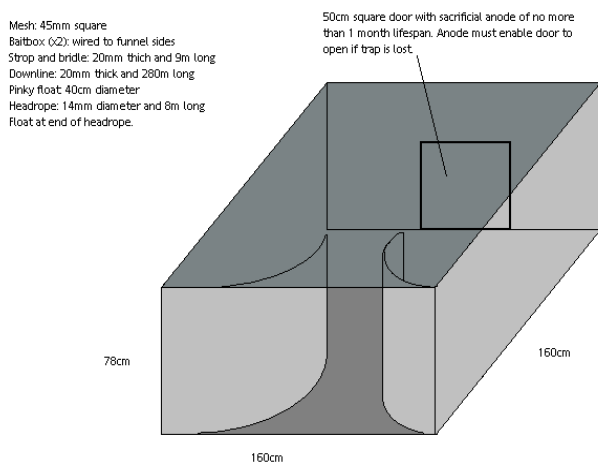
Otter trawling relies on the principle of herding fish inward from the otter boards and the sweep (wire from otter board to the headline and footrope) towards the mouth of the trawl net. Fish have a natural tendency to swim away from the otter boards, sweeps and net wings and fall backwards, towards 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.

Sea Cucumber Sector

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