



Australian Government

Australian Fisheries Management Authority

Torres Strait Prawn Fishery Observer Manual 2008



AFMA Observer Program

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The distribution list is correct as of the time of printing. Refer to AFMA Observer Program for the current distribution.

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Observer Program Contacts
Home numbers only to be used in emergency situations

AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY

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| AFMA licensing and quota management | | monitoring@afma.gov.au |
| AFMA VMS section (to ascertain if the VMS is working) | | vmsreporting@afma.gov.au |
| Observer Duty Officer after hours Mobile Phone number (24 hr Emergency contact) | | 0427 016 859 |
| If Duty Officer or Manager cannot be contacted on the above, try Coastwatch or Sea Safety. | | |

Coastwatch

| | |
|--|--------------|
| Reporting number (free call via Inmarsat or radphone) | 1800 06 1800 |
| Fax | 02 62756275 |

Sea Safety

| | |
|-----------------|--------------|
| Ausrep | 02 6230 6880 |
| Search & Rescue | 02 6247 5244 |

1 General

1.1 General Advice to Observers

Choosing a Vessel – During operations in the Torres Strait Prawn Fishery the first vessel for observation will normally be pre-arranged by the observer coordinator, however subsequent vessels are chosen at the observer's discretion. Observers should be mindful that they are under no obligation to board a particular vessel if they feel uncomfortable with a particular aspect of that vessel. If a tense or threatening situation arises during the observers deployment they should judge the situation and either transfer to another vessel at first convenience or request immediate retrieval through the observer coordinator.

On Board Conduct – Observers should always be mindful and respectful of customs and work routines aboard fishing vessels. Vessels have well worked out routines and standards for extended periods of operation at sea. Observers should try where possible to fit in and not disrupt either work routine or living arrangements. Noise in the cabin area should be kept to a minimum at all times.

Observers should be especially careful to maintain a high personal standard on board, including dress, attitude and cleanliness.

If you feel requests are unreasonable or designed to frustrate your work objectives, it is fruitless to dispute this on board. You should report the issues after disembarkation.

Personal Ship to Shore Communication – For longer duration cruises (3+ weeks) in addition to the weekly response call, Observers may make one weekly radphone or Inmarsat call to family/friends. The call may be of a reasonable duration (2-4 mins) and must be logged by the Observer for subsequent reimbursement to the vessel.

Private calls should NOT be made for personal business reasons. It is preferable for all private business arrangements to be cleared for the duration of the cruise.

Length and Recording of Calls – All calls made on all voyages not for the purpose of weekly schedule base, must be logged and details forwarded to AFMA on completion of the cruise for reimbursement to the vessel.

Call Costs – The vessel's owner covers the cost of weekly radio schedules, as part of their responsibilities while an Observer is on board. All non scheduled call costs are not an obligation of the vessel and will be met by AFMA, if of an approved nature.

Notes under 'Personal Ship to Shore Communications' provide an outline of the duration and nature of calls that AFMA regards as acceptable.

Call costs outside of these areas will NOT be met by AFMA and the costs will be invoiced against the Observers responsible for incurring them. Where non-scheduled calls are made, it would be in the Observers interest to have the Master counter sign the log.

Equipment and Clothing – Adequate safety and other equipment will be supplied directly by AFMA and will be registered.

- Damage loss and breakages will be at the Observers expense unless in the course of duties. All such damage and loss should be immediately notified and no reissue of equipment can be made unless done so
- Equipment exchanges or swaps must be registered
- Observers are responsible for the maintenance and cleaning of their equipment, both clothing and voyage gear.
- AFMA will not reimburse for lost or damaged personal items that are not directly related to the Observers work. This includes personal radios, cameras, binoculars and calculators etc.
- DO NOT use the vessels stores as a source of free gear or storage bags. It is your responsibility to obtain adequate supplies of gloves, and sample bags etc. prior to boarding
- Observers issued special equipment such as time depth recorders (worth \$2000 each) must maintain them properly, including their storage and transportation in a safe, secure place.

Accommodation – Always remove work gear and shoes before entering accommodation areas and bridge. The crew like a clean living area.

- Accommodation may be restricted and there is not much to be achieved by complaining about it. However, you should have, as a bare minimum, a bunk arrangement equivalent to the deck crew.
- Storage is limited therefore store as much equipment as possible in areas outside cabins. The deck store might be appropriate for spare data forms, cameras and unused boarding bags.

1.2 Obligations of AFMA and the Observer

The obligations of AFMA and the Observer towards the permit holder and the Master of the vessel include:

- AFMA shall ensure the Observer is adequately trained to carry out safely and competently their duties as required by AFMA, including sufficient understanding of maritime navigation, radio communications, permit conditions, fishing gear technology and general elements of shipboard safety
- AFMA shall ensure the Observer is covered under appropriate OH&S and EEO guidelines relevant to the particular tasks in which they are engaged, and that the Observer is covered by suitable workers compensation and insurance relevant to their duties
- AFMA shall ensure the Observer is carrying authorisation identifying them as an AFMA Observer
- Observers will conduct themselves in accordance with the AFMA professional code of conduct, and the AFMA Observer 'at sea' code of conduct, refer to Appendix of this manual for further details
- Observer will have a sound and comprehensive knowledge of fisheries research methodologies, species identification and experience at sea in the collection of scientific data and biological sampling
- Observer personnel will have the ability to work with the boats crew on a cooperative and team basis over a long and continuous period of time, at sea under difficult conditions and at varying times of the day and night
- Observers are expected to be mindful and respectful of the crew's customs and work routines. They will, where possible, try to fit in and not disrupt either the work routine or living arrangements of the crew

- Observers will have no right to collect or seek any material or information from vessels unless authorised by AFMA, and consistent with that stipulated in the attached project plan
- Observers will provide to the Master of the vessel copies of such records collected and prepared by the Observer, as the Master may request
- The Observer will submit to AFMA a report on each vessel placement undertaken. A copy will be sent to the relevant permit holder upon request.

1.3 Obligations of the Permit Holder and the Vessel's Operator

Regulation 18 of the Fisheries Management Regulations made under the Fisheries Management Act 1991 outline the permit holders and vessel operator's requirements in relation to the provision of an AFMA Observer, Refer to the Appendix of this manual for further details.

Additional obligations include:

- The vessel's operator will take appropriate action to guarantee the Observer is provided with medical care to an adequate standard
- That appropriate action is taken by the Vessel's operator to safeguard the security and welfare of the Observer by providing a safe and healthy living and working environment in which the Observer is free from harassment and undue influence.

1.4 TORRES STRAIT ISLANDERS AND THEIR LIFESTYLE

It is important that fishermen who may be new to the Torres Strait have some understanding of the culture and lifestyle of the Torres Strait Islanders. The Islanders are a proud people who have both respect for the sea and the people who make a living from it.

The Torres Strait is culturally distinct within Australia, being home to Australia's indigenous Melanesian people - the Torres Strait Islanders. It is estimated that 8000 Islanders live within the Torres Strait, including 3500 living in the major commercial and administrative centre of Thursday Island.

The Islanders have a strong relationship with the sea, coast and reefs. The significance of the sea as a basis of their livelihoods and food source can be appreciated by the fact that average rates of consumption of seafood in the Torres Strait are amongst the highest in the world. This is reflected in their myths and legends that contain many references to fish, turtle, dugong and shellfish. Marine resources, particularly dugong and turtle, are important in community ceremonies such as weddings and tombstone openings.

Everyday life on island communities revolves around maintaining essential services, schooling and supporting other members of the village as well as duties to the various churches of the islands. Islanders today use outboard motors and dinghies for fishing and inter-island travel rather than dugouts as they did in the past. Islanders are involved in the commercial fishing for lobster, sea cucumbers, mackerel and reef fish, trochus and pearl shell. The taking of turtle and dugong is restricted to the indigenous inhabitants and the sale of either species (including the shell of the turtle) is strictly prohibited. Women often handline from the reefs and jetties for fish which is consumed by their immediate and extended family.

The communities are managed by elected Chairpersons and councillors in the same way as local councils are on the mainland. Visitors to communities are reminded that resources on

communities are limited. Water, telephone services and food stores are designed for community use only. When visiting a community for medical help or to connect with an airline service, visitors are asked to respect community standards and remember that you are on someone else's home or property. There are accepted protocols for visiting island communities. The correct approach is to first visit the council office and speak to the Chairperson, councillor or clerk, explain why you are on the island and how long you will be staying. Remember that some of the islands have a complete ban on alcohol.

1.5 Catch sharing with Papua New Guinea (PNG)

Under the *Torres Strait Treaty 1985*, Papua New Guinea (PNG) is entitled to a 25 per cent share of the allowable catch of the Protected Zone commercial fisheries located within Australian fisheries jurisdictional waters within the Protected Zone, south of the fisheries jurisdiction line. It also entitles Australia to a 25 per cent share of the allowable catch of the Protected Zone commercial fishery resources in PNG's fisheries jurisdictional waters within the zone. This recognition is implemented through the catch sharing provisions of Article 23 of the Treaty. All PNG vessels that take up this option are required to operate under the same regulations that exist for

Australian vessels. In addition, the crew is subject to Australian quarantine, customs and immigration laws and is therefore not permitted to have contact with any Australian inhabitant or set foot on Australian territory. Historically, PNG participation in Australian waters has been low.

Following the permanent surrender of Torres Strait Islander interests in 2005, Torres Strait Islanders no longer participate in the TSPF in the Australian area of the fishery (PZJA, 2005). In 2007, PNG agreed to allow Australia to utilise PNG's 25% allocation of Australian jurisdiction days under the catch sharing agreement. Further, PNG agreed to implement measures under relevant PNG laws to endorse up to seven Australian prawn licenses to fish 217 days in the PNG jurisdiction of the Torres Strait Protected zone between 1 December 2007 and 30 November 2008 in accordance with agreements under the Torres Strait Treaty.

At the PNG / Australia Bilateral Fisheries Talks held in Port Moresby on 2-3 October 2007, PNG and Australia agreed at an agency level to rollover the 2007 agreements, thus giving Australia access to these days again for 2008. This decision is still to be ratified by the respective ministers and will be reviewed annually. PNG's days within the Australian area of jurisdiction will be offered on a pro rata basis in two rounds to all Australian endorsed license holders early in 2008.

Access for the seven Australian prawn licensed vessels to the PNG area of jurisdiction will be determined in consultation with industry. When the conditions of entry have been finalized, successful licence holders will be advised of the final management conditions by the Australian Government. Provided that the conditions of entry are acceptable to the successful licence holders, their licences will be nominated for endorsement by the Australian Government during the PNG nomination process.

Licensed PNG prawn boats which are not endorsed under the catch sharing arrangement may transit the Australian area of the TSPF provided their trawling equipment is stowed and secured.

1.6 Carriage of other species

Table 1 Torres Strait Prawn Fishery species carriage allowances

| SPECIES | MAXIMUM QUANTITY | FM NOTICE NO. |
|-----------------------|--------------------------------------|---------------|
| | | |
| Mackerels (Scombrids) | Total of 20kg combined in any form | 79 |
| Finfish | | 78 |
| Shark | Lesser of 5 sharks or 30kgs of shark | 61 |
| Shark fin | Nil | 61 |
| Tropical rock lobster | Nil | 19 |
| Pearl shell | Nil | 69 |
| Turtle | Nil | 66 |
| Coral | Nil | - |

1.7 Fishery Overview

The Torres Strait Prawn Fishery is a multi-species prawn fishery (Endeavour, tiger and king prawns) that operates in the eastern part of the Torres Strait. This is the most valuable fishery in the Strait, and is considered fully exploited with current levels of effort. At the end of the 2007 season there were 51 active licences in the fishery and 10 inactive licences that did not have a boat attached. As a minimum requirement, operators fishing in the TSPZ must hold:

- a Torres Strait Master Fisherman's licence; and
- a Fishing Boat License endorsing them to take prawns in the area of the fishery.

No new licences will be issued for the Torres Strait Prawn Fishery. The three licences which were exclusively reserved for Torres Strait Islander interests to promote Islander entry into the TSPF were relinquished to the Australian Government in return for appropriate compensation during 2005.

Torres Strait Fisheries Area of the Prawn Fishery

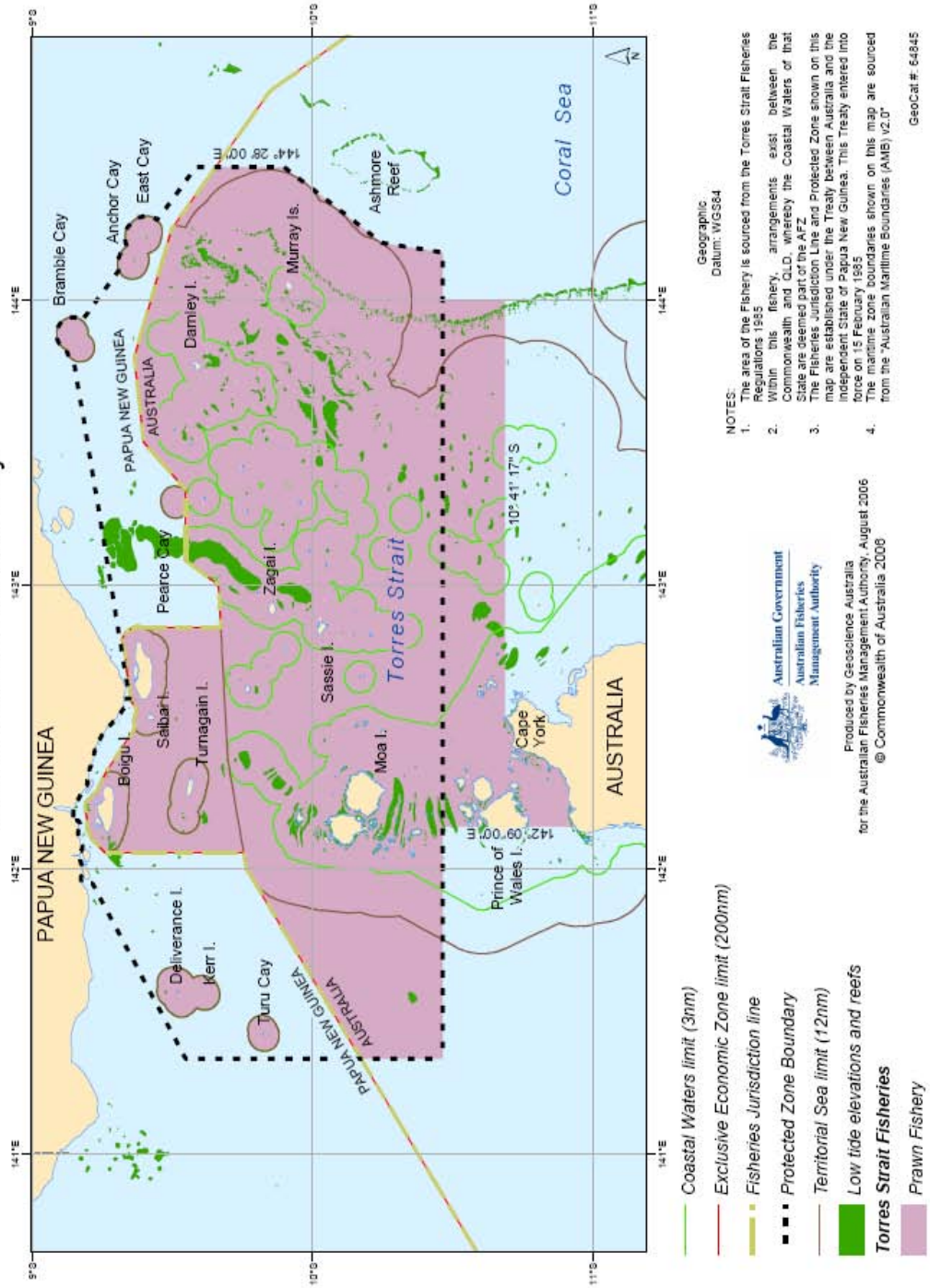


Figure 1 Area of the Torres Strait Prawn Fishery

1.8 The trawl vessel

1.8.1 Trawl Gear Description and Function

Trawl fisheries consist of towed nets made up of a cone or funnel shaped body extended at the opening by wings and leading to a bag or codend. The trawl is towed to capture target species by sieving them out of the water by using either one or two boats pulling the net through the water.

Trawl Doors – Are used primarily to keep the net open in the horizontal direction, but in the case of demersal trawling also help to keep the net on the seabed. The most common forms include square, oval and vee shaped.

Main Warp – The cable that connects doors to the main trawl winches on the vessel.

Door Legs – Are chains connecting the doors to the groundline. They act to keep the doors upright and stable during fishing operations.

Pennant – is the cable loosely attached at the point where the door legs meet the groundlines and to the inside of the doors. The purpose of the pennant is to facilitate the deployment and retrieval of the trawl.

Headrope – Is a rope or cable to which the upper wings and the forward section of the square are attached. Floats attached to the headrope provide the lift necessary to maintain the vertical opening of the net.

Groundrope – Is the bottom rope or cable to which the bottom wings and bellies are attached. Comprised of rubber discs or steel roller balls that are attached to the footrope. Used exclusively in bottom-demersal trawls to prevent damage due to rolling over obstacles.

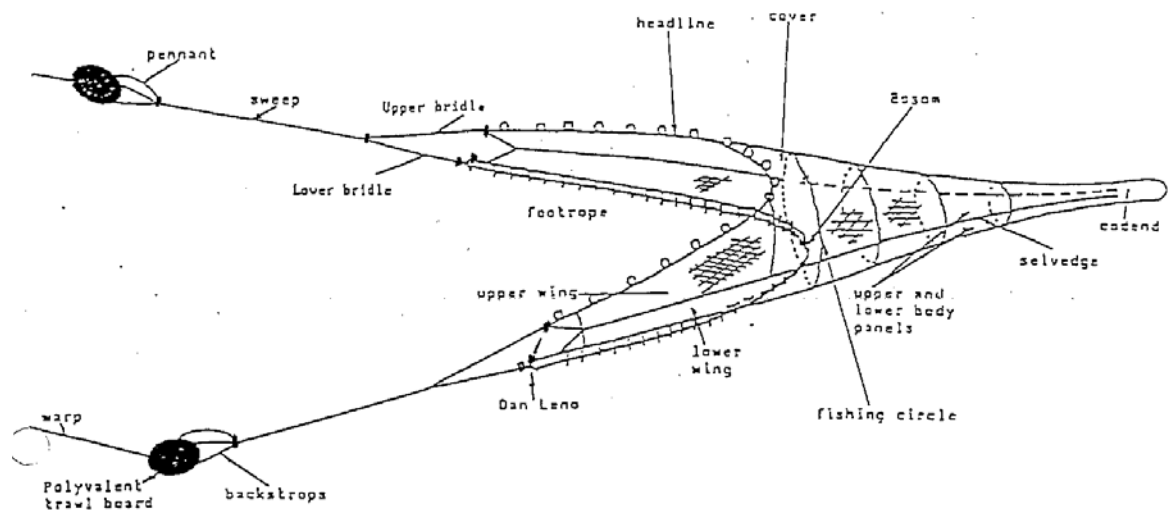


Figure 2 Components of a typical trawl

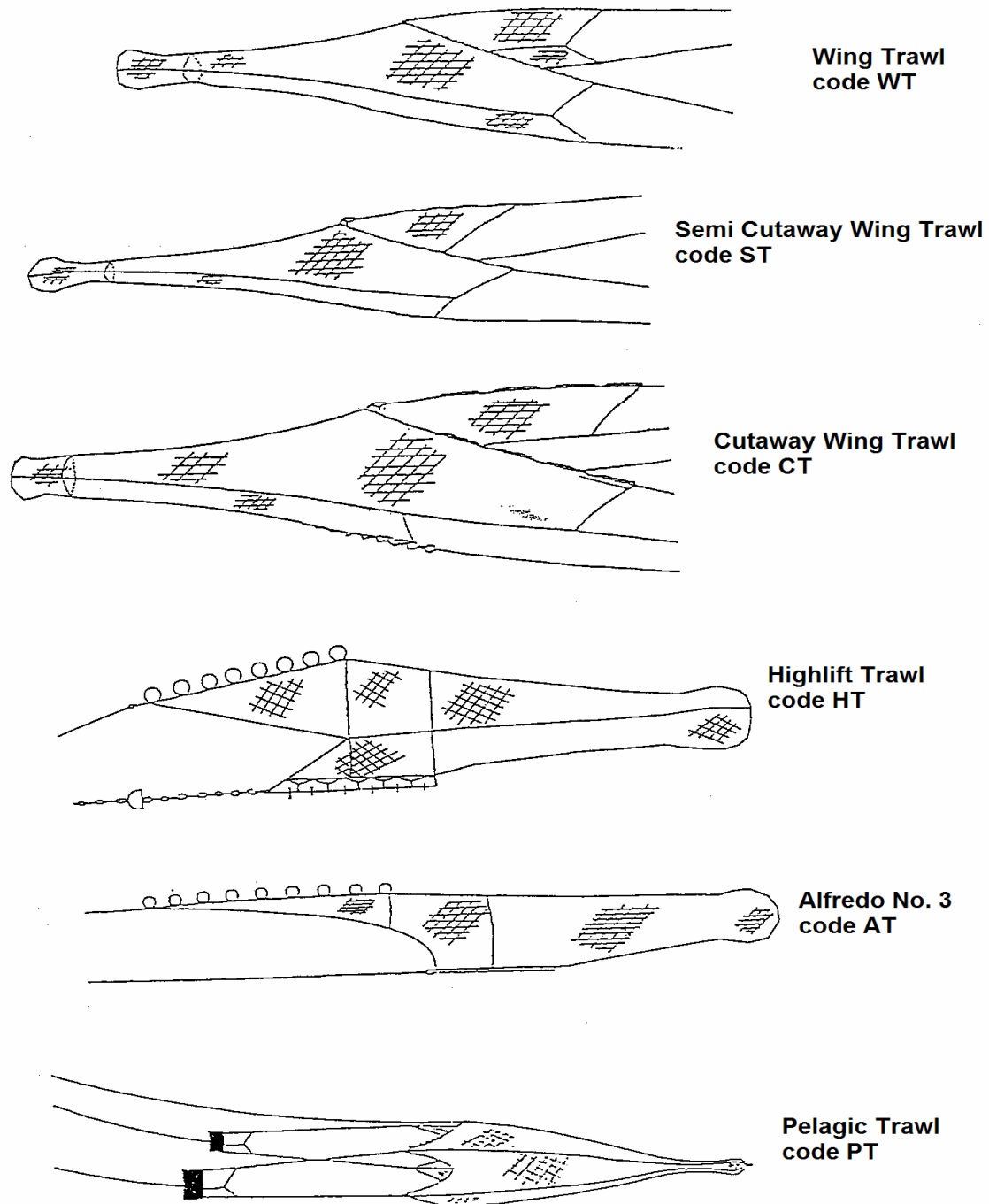


Figure 3 Net descriptions and codes

1.8.2 Bycatch Reduction Device Specifications

Turtle Exclusion Device's are mandatory to use when fishing in the NPF. These consist of a steel grid located before the codend that ejects any large organisms (turtles) from the net prior to entering the codend.

Mandatory use of Turtle Excluder Devices

As outlined in Fishery Management Notice No. 81 all Torres Prawn operators are required to use a Turtle Excluder Device (TED) in their nets (Figure 3-5). “*Turtle Excluder Device*” means a device fitted to a net, and modification made to a net, that allows turtles to escape immediately after being taken in the net, and which has:

(a) a rigid or semi rigid inclined barrier structure comprised of bars extending from the foot to the head of the net that is attached to the circumference of the net which must guide turtles towards an escape hole immediately forward of the grid. The minimum dimensions of this structure to be at least 80cm by 80cm. This structure is to be set within an angle range of 30 – 55 degrees in relation to the horizontal plane of water through the net;

(b) an escape hole which must be either

(i) a double flap rectangular net opening where the cut immediately forward of the TED must allow a minimum opening of 61 cm when attached to the frame and the two forward cuts of the escape opening must not be less than 51 cm long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 142 cm stretched, or a double flap net triangular opening where the cut immediately forward of the TED frame must allow a minimum opening of 102 cm when attached to the frame with minimum forward cuts of 101 cm. The flaps must be composed of two equal size rectangular panels of mesh. Each panel must be a minimum of 147 cm wide and may overlap each other no more than 38 cm. The panels may only be sewn together along the leading edge of the cut. The trailing edge of each panel must not extend more than 61 cm past the posterior edge of the TED frame. Each panel may be sewn down the entire length of the outside edge of each panel; or 14

(ii) a single flap rectangular net opening where the cut immediately forward of the TED must allow a minimum opening of 61cm when attached to the frame and the two forward cuts of the escape opening must not be less than 66 cm long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 181 cm stretched, or a single flap triangular net opening where the cut immediately forward of the TED must be a minimum of 102 cm with minimum forward cuts of 136 cm. The flap must be a minimum of 338 cm by 132 cm piece of mesh. The 132 cm edge of the flap is attached to the leading edge of the escape opening cut. The flap may extend no more than 61cm behind the posterior edge of the TED frame;

(c) a maximum bar spacing of 120 mm between bars; and

(d) it is not permitted to attach any weights, chains or other devices on the escape flap which may prevent the flap from opening.

Finfish bycatch reduction device – Usually rotated mesh panels in the upper side of the net which allow finfish to escape the trawl without sacrificing prawn catch

Mandatory use of Bycatch Reduction Devices

As outlined in Fishery Management Notice No. 70 all Torres Prawn operators are required to use an approved Bycatch Reduction Device (BRDs; Figures 6 – 11) in their nets. “*By-catch Reduction Device*” means a device that allows fish and other animals to escape immediately after being taken in the net and is constructed in accordance with Schedule 1 in Fishery Management Notice No. 70.

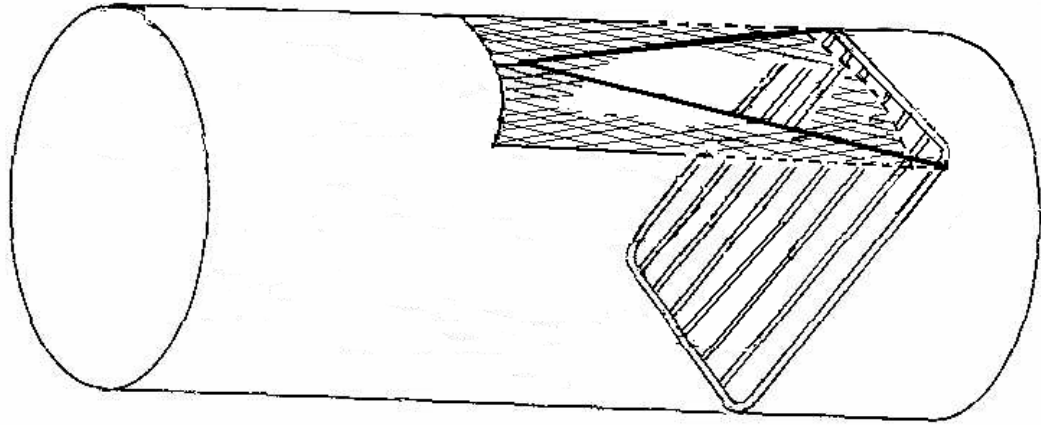


Figure 4 Dimensions of the flap of a turtle excluder device with single triangular net opening.

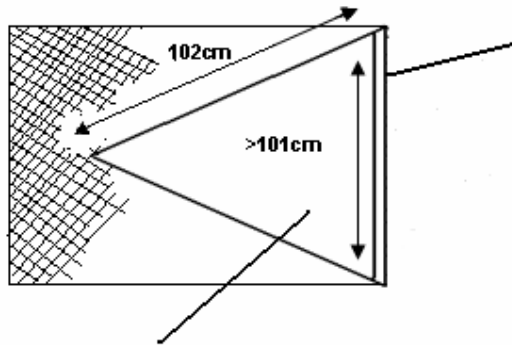
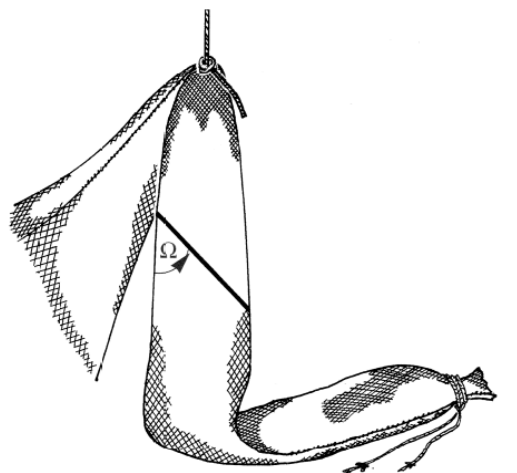


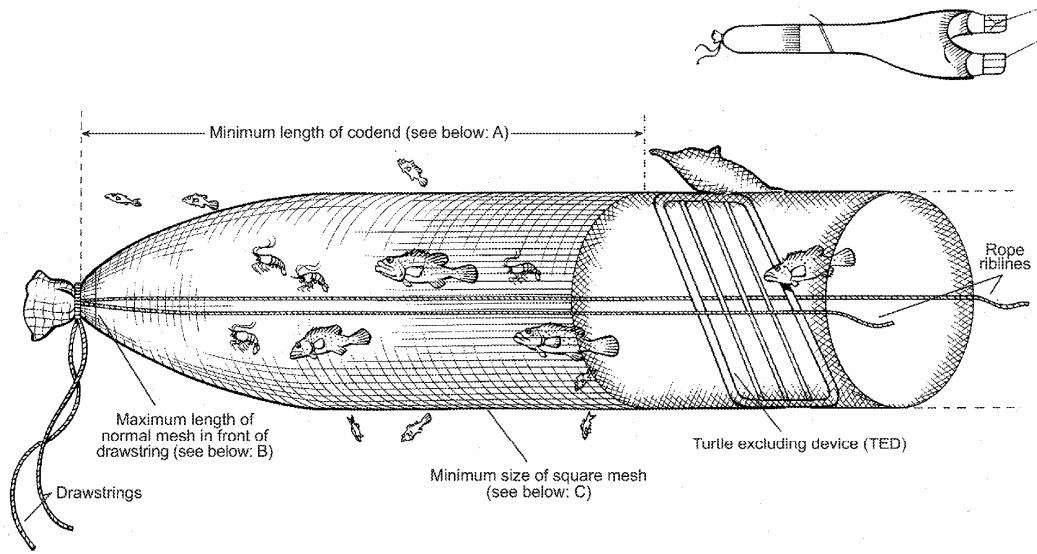
Figure 5 Dimensions of the escape opening of a turtle excluder device with a single triangular net opening.



Measuring the grid angle.

Figure 6 Correct position for measuring angle size on turtle excluder devices

Square mesh codend by-catch reduction device (BRD)



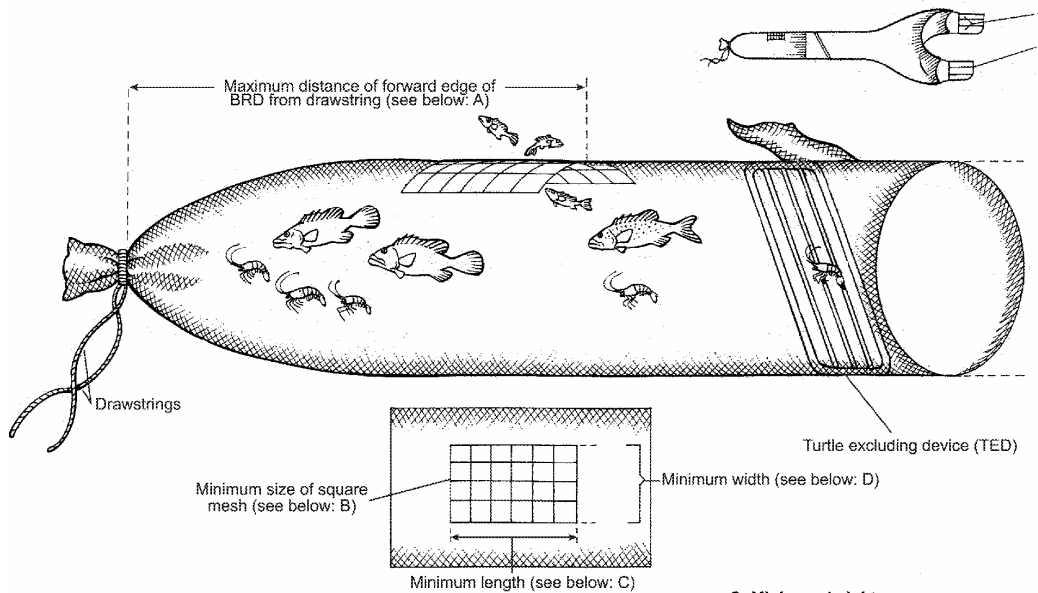
A: Minimum length of codend:
All otter trawl nets: 75 bars

B: Maximum length of normal mesh:
Otter - prawn nets: 5 meshes

C: Minimum size of square mesh:
All otter trawl nets: 45 mm

Figure 7 The square-mesh Codend BRD.

Square mesh panel by-catch reduction device (BRD)



A: Maximum distance from drawstring:
Otter - prawn nets: 100 meshes

B: Minimum size of square mesh:
All otter trawl nets: 10.1 cm

C: Minimum height:
All otter trawl nets: 40 cm

D: Minimum width:
All otter trawl nets: 60 cm

Figure 8 The square-mesh panel BRD

Fish eye by-catch reduction device (BRD)

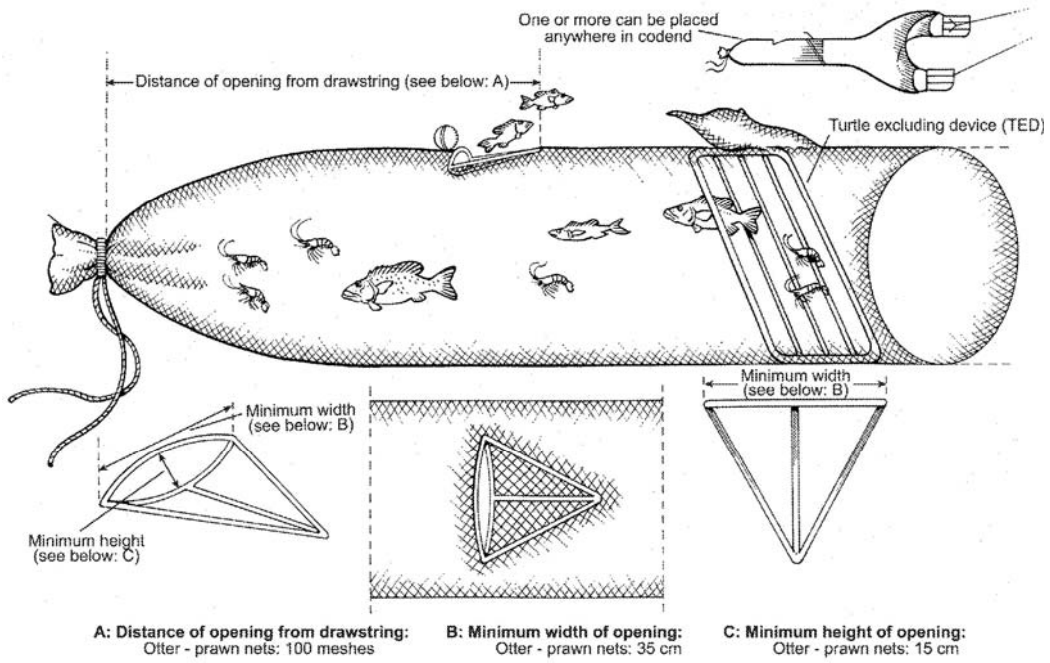


Figure 9 The Fish Eye BRD

Big eye by-catch reduction device (BRD)

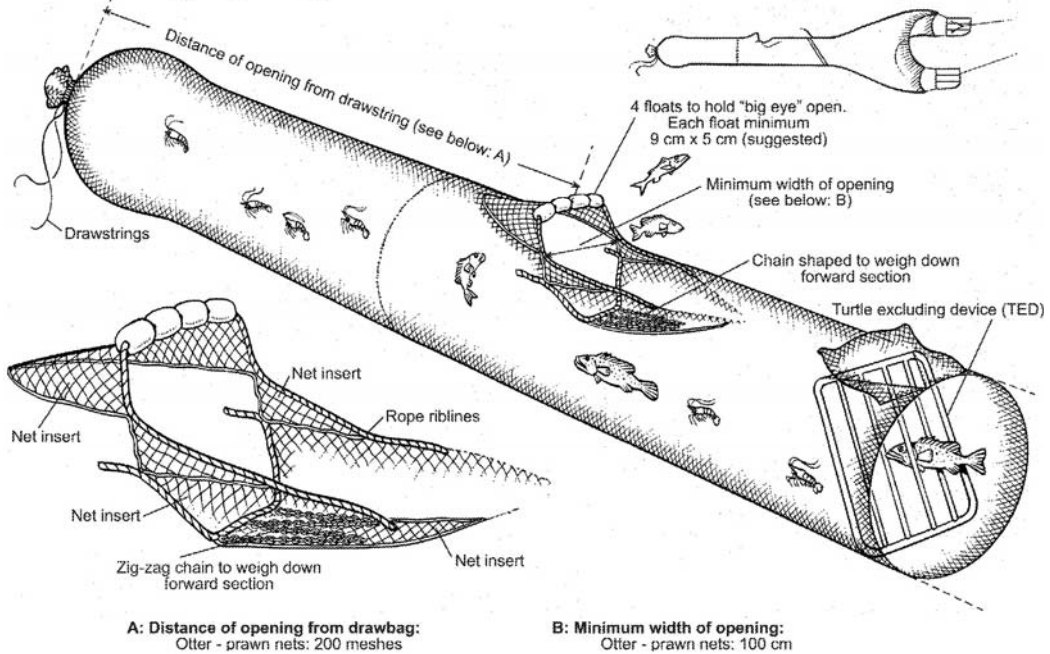


Figure 10 The Big Eye BRD

Radial escape section by-catch reduction device (BRD)

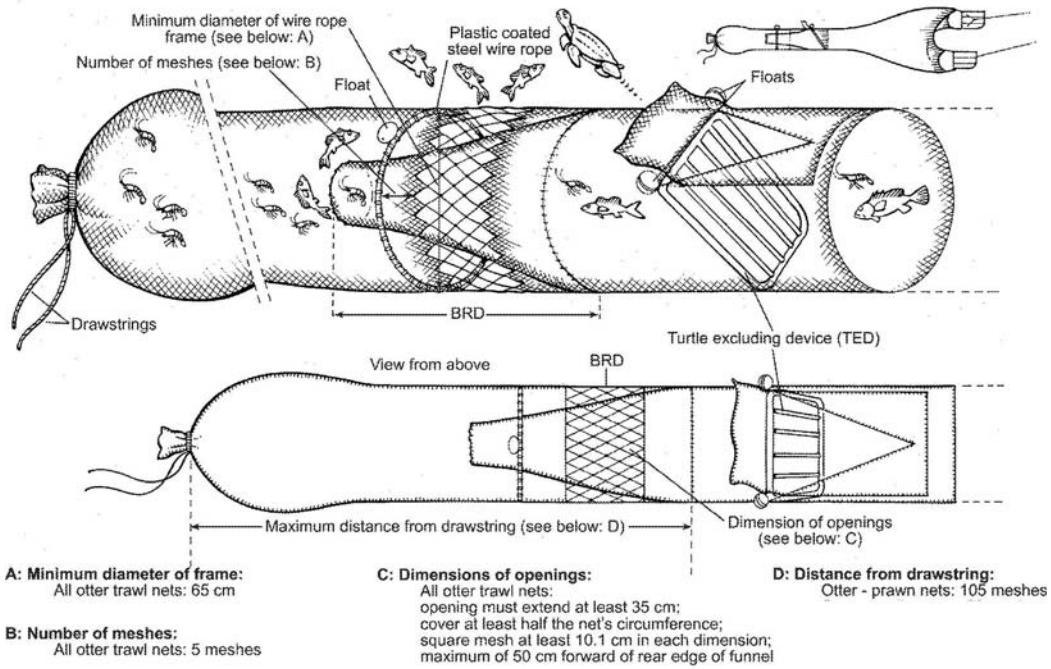


Figure 11 The Radial Escape Section BRD

Popeye fish excluder by-catch reduction device (BRD)

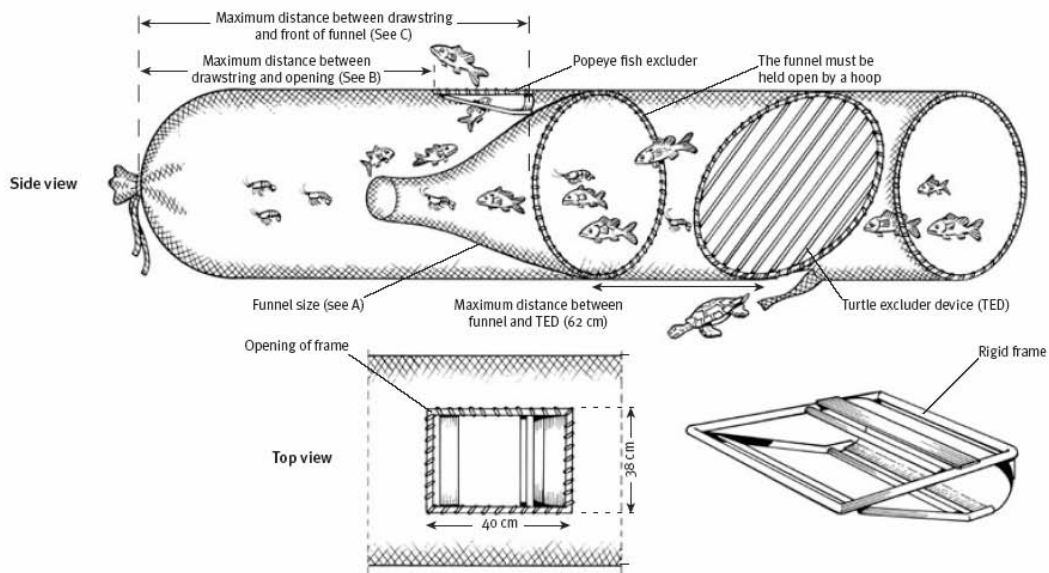


Figure 12 The Popeye Fish Excluder BRD

2 Operational Procedures

The observer's objective is to collect independent, unique, 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:

- a) **Collection of vessel activity and catch data**, which is not obtainable through official logbooks.

This information is used by AFMA and other agencies to provide more specific and detailed information to aid in assessing the actual state of the fishery and environment. Biological sampling is done to assist scientists and managers with stock assessments and to improve the understanding of impacts of fishing operations upon the marine environment.

- b) **Collection of data for research programs**, supporting marine management and other issues relevant to environmental awareness and management.

Observers provide data and information for research programs relating to Australian and global fisheries and the marine environment.

- c) **Monitoring compliance** of the vessel with its fishing agreements.

Observers are required to note the day to day activities of the vessel, having regard to the permit conditions. They assist vessels in seeking advice in the event of misunderstandings and assist in improving the level of compliance of various conditions. This helps to ensure that fisheries managers are obtaining reliable logbook information to assist with stock assessments and that the vessels are complying with their permit conditions.

NB: Observers have NO AUTHORITY to direct fishing operations of the vessel or to give operational advice or to act in an enforcement role.

2.1 Observer Duties

AFMA Observers primary duties include:

- a) **Validation of vessel logbooks** – observe and monitor fishing vessel operations while in the AFZ. Observers should monitor the Master's use of the logbook and help ensure the specified details are entered in an accurate and timely manner.
- b) **Report unique features** – of the vessel's operations that may be of interest to AFMA and other related agencies, such as environmental issues, bycatch, safety incidents, gear and fleet interactions and marine mammal sightings.
- c) **Monitoring compliance** – of the vessel and fishing operations with permit conditions. Observers should familiarise themselves with the permit conditions, a copy is provided in the Appendix of this manual.
- d) **Any additional trip specific duties** – see Section 4 for details.

Secondary duties include:

- a) Report and note any activities other than those directly related to the operational features of the vessel, including such issues as unidentified or unusual vessel activity in the area, and incidental observations of the marine environment.

Logbooks - Observers should report on practicalities in the use of the logbooks and any problems the Master has had that could affect accuracy between the initial recording of shot details and catch or bycatch information.
Blank hard copies of the log sheets and their explanation pages are attached in the Appendix.

Operating Outside of the AFZ - As AFMA Observers are placed aboard vessels that may in some circumstances leave the AFZ, it is essential that a current Australian passport be carried on all voyages.

Post Cruise Requirements - At the completion of a voyage the Observer MUST contact AFMA immediately on disembarking to notify AFMA of their movement intentions and confirm any other arrangements.

2.2 Observers Authority and Code of Conduct

Observers are expected to conduct themselves in accordance with the AFMA Observer Code of Conduct, complying with set standards related to:

- Professionalism and Objectivity
- Acceptance of Gifts / Bribes
- Use of Alcohol and Drugs
- Conflict of Interest
- Confidentiality of Information
- Observer Identification Cards
- Reliability and Secrecy Undertaking

Professionalism and Objectivity –

Objectivity is the ability to assess all perspectives of a situation in a non-biased manner.

Observers should conduct themselves at all times in a professional manner, avoiding any behavior that could adversely affect the confidence of the public in the integrity of the AFMA Observer Program. Observers are expected to conduct themselves in an open, honest, professional, and businesslike manner in all situations.

Acceptance of Gifts / Bribes –

Observers should decline all gifts and refrain from taking anything, including commercial and non-commercial fish from the vessel, unless as a legitimate objective or scientific sample.

Observers are requested not to accept gifts, due to the possibility of creating obligations or suggesting impropriety. Gifts may include, but are not limited to, money, fish products, free trips, and alcoholic beverages. Any offer which may be perceived as a bribe, even presented in a joking or non-serious manner should be reported and recorded immediately.

Use of Alcohol and Drugs –

Observers are strictly prohibited to consume or be under the influence of alcoholic beverages

or illegal drugs while on deployment.

Conflict of Interest –

Observers must disclose in writing any conflicts of interest to AFMA as soon as they become aware of the conflict. Conflict issues could include, but are not limited to, involvement in the purchase of fish for the purpose of resale, being the operator or owner of an enterprise that catches, processes or transports fish products.

Confidentiality of Information –

At all times, Observers should bear in mind the restrictions of commercial confidentiality of data collected and operational procedures of vessels. Any information or material collected from vessels is the property of AFMA and can only be released with clearance by AFMA. This includes operational information, film or other material.

Observers must not only refrain from the deliberate disclosure of official information to unauthorised persons but must also take care to ensure that there is no inadvertent disclosure (eg even in a social scene such as at the pub after disembarking from the vessel). Such disclosure could come about by the careless disposal of correspondence, copies, notes and conservation.

Observer Identification Cards –

Observer identification cards are for official use only, and must be returned to AFMA upon request.

It is AFMA's policy to ensure that Observer's activities do not affect the quality of fish retained by the vessel and that any disruption is minimised. Observers have no right to demand scientific samples of commercial value.

2.3 Time Management

Time management refers to the planned use of time to minimise wasted time so as to maximise efficiency and productivity. The four main benefits that can be derived from effective time management include:

- Decreased work related stress
- Increased productivity
- Progression towards short and long-term goals
- Balance between personal and professional life.

Some time management techniques include:

- **Establishing goals and priorities** - The primary goal of every deployment is to collect information required for a complete data package. Once this has been achieved, secondary goals of collecting additional information or spending extra time monitoring fishing activities can be pursued. For extended deployments Observers should also include personal goals such as a specific time set aside each day for exercise, reading or to do a hobby.
- **Adequate planning**
- **Instituting self-discipline** - a lack of self discipline often results in procrastination which wastes a lot of time and results in poor work quality.
- **Avoiding interruptions.**
- **Effectively using down time** - time spent riding out a storm or repairing the vessel is time that can be spent to complete unfinished paperwork and rest, review work, conduct quality checks, and conduct progress reports

- **Eliminating time wasters** - The identification of wasted time can result in its solution. For example, interruptions can be eliminated by not allowing them to happen.

2.3.1 Completing Data Sheet Time Line

The logs and data sheets comprise the following forms:

| LOG | FORM | # | WHEN TO COMPLETE |
|------------------------|---------------------------------|---|--|
| Observer Vessel Cruise | Vessel Voyage Summary | 1 | Complete at the end of each cruise - summarise boarding and activity details and vessel reported tagged birds / fish, |
| | Vessel and Crew Details | 1 | Complete at beginning of voyage or when convenient - record vessel details and crew details. |
| | Vessel Gear Details | 1 | Complete at beginning of voyage or when convenient – record gear onboard vessel during voyage. |
| | Tori Line Specifications | 1 | Complete at beginning of voyage or when convenient - record wildlife mitigation details. |
| | Vessel Activity Form | 1 | Daily entry - record vessel's activity for example setting and hauling details |
| | Biological Data Collection Form | 1 | Complete during the haul – Records the catch composition of the haul. |
| | Shot Details Form | 1 | Complete at the end of each set. Records characteristics of the set. |
| | Wildlife Interaction Data Form | 1 | Complete every trip, if no wildlife interaction is observed then fill out form stating that. This form records characteristics of a interaction. |
| | Abundance Data Forms | | Complete during designated time intervals during the set. Records wildlife abundance during the set. |
| | Longline Shot mitigation Report | | Complete at the end of each set. Records the efficiency of the wildlife mitigation measure during the set. |
| | Observer whale sighting | 1 | Complete whenever a whale is sighted by the observer |
| | Wildlife Incident Report | | To be completed for all wildlife incidents / interactions. This report is to be completed as well as the Interaction Data Form. |
| | Marpol compliance assessment | 1 | Complete at the end of each cruise - record observer's opinion of the vessel's adherence to marine pollution requirements |
| | Hospitality assessment | 1 | Complete at the end of each cruise - record conditions on board which may be useful for future boardings |
| | Comments | 4 | Complete in appropriate data sheet preferably as soon as possible after event described or information gathered |

Note: 1. Do not enter anecdotal information, particularly involving campaigns/values etc unless you are reasonably confident to its accuracy.

2.4 Sampling Area

Observers should become familiar with their working environment shortly after arriving on board the vessel. The Master of the vessel should provide a suitable and safe area for Observer sampling activities. Prior to working with catch Observers should assess the processing operations to determine the optimum location for sampling.

Ideally a sampling area should have:

- Minimal interference with vessel operations
- Be a safe area for the Observer to work
- Easy access to unsorted catch
- Space to store data sheets and small sampling equipment
- Space to measure fish
- Space to hang weight scales
- Sufficient lighting.

3 OBSERVERS SCIENTIFIC DATA AND SAMPLE COLLECTION PROTOCOLS FOR THE TORRES STRAIT PRAWN FISHERY 2006

There is a heavy workload, and depending on fishing conditions and other factors at various times, it may not be possible to perform all tasks at any one time. While it is necessary to attempt to achieve all required tasks on any voyage, the following is a guide to the relative importance of the various tasks for the voyage. This does not imply that any project is necessarily of higher overall priority than others and is meant to assist you in planning your work during the voyage, should the need arise. If you experience difficulty in completing any task, please contact the Observer section at AFMA for advice.

Collection of wildlife observation, vessel activity and catch data which are not obtainable through official logbooks is the main focus of observer tasks. With several Threatened, Endangered and Protected (TEP) species identified as occurring within the TSPF area of operation, the major priority of the Observer Program is to monitor TEP and wildlife interactions and assess the effectiveness of TED's and BRD's in reducing bycatch. Observations of TEP bycatch during fishing operations are designed to describe the potential for and quantify the actual level of interaction with wildlife. These data feed into the Environmental Risk Assessment (ERA) to help identify populations at risk. Biological sampling (length/frequency and sex) is carried out to assist scientists and managers with stock assessments and to improve our understanding of the impact of fishing operations on the marine environment.

3.1 The Observer's data collection priorities include:

- Identification of interactions with Threatened, Endangered and Protected (TEP) species.
- Identification of trawling impacts on identified 'high risk' bycatch species and the marine environment.
- Description of bycatch.
- Data validation for target and byproduct species.
- Assessment of TED's and BRD's - simultaneous deployment of alternative TED's and BRD's.
- Collect biological data from target prawn species.
- Validate the vessel's logbooks, observe and monitor fishing vessel operations.
- Monitor compliance of the vessel and fishing operations with permit conditions.

3.1.1 EPBC Act, Protected species and Wildlife interactions

THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT, 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any person who undertakes an activity that results in the unintentional death, injury, trading, taking, keeping or moving of a member of a protected species in or on a Commonwealth area and the activity was not authorised by a permit, must notify the Secretary of the Department of the Environment and Water Resources of that action. This requirement to report includes fishers operating in all Commonwealth waters.

WHAT IS A PROTECTED SPECIES?

The Environment Protection and Biodiversity Conservation Act 1999 (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 (like the introduction of a feral predator).
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 classified as protected. Of relevance to Commonwealth fisheries, all cetaceans (whales & dolphins), seabirds, sea snakes, turtles, seals and sea lions, syngnathids (sea horses, sea dragons and pipefish), crocodiles and dugongs are protected. There are also a small number of sharks and other fish listed under the *EPBC Act*. A full listing of protected species is available on the DEWHA website:

(<http://www.environment.gov.au/biodiversity/threatened/index.html>)

“Interaction” means any physical contact an individual (person, boat or gear) has with a protected species that causes, or may cause death, injury or stress to the individual. This includes all catching, hooking, netting, entangling, or trapping of a protected species including any injuries or mortalities directly resulting from fishing activities. It includes any contact or collisions with warps, trawl doors, backstops, brides, sweeper, net, Paravanes (includes towing wires), wheelhouse, and windows. An Interaction is an event or incident involving a protected species whether it occurs on the boat or in the water. An individual does not need to be landed on the deck for an interaction to have taken place.

Examples of when an event/ incident is considered an interaction and must be reported

In the case of Seabirds, an interaction includes:

- seabirds that accidentally land on the boat or in the fishing gear in circumstances where it has to be assisted back into the water or air ;
- circumstances when there is a bird on the water, which results in heavy contact with the vessel/gear, causing the bird to be dragged underwater ;
- where there is a bird flying, and there is heavy contact with vessel/gear, causing the bird to deviate from its course and/or is dragged underwater;
- any collisions with the fishing vessel, fishing gear (ie warps, wheel house) including circumstances where the individual has to be assisted back into the water or air;
- a bird gets snagged on loose or protruding wire ends (eg. splice ends);
- a high speed collision with vessel/ gear; or
- A bird gets caught in the net or snagged on the net while attempting to feed (on “stickers”) and has to be assisted back into the water or air.

In the case of Seabirds, an interaction doesn’t include:

- seabirds landing on a boat or diving into/onto a net of fish and swimming or flying off uninjured and without assistance;
- where a bird is flying and has light contact with vessel/gear, and the bird does not deviate from its course;
- a bird floating on the water, and has light contact with vessel/gear ;
- where a bird “hitches a ride” on the trawl arms for a period of time and then flies away unassisted;

In the case of Seals, an interaction includes:

- Where a Seal climbs on or gets caught in a trawl net.

In the case of Seals, an interaction doesn’t include:

- Where a Seal is sighted in close proximity to the net but no contact or Light contact with net is made.

In the case of Cetaceans, an interaction includes:

- Any cetacean that is caught in a net even if it is released or escapes unassisted and uninjured.

3.2 Data Collection Methodology

Remember: For every shot for which sampling is undertaken you must record an estimated total weight (includes retained and discarded bycatch species) of the codend when it is first hauled onboard.

3.2.1 Data collected from every shot

1. Vessel Activity (AFMA data form)
 - Record accurate date, time, lat/longs and conditions for setting and hauling for every shot during the voyage.

2. Trawl Vessel Shot Details (AFMA data form)
 - Record all details taking special regard to accurately record an estimated total catch, retained catch and discarded catch weight.
 - To ascertain the weights and numbers of retained species catch ask a crew member for the number of packed cartons by species, the average carton weight and the approximate number of prawns in a carton. By multiplying the number of cartons by the average weight and average number an extrapolated weight and count of retained catch can be recorded.

3. Threatened, Endangered and Protected Species (TEP) and species of interest bycatch monitoring
 - Count the number of every TEP species;
 - Sea snakes
 - Sawfish
 - Sharks (Whale, Grey Nurse and Great White)
 - Turtles
 - Sygnathids

 - And, species of interest;
 - Tropical Rock lobsters
 - Rabbit Fish
 - Mangrove Jack
 - Red Emperor
 - Blue Tusks
 - Maori Wrasse
 - Barramundi Cod
 - Rays, and
 - All other sharks

NOTE: All these should be recorded on the catch composition form and interactions with TEP species should also be recorded on the interaction sheet.

- Count the species type captured and record on the Catch Composition form.
- Aim to record details for every TEP species and species of interest individual captured in the Biological Data form (AFMA data form).
- Details should include:
 - a. Species name and FAO code

- b. Life status
 - c. Sex
 - d. Measure and weight if possible
 - e. Fate (retained or discarded)
 - f. Note in the comments if lobsters were damaged or not
- Where TEP species cannot be identified take a photo and reference accordingly in the comments section of the Biological Data form.
 - All sea snakes should be photographed and referenced in the comments section of the Biological Data form.

3.2.2 Data collected from every second shot

NOTE: Do not monitor the same shots for every night, i.e. do not monitor the second and fourth shot every night for the 10 kg sample, rotate so shots for all different times are monitored over the duration of the trip.

In addition to the data collected from every shot, collect a catch composition of the net from every second shot, using the following methodology and entered on the 'Catch Composition' or 'Biological Data' form where applicable.

1. Take a random sample of the **discarded bycatch** as follows:
 - a. Collect a "random" sample of the discarded bycatch (after prawns have been removed) – minimum 10 kg and record total weight on Catch Composition forms.
 - b. Separate random sample by species and identify (family level is ok but aim for species level), weigh and record on Biological Data form.
 - c. Record the number and/or weight and species of catch retained (target species & byproduct).
 - d. Any bycatch species which cannot be identified should have a photograph taken and be referenced (see Section 4.5.1 Specimen Photography).

NOTE: The 10 kg random sample of discarded bycatch should be collected in addition to recording all Threatened, Endangered and Protected species (TEP) and species of interest, and larger individual animals caught.

3.2.3 Data collected from every other shot

For those shots where you are not undertaking catch composition sampling the priority is to conduct biological sampling from retained prawns.

1. Take a random sample (attempt to sample a whole weight i.e. 1 or 2 kg of each species represented in the haul if possible) of the prawn catch and collect the following biological information:

Total weight of the random sample and the total codend weight

Measure all prawns in this sample by species, sex, Post Orbital Carapace (POC) length and gonad stage.

NOTE: Male prawns have a tube shaped structure positioned behind the front pair of swimming legs. Female prawns have a distinctive plate-like disc with a central groove positioned between the rear pair of walking legs. Generally big prawns are female but remember to check. See Appendix 18

NOTE: Post Orbital Carapace (POC) length is measured in a flat line across the top of the carapace from a line behind the orbital socket to the end of the carapace. Do not measure rostrum length.

3.3 Environmental observations

Collect **wildlife abundance counts** during setting and hauling for those shots that occur during daylight hours (it is too dark to count accurately at night) – this will usually be the first or last shot of the evening's fishing. An abundance count should be taken over a 5 minute interval when the codends are within 500 m of the rear of the vessel. Ideally a count should be taken during hauling as the codend is about to be brought on deck. Any interactions between the vessel, its fishing gear and wildlife should be recorded on the wildlife interaction form.

3.3.1 Guidelines following the retrieval of a seabird from the vessel's deck.

- ID the bird as accurately as possible;
- Take photographs of distinguishing features (e.g., head, wing, tail pattern);
- Check for any obvious injuries or oil fouling;
- A live bird with vomit on its feathers will need to be cleaned prior to release;
- Check for any colour markings (head, foreneck, chest, wings);
- If colour marked on the chest the bird will almost certainly be banded;
- Check for and record the details of any bands;
- Do not remove any bands from a live bird just note the details;
- If banded, record the location of your vessel, time and date when the bird alights, and when the bird is released, note condition of the bird at time of release;
- If the bird is dead, retain bird whole, do not remove bands;
- If still dark possibly wait until day light before releasing.

Place any dead birds in separate plastic or polypropylene bags, place a label on water proof paper inside the bag (preferably in the birds mouth) and include the date and time of capture, location of capture (lat/longs.), vessel name, observer name, cause of death and any other particulars you feel may be important (such as ship activities you feel may have led to any accident with birds).

3.4 Monitoring compliance of vessels with their fishing permits.

Observers are required to note the day to day activities of the vessel, having regard to the permit conditions. In particular you should take note of compliance with the compulsory use of TED's and BRD's and remember to advise the vessel in the event of witnessing a compliance breach.

3.5 Secondary Duties

Observers are also expected to note and report on activity other than that directly related to the operational features of the vessel they are working on.

Areas they should be aware of and include in their report are:

- unidentified or suspicious vessel activity in the area
- incidental sightings and observations concerning the marine environment,
- hospitality, assistance and cooperation of the Master and crew of the fishing vessel boarded.
- MARPOL – Vessels compliance with marine pollution at sea (see Appendix 14 for MARPOL form and more details on this international convention)

Observers should be mindful that all data collected during the voyage is of a commercially sensitive nature and any information or material collected from the vessel is treated by AFMA as “*Commercial in Confidence*”. The data collected to meet AFMA’s requirements will be returned to AFMA for compilation, entered onto a database and archived care of the AFMA Observer Program. Reports will be sent to stakeholders after quality control checking. Access to observer data is restricted. Researchers seeking access must sign and abide by AFMA’s Deed of Confidentiality Agreement.

3.5.1 Specimen Photography

Always photograph the left side of the fish unless the left side is in poor condition relative to the right. The best position to photograph invertebrates varies from group to group: prawns on their left side, crabs, lobsters and squid on their dorsal surface.

Try to photograph on a plain (light coloured) background. Ensure that there is a ruler or similar in the frame so that later on we can get an accurate determination of the specimen’s size. With fish, if possible, try to spread its fins. This not only shows the positioning of the fins on the fish but may also reveal important information about the fin colour. A label with the shot number should also be included in the frame to assist with matching the specimen to the catch composition records and specimens retained. Once photographed, write on the label and catch composition data form that the specimen has been photographed.

See Appendix 23 for scale tag for photos.

4 Cruise Vessel & Fishing Gear Summaries, Hospitality & Compliance Assessments, General Comments.

4.1 Vessel and Crew Details Form

This form collects information concerning the vessel's details, factory processing power and electronic fishing equipment. All the required information should be obtained from the captain or mate and factory manager. A copy is attached as Appendix 3.

4.2 Trawl Gear Details Form

This form collects information concerning the vessel's fishing gear and may be used when determining effort. All the required information should be obtained from the captain. A copy is attached as Appendix 4.

4.3 Vessel Voyage Summary Form

This form is a summary of effort, catch and wildlife interaction events during the cruise. A copy is attached as Appendix 5.

4.4 Trawl Vessel Shot Details Form

This form is a summary of the fishing strategy employed for each shot. It explains the effort and results and any other unique feature of an individual trawl. A copy is attached as Appendix 6.

4.5 Vessel Activity Log

This form acts as a diary of operations, accounting for start and end dates/times and lat/longs for each shot plus weather and sea conditions. A copy is attached as Appendix 7.

4.6 Catch Composition Data Form

This form collects broad data on the entire net contents by number and weight of individual species taken. A copy is attached as Appendix 8.

4.7 Biological Data Forms

Biological data forms are used to collect fine scale data on retained target and bycatch species. A copy is attached as Appendix 9.

4.8 Conversion Factor Data Form

This form is used to document conversion factor tests from the initial sample weight through to processed weight and process type code. A copy is attached as Appendix 10.

4.9 Wildlife Interaction Form

This form is filled out when the observer conducts interaction observations during the setting or hauling. The observer will fill out details for those species observed interacting with gear if such

an event occurs or if no interactions occurs he will write as such against the observed operation. A copy is attached as Appendix 11.

4.10 Wildlife Abundance Form

This form is used to document wildlife numbers attracted to a fishing vessel during hauling operations. The observer will conduct a wildlife count by species for 5 minutes starting from the moment the codend is entirely hauled onboard the vessel. If no wildlife is seen the observer will write as such against the observed operation. A copy is attached as Appendix 12.

4.11 Whale Sighting Form

AFMA observers will fill out this form to document whale sighting information. A copy is attached as Appendix 13.

4.12 Marpol Compliance Assessment

This form will be filled out to report on any breaches of Marine Pollution regulations witnessed by the observer. A copy is attached as Appendix 14.

4.13 Hospitality Assessment

This form is an assessment of the crew's attitude towards the observer. It will assist in future Observer deployments and compliance with permit conditions. A copy is attached as Appendix 15.

4.14 Safety Induction Checklist

This form is to be filled out when an observer boards any vessel. It should be done in conjunction with the skipper or mate as they show you the location of each point on the checklist. A copy is attached as Appendix 16.

5 Appendices

| | |
|---|-------------|
| Permit Conditions | Appendix 1 |
| Possible breaches of permit conditions, preferred observer strategy | Appendix 2 |
| Vessel and Crew Details Form | Appendix 3 |
| Trawl Gear Details Form | Appendix 4 |
| Vessel Voyage Summary Form | Appendix 5 |
| Trawl Vessel Shot Details Form | Appendix 6 |
| Vessel Activity Log | Appendix 7 |
| Catch Composition Sheet | Appendix 8 |
| Biological Data Form | Appendix 9 |
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| Wildlife Interaction Data Form | Appendix 11 |
| Wildlife Abundance Data Form | Appendix 12 |
| AFMA Observer Whale Sighting Form | Appendix 13 |
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| Code of practice for the handling of sharks and rays in the Torres Strait Prawn Fishery | Appendix 17 |
| Prawn identification | Appendix 18 |
| Sawfish identification | Appendix 19 |
| Turtle recovery procedures | Appendix 20 |
| Sea snake identification | Appendix 21 |
| Closures | Appendix 22 |
| Scale tag for photos | Appendix 23 |
| Species codes, common names and species names for species commonly caught in the TSPF | Appendix 24 |
| Fisheries legislation affecting the Torres Strait Prawn Fishery | Appendix 25 |

5.1 APPENDIX 1 – PERMIT CONDITIONS

Conditions to which this licence is subject

The holder of this fishing licence must ensure that relevant information about fish taken in the area of the Torres Strait is accurately and fully recorded and submitted in the logbook titled Northern and Torres Strait Prawn Fisheries Daily Fishing Log - NP14 in accordance with the General Information and Instructions for completion of that logbook dated June 2003.

You may be required to carry on board a designated fishery observer who will collect scientific, management information, and any other information at a time and in a manner determined by the Australian Fisheries Management Authority. During the period that the fishery observer is on board, you will be required to allow the fishery observer access to all parts of the vessel, provide reasonable accommodation for the fishery observer, and to allow the use of all equipment necessary for the performance of their duties. Further details of your obligations are outlined in the *Project Plan - Torres Strait Prawn Fishery Surveys*.

Vessel Monitoring System Licence Conditions

1. When operating in the area of the Torres Strait Prawn Fishery the boat must be fitted with a VMS which:
 - i. includes, or consists of an ALC of a type specified in the Dept of Primary Industries & Fisheries document "ALC Type Approval Listing"; and
 - ii. is installed in the boat in accordance with the Dept of Primary Industries & Fisheries document "VMS Installation and Maintenance Standards and Requirements"; and
 - iii. is operating continuously and in accordance with the manufacturer's specifications and operating instructions unless arrangements have been entered into with AFMA.
2. The master of the boat must ensure that no person or persons switches off, tampers with, alters, damages or disables any component of the ALC or its antenna system.
3. If the ALC is not operating or is malfunctioning the boat must remain in port until the ALC is inspected, repaired if necessary and AFMA has received written confirmation from an authorized technician that the ALC is functioning normally.
4. If the ALC stops reporting or malfunctions after the boat has left port, the master of the boat must comply with any instructions given by AFMA or an Officer.
5. If requested by AFMA or an Officer, the master of the boat must provide manual position reports to facsimile number 07 4069 1277, or another location agreed to with AFMA, and at the times or intervals specified.
6. Where manual position reports are requested, the following information must be included in the report:

- i. the boat's name;
- ii. the boat's distinguishing symbol;
- iii. the date and time;
- iv. the boat's current latitude and longitude (in degrees and decimal minutes); and
- v. if the boat is fishing, steaming, or anchored.

5.2 APPENDIX 2 – POSSIBLE BREACHES OF PERMIT CONDITIONS, PREFERRED OBSERVER STRATEGY

Observers are NOT to guide vessels on licensing matters or regulations.

Where the Observer is not absolutely certain of the intent of the regulations or permit conditions, all enquires from the vessel regarding interpretation and 'Official' opinion or sanction should be referred to AFMA via either facsimile or Inmarsat.

If an Observer has cause to suspect a breach of permit conditions has occurred, then the following points will provide a framework for actions and considerations:

Obviously observers will be required to use a degree of discretion in such matters. Adopting a sensible work routine is important, as by staying relatively fresh an observer will be better prepared to adopt an appropriate course of action.

1. **Remain alert and conversant with permit conditions.** The permit conditions can be found in APPENDIX 1. Document your observations in an accurate manner cross-referenced to the date, time and position of the vessel. The attached Incident Report Form can be used for this purpose.
2. **Raise the matter by way of an inquiry** (in a sensitive manner) **with the master.** The master's response will provide the observer with the following courses of action.
 - If the Master believes there is no problem he will need to demonstrate to the observer why he believes no breach has occurred. If the observer is satisfied with the explanation provided this should be documented for inclusion in the Observer's cruise report.
 - If the Observer is still unsure after these discussions then the Observer should indicate that they will require access to communication equipment to submit a report to AFMA seeking clarification. At no stage will the Observer give direction as to the vessels operations. The Observer's observations and the skipper's response should be incorporated in the cruise report.
 - If the Master acknowledges that a problem may exist and takes action to rectify it the Observer should report on this accompanying course of action.
 - If the Master and Observer agree that a breach has occurred and the Master takes no action to rectify the problem. The Observer should submit "in a convenient and timely manner" a report to AFMA. This report should be documented for inclusion in the Observer's cruise report. The Observer's observations and the Skipper's actions and or comments should be incorporated in the initial report.
3. The Observers should **notify AFMA if they feel the presence of the relevant investigations officer is needed** on return to port, particularly if the company involved intends holding a debriefing session. Ideally such a message would be sent at least 3 days (preferably 5 days) before arrival to port to allow the appropriate investigations officer to decide on a course of action.

Documentation of Breaches

| Breach | Specific Points to Include in Documentation |
|--|---|
| Misreporting amounts of catch | <ul style="list-style-type: none"> - Amounts of fish logged or hailed vs amounts observed - Observer method of catch estimation - Masters stated method of catch estimation - Observed vs recorded discrepancies at trip conclusion |
| Misreporting area of capture | <ul style="list-style-type: none"> - Observed positions of capture vs logged positions - Observed estimates by area vs logged estimates by area |
| Close times and areas | <ul style="list-style-type: none"> - Positions fished while inside the closed area - Time / dates and duration of time spent fishing inside closed area - Observed estimates of fish captured within the closed area - Other vessels fishing in or near the closed area |
| Dumping, Discarding or Highgrading | <ul style="list-style-type: none"> - Amounts and method of fish discarded / dumped - Observer method of estimation - Reason for discarding / dumping |
| Exceeding bycatch or catch limits | <ul style="list-style-type: none"> - Applicable bycatch / catch weight or percentage limits - Calculated bycatch or catch weight levels - Vessels fishing in the area - Lack of action by the Master to avoid exceeding limits |
| Retention of prohibited catch | <ul style="list-style-type: none"> - Location of the vessel where prohibited catch noted - Species / number / amount of prohibited catches retained |
| Gear restrictions | <ul style="list-style-type: none"> - Description of prohibited gear being used - Effect of prohibited gear on capture of fish - Duration of time prohibited gear observed to be in use - Amount of fish captured while using prohibited gear |
| Gear conflict | <ul style="list-style-type: none"> - Time and position of gear conflict observed - Description of gear and entanglement - Position / depth / times of start and end positions of sets with conflict - Gear markings observed on radar - Identification and number of vessels in the area of conflict |
| Vessel license conditions | <ul style="list-style-type: none"> - Identification numbers of applicable documents - Applicable sections of license |
| Habitat violations | <ul style="list-style-type: none"> - Description of pollutants or physical damage - Estimate of amount of pollutants or physical damage - Presence of fish (Identify affected area as fish habitat) |
| Obstruction or failure to assist observers | <ul style="list-style-type: none"> - Description of obstruction or failure to assist - Description of request for assistance |

5.3 APPENDIX 3 – VESSEL AND CREW DETAILS FORM

| | |
|--|------------------|
|  Australian Government Australian Fisheries Management Authority | OBSERVER PROGRAM |
|--|------------------|

| |
|-------------------------|
| VESSEL AND CREW DETAILS |
|-------------------------|

| | | |
|--------------------|--------------|---------------------|
| OBSERVER NAME | VESSEL NAME | OBSERVER TRIP ID |
| LOGBOOK SERIAL NO. | LOGBOOK TYPE | OBSERVER PROJECT ID |
| | FISHERY | |

VESSEL DETAILS

| | |
|---|-------|
| VESSEL OWNER | |
| NATIONALITY | |
| HOME PORT | |
| DISTINGUISHING SYMBOL | |
| INTERNATIONAL CALL SIGN | |
| GROSS TONNAGE (GRT) | |
| LENGTH OVERALL (LOA) metres | |
| YEAR OF MANUFACTURE | |
| MAIN ENGINE BRAKE POWER (kw) | |
| NUMBER OF MAIN ENGINES | |
| FUEL CAPACITY (tonnes) | |
| FUEL CONSUMPTION (tonnes / day while fishing) | |
| TOTAL FREEZER CAPACITY (VOLUME) cm ³ | |
| TOTAL RSW CAPACITY (VOLUME) m ³ | |
| BLAST FREEZER CAPACITY (tonnes / day) | |
| COLD STORAGE CAPACITY (VOLUME) m ³ | |
| KORT NOZZLE (circle) | Y N |

ELECTRONIC FISHING EQUIPMENT


| ELECTRONIC EQUIPMENT | CIRCLE | MANUFACTURER |
|--------------------------|--------|--------------|
| GPS 1 | Y N | |
| GPS 2 | Y N | |
| RADIO DIRECTION FINDER 1 | Y N | |
| RADIO DIRECTION FINDER 2 | Y N | |
| RADAR 1 | Y N | |
| RADAR 2 | Y N | |
| WEATHER FACSIMILE | Y N | |
| TRACK PLOTTER | Y N | |
| SOUNDER 1 | Y N | |
| SOUNDER 2 | Y N | |
| SONAR | Y N | |
| NOAA RECEIVER | Y N | |
| NET SONDE | Y N | |
| INMARSAT SERVICE | Y N | |
| VMS | Y N | |

CREW DETAILS

| | |
|---------------------------------|--|
| CAPTAIN'S LAST NAME | |
| CAPTAIN'S FIRST NAME | |
| YEAR'S EXPERIENCE AS A CAPTAIN | |
| YEARS EXPERIENCE IN THE FISHERY | |
| TOTAL NUMBER OF CREW | |
| OTHER | |

COMMENTS

5.4 APPENDIX 4 – TRAWL GEAR DETAILS FORM



Australian Government
Australian Fisheries Management Authority

OBSERVER PROGRAM

TRAWL GEAR DETAILS

FISHERY

OBSERVER NAME

VESSEL NAME

OBSERVER TRIP ID

FISHERY

LOGBOOK SERIAL NO.

LOGBOOK TYPE

OBSERVER PROJECT ID

NET DETAILS

| NET ID | TRAWL TYPE | NET TYPE | HEADROPE LENGTH (m) | SHOULDER ROPE LENGTH (m) | SHOULDER ROPE TYPE | HORIZONTAL OPENING (m) | VERTICAL OPENING (m) | MAIN MESH SIZE (mm) | NO. MESH AROUND | COURT MESH SIZE (mm) | COURT MESH ORIENTATION | MAX. WING MESH LENGTH (m) | DOOR TO WING LENGTH (m) |
|--------|------------|----------|---------------------|--------------------------|--------------------|------------------------|----------------------|---------------------|-----------------|----------------------|------------------------|---------------------------|-------------------------|
| A | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | |
| D | | | | | | | | | | | | | |
| E | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | |

DOOR DETAILS

| DOOR ID | DOOR TYPE | WEIGHT (kg) | LENGTH (m) | WIDTH (cm) | HEIGHT (m) |
|---------|-----------|-------------|------------|------------|------------|
| A | | | | | |
| B | | | | | |
| C | | | | | |
| D | | | | | |

WINCH DETAILS

| PURPOSE | NO. | WIRE DIAMETER (mm) | WIRE LENGTH (m) | BRAKE POWER (kW) |
|-----------------|-----|--------------------|-----------------|------------------|
| WARP | | | | |
| OTHER (SPECIFY) | | | | |

COMMENTS


WIRE CONSTRUCTION / OTHER DETAILS

| TRAWL TYPE | NET TYPE | DOOR TYPE | GROUNDROPE TYPE | LEAD | BRAKE POWER (kW) |
|--|---|--|--|------|------------------|
| OTB - BOTTOM OTTER TRAWL PTB - BOTTOM PAIR TRAWL TBN - BOTTOM NEPHROPS TRAWL TBS - BOTTOM SHRIMP TRAWL OTM - MID-WATER OTTER TRAWL PTM - MID-WATER PAIR TRAWL | WT - WING TRAWL BT - BEM CUTAWAY WING TRAWL CT - CUTAWAY WING TRAWL HT - HERLETT TRAWL AT - ALFREDO NO. 3 PT - PELAGIC TRAWL | RF - RECTANGULAR FLAT RK - SUBARUS VG - SUPER VEE OF - OVAL FLAT CP - CHAMBERED POLYVALENT | LRG - LEADED ROPE OR CHAIN DIS - RUBBER, POLYSTYRENE, WOOD OR CORK DISCS EOM - SEM WHEEL SHAPED BORINGS RCL - SMALL ROLLERS WITH DISCS BOB - STEEL OR RUBBER ROLLER BOBBING NON - NONE OTH - OTHER | | |

Revised AFMA December 2004

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5.6 APPENDIX 6 – TRAWL VESSEL SHOT DETAILS FORM

| | | |
|---|---|-------------------------|
|  | Australian Government Australian Fisheries Management Authority | OBSERVER PROGRAM |
|---|---|-------------------------|

| |
|----------------------------------|
| TRAWL VESSEL SHOT DETAILS |
|----------------------------------|

| | | |
|---------------------|------------------|-------------|
| OBSERVER NAME | OBSERVER TRIP ID | SHOT NUMBER |
| OBSERVER PROJECT ID | NET ID | TRAWL DATE |

SHOT DETAILS

| | |
|--------------------------|--|
| PRIMARY TARGET SPECIES | |
| SECONDARY TARGET SPECIES | |

SUBSTRATUM TYPE (CIRCLE ONE 'Y' ONLY)

| | |
|-----------------------------|---|
| HARD ROCK OR CORAL | Y |
| SAND / GRAVEL | Y |
| SOFT MUD | Y |
| OTHER (SPECIFY IN COMMENTS) | |

TOPOGRAPHY TYPE (CIRCLE ONE 'Y' ONLY)

| | |
|-----------------|---|
| ROUGH | Y |
| RIDGE | Y |
| UNDULATING | Y |
| FLAT | Y |
| PINNACLE | Y |
| OTHER (SPECIFY) | |

TOW CONFIGURATION (CIRCLE ONE 'Y' ONLY)

| | |
|----------------------|---|
| STRAIGHT LINE | Y |
| ZIG ZAG | Y |
| U BEND | Y |
| FOLLOW DEPTH CONTOUR | Y |

TOW DETAILS

| | |
|--------------------------|-----|
| AVERAGE TOW SPEED (KNTS) | |
| DEPTH MAX (m) | |
| DEPTH MIN (m) | |
| TARGET TRAWL | Y N |

BRD DETAILS

| | |
|------------------------------------|-----------|
| BRD FITTED | Y N |
| BRD ID (CIRCLE ONE ONLY) | A B C D E |
| CLOGGED GRID (SPECIFY IN COMMENTS) | Y N |
| CLOGGED GUIDING FUNNEL (COMMENTS) | Y N |

REASONS FOR SHOT (CIRCLE ONE 'Y' ONLY)

| | |
|----------------------------------|---|
| KNOWN AREA | Y |
| PREVIOUS SHOT | Y |
| PREVIOUS TRIP | Y |
| OBVIOUS MARKS | Y |
| OTHER VESSELS | Y |
| NEW GROUND / EXPLORATORY FISHING | Y |
| OTHER (SPECIFY IN COMMENTS) | |

VALID SHOT (CIRCLE ONE 'Y' ONLY)

| | |
|-----------------------------|---|
| NORMAL SHOT | Y |
| CROSSED BOARDS | Y |
| TIDE AFFECTED | Y |
| MISSED MARK | Y |
| TWISTED NET | Y |
| PIN UP | Y |
| NET SONDE MAL FUNCTION | Y |
| OTHER (SPECIFY IN COMMENTS) | |

GEAR DAMAGE

| | | |
|-------------------------------------|---|---|
| GEAR DAMAGE | Y | N |
| GEAR LOSS (DESCRIBE IN COMMENTS) | Y | N |
| ESTIMATED LENGTH OF GEAR LOST (m) | | |
| CATCH LOST | Y | N |
| ESTIMATED WEIGHT OF CATCH LOST (kg) | | |

DATA SOURCE (CIRCLE ONE 'Y' ONLY)

| | |
|------------------------------------|---|
| OBSERVER PERSONALLY COLLECTED DATA | Y |
| CAPTAIN ENTERED DATA | Y |
| DATA EXTRACTED FROM VESSEL LOGBOOK | Y |

CATCH


| | | |
|-----------------------|---------|--|
| RETAINED CATCH (kgs) | A | |
| DISCARDED CATCH (kgs) | B | |
| BENTHOS (kgs) | C | |
| TOTAL CATCH (kgs) | (A+B+C) | |

CATCH ESTIMATION METHOD (CIRCLE ONE 'Y' ONLY)

| | |
|---|---|
| EYEBALL ESTIMATE OF CODEND BY OBSERVER | Y |
| CALCULATED BY OBSERVER AFTER MEASURING CODEND | Y |
| CALCULATED BY OBSERVER FROM BIN VOLUMES | Y |
| EXTRACTED FROM VESSEL'S LOGBOOK | Y |
| OTHER (SPECIFY IN COMMENTS) | |

COMMENTS

5.7 APPENDIX 7 – VESSEL ACTIVITY LOG

| | |
|---|---------------------------|
|  | OBSERVER PROGRAMME |
| OBSERVER NAME | |
| VESEL NAME | |
| OBSERVER PROJECT | |
| OBSERVER | |

| | |
|----------------------|--|
| DATE DD/M/YY (th/mm) | |
| TIME ZONE UTC + | |

VESSEL ACTIVITY LOG

| Date DD/M/YY (th/mm) | Time (h:mm) | Vessel Activity Code | Shot Number | Latitude (dd° mm'") | N S | Longitude (dd° mm'") | E W | Start SST °C End °C Bar. f | Net Sonde %C | Current | | Wind | | Swell | | Sea | | Cloud /8 | Beaufort | Vessel course (degrees) | Vessel Speed (kts) | Offal Discharge Level | |
|----------------------|-------------|----------------------|-------------|---------------------|-----|----------------------|-----|----------------------------------|--------------------|---------|-----------|-------------|---------|------------|---------------|------------|---------------|----------|----------|-------------------------|--------------------|-----------------------|------------|
| | | | | | | | | | | Speed | Direction | speed (kts) | dir (°) | height (m) | direction (°) | height (m) | direction (°) | | | | | | height (m) |
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|----------|--|
| Comments | |
|----------|--|

Vessel Activity Codes: DD - docking
DR - drifting
SR - sailing
HA - hauling
ST - standing
SP - searching
AN - anchor
GT - gillnetting
OT - other
PR - processing
MP - mopping
TL - trawling
PL - pelagic
BN - broken weather
BD - broken down

Offal Discharge Level:
H - high
M - medium
L - low
N - negligible

Revised AFMA February 2003

5.8 APPENDIX 8 – CATCH COMPOSITION DATA FORM



AFMA
Australian Fisheries Management Authority

OBSERVER PROGRAMMED

OBSERVER TRIP ID

OBSERVER NAME

VESSEL NAME

SHOT No

OBSERVER PROJECT

START SHOT TIME

SHOOT DATE

CATCH COMPOSITION DATA

| Species | Species Code | Fate | Count | Count Method | Total Weight (kg) | Weighing Method | Weight Type | Process Code | No Samples Collected | Sample Code | Comments (See comments, tag #) |
|---------|--------------|------|-------|--------------|-------------------|-----------------|-------------|--------------|----------------------|-------------|--------------------------------|
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Count Method: AC - Accurate Count
 EC - Estimated Count
 XC - Extrapolated Count
 LN - Estimated from logbook observer not present
 LP - Estimated from logbook observer present
 OC - Other Method

Weighting Method: EW - estimated by eyeball
 TW - true weight (weighed by observer)
 FW - calculated from factory records
 XW - extrapolated weight, calculated from weighing sub sample
 VW - estimated weight, calculated from volumetrics of fish
 OW - other method (explain in comments)

Weight Type: WHO - whole
 CCM - composite
 PHS - Processed

Fate: R - retained, kept for commercial or crew consumption
 D - discarded, landed and not retained
 J - jacked free - crew jacked free, cut free without landing
 E - escaped - bites off
 U - unknown - did not observe
 T - tagged fish and returned to sea alive

Page of

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5.9 APPENDIX 9 - BIOLOGICAL DATA FORM

OBSERVER PROGRAMME

OBSERVER NAME [] **OBSERVER PROJECT** [] **OBSERVER TRIP ID** []

VESSEL NAME [] **START SHOT TIME** []

SHOT No. []

BIOLOGICAL DATA

| Time (dd/HH/mm) | Species Code | Catch Locn | Tag / Band or Star | Life Status | File | Length (cm) | Length Code | Weight Whole (kg) | Weight Dressed (lgs) | Process Code | Sex M-F-U | Conad Stage | Sample (diem) | Code | Comments (But contents, tag #) |
|-----------------|--------------|------------|--------------------|-------------|------|-------------|-------------|-------------------|----------------------|--------------|-----------|-------------|---------------|------|--------------------------------|
| | | | | | | | | | | | | | | | |
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Life Status: 0 - dead and damaged
 1 - fresh in rigor
 2 - dead and flexible
 3 - alive, just
 4 - alive sluggish
 5 - alive and vigorous

Fate: R - retained, kept for commercial or crew consumption
 D - discarded, landed and not released
 J - jacked free - crew jacked free, call free without landing
 E - escaped - taken off
 U - unknown - did not observe
 T - tagged fish and returned to sea alive
 C - call free - call free without landing

Length Codes: LCF - length to caudal fork
 TOT - total length
 STL - standard length
 BFL - BL to caudal fork length (billfish)
 LFL - lower jaw to caudal fork length (billfish)
 CFL - orbi to caudal fork length (billfish)

Tag Band Scar: T - Tag Present
 S - Scar from tag evident, no tag present
 N - no tag or scar
 U - unknown

Sex: M - Male
 F - Female
 I - indeterminate
 U - unknown

Page [] of []

5.13 APPENDIX 13 – WHALE SIGHTING FORM

WHALE SIGHTING FORM

| | | |
|-------------|---------------|------|
| VESSEL NAME | JNT CALL SIGN | DATE |
|-------------|---------------|------|

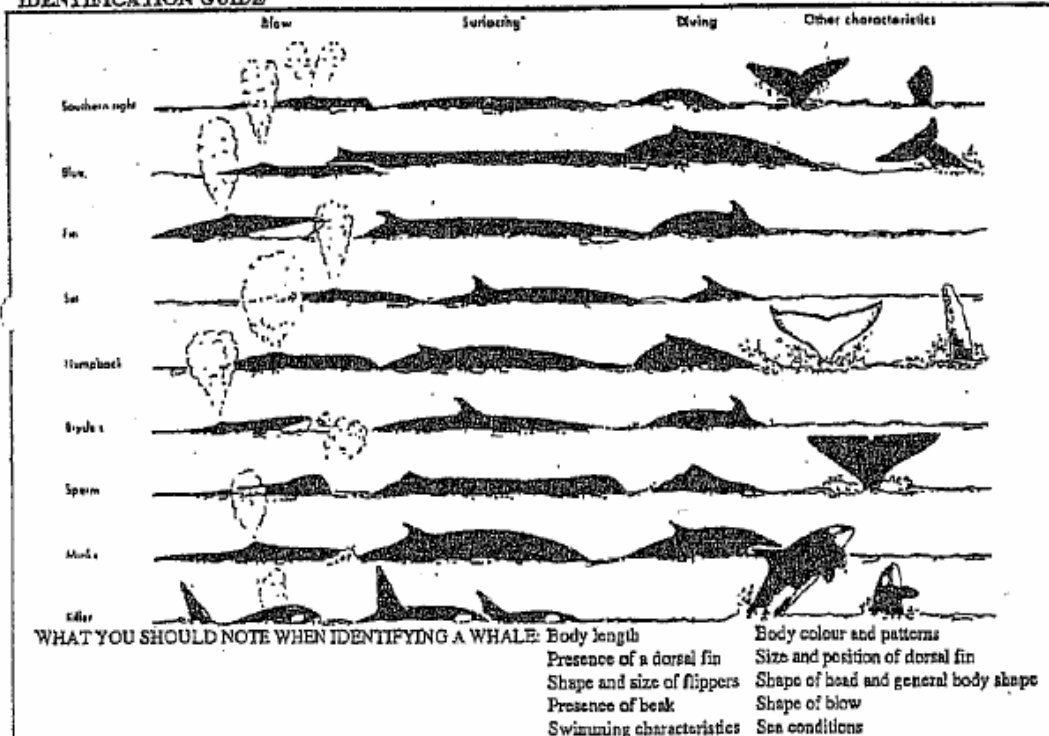
| POSITION | | TIME AND WEATHER | | | |
|--------------------|--|--------------------|----------------|------------------|----|
| LATITUDE | | Wind dir (deg) | Sea dir (deg) | Swell dir (deg) | |
| LONGITUDE | | Wind speed (kt) | Sea height (m) | Swell height (m) | |
| BEHAVIOUR* | | Bar (mB) | Air temp (C) | Cloud cover | /8 |
| SWIMMING DIRECTION | | Bar rising/falling | SST (C) | Rec time | |

* Swimming steadily, Stationary, Breaching, Feeding, Splashing water with tail or flippers.

WHALE DETAILS

| | |
|------------------------------------|------------------|
| SPECIES | TOTAL NUMBER |
| ESTIMATED LENGTHS | NUMBER OF CALVES |
| COLOUR PATTERNS AND MARKINGS | |
| LARGE WHITE SIGMS PRESENT ON HEAD? | |
| LONG WHITE FLIPPERS PRESENT? | |
| MAMMALS, SEARKE, SEABIRDS PRESENT? | PHOTO TAKEN? |
| COMMENTS | |
| | |
| | |

IDENTIFICATION GUIDE



OBSERVER

DATE

5.14 APPENDIX 14 – MARPOL COMPLIANCE ASSESSMENT

Pollution

Overview

Fishing vessels are a significant contributor to pollution incidents reported to marine authorities around Australia. Fishermen have an added responsibility not to pollute the resource which provides their livelihood. The following provides information on the laws regarding oil and garbage pollution from vessels and suggests ways to minimize and prevent such pollution.

The Law

Pollution of the marine environment by ships of all types, including fishing vessels, is strictly controlled by the International Convention for the Prevention of Pollution from Ships (known as MARPOL 73/78). Australia is a signatory to this convention, which is now enforced in over 100 countries. The Australian Maritime Safety Authority (AMSA) administers the Convention. Its regulations are implemented through Commonwealth and State/ NT legislation.

Penalties for not complying with the law are up to \$200,000 for individuals and \$1,000,000 for companies. The Australian MARPOL regulations apply to fishing vessels wherever they are operating. Australian laws can be applied against foreign fishing vessels operating anywhere within Australia's 200 nautical mile exclusive economic zone.

Garbage

There are two basic principles for the disposal of garbage at sea.

Plastics are prohibited from the disposal into the sea.

No other garbage may be discharged within 12 nautical miles from the nearest land.

Types of Garbage

Garbage from vessels may include but is not limited to: :

| | |
|-----------------|--------------------|
| food wastes, | residues |
| paper products, | bait boxes, |
| rags, | lining, |
| glass, | packing materials, |
| nets, | deck sweepings |
| paints, | metal, |
| wood products, | bottles, |
| wire, | crockery, |
| cargo, | fishing gear, |

MARPOL COMPLIANCE ASSESSMENT

| | | |
|---|---|--|
| VESSEL NAME <input style="width:95%;" type="text"/> | INT CALL SIGN <input style="width:95%;" type="text"/> | DATE <input style="width:95%;" type="text"/> |
|---|---|--|

| | | |
|--|---|------------------------------|
| List any MARPOL breaches you witnessed. Indicate whether you discussed any breaches with the fishing Master | | |
| Did the Vessel comply with MARPOL regulations? | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> F/M |
| Did the vessel appear to fully understand MARPOL regulations when you first boarded? | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> |
| Did the vessel appear to understand MARPOL regulations at the time of disembarkation? | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> |

| | |
|--|---|
| Was the vessel equipped with an incinerator? If equiped, describe in comments. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Did the vessel comply with MARPOL regulations in regards to disposal of any rubbish at sea? Describe in comments. | <input type="checkbox"/> Y <input type="checkbox"/> N |

| | |
|---|---|
| Were facilities adequate for the disposal of rubbish at the last port? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Masters Opinion | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Your Opinion | <input type="checkbox"/> Y <input type="checkbox"/> N |
| What was the last port of call? <input style="width:150px;" type="text"/> | |

| |
|---|
| If rubbish was disposed of at sea, estimate the quantity and type (ie cans, paper, food scraps, bottles etc) and describe routine. |
| |
| |
| |
| |

| |
|---|
| Describe the bait packaging materials used by the vessel on their bait boxes, particularly the straps, number and construction |
| |
| |
| |
| |

| |
|-----------------|
| COMMENTS |
| |
| |
| |
| |
| |

| | |
|-----------------|-------------|
| OBSERVER | DATE |
|-----------------|-------------|

5.15 APPENDIX 15 – HOSPITALITY ASSESSMENT FORM

HOSPITALITY ASSESSMENT

VESSEL NAME: _____ INT CALL SIGN: _____ DATE: _____

CREW ATTITUDE

Rate the crews attitude to you.

| | Ingratating | Very Friendly | Friendly | Neutral | Unfriendly | Antagonistic |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Fishing master | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Captain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Radio operator | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Ice master | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Deck crew | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Cook | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Rate the crews attitude to your work.

| | Very cooperative | Co-operative | Neutral | Unco-operative | Very unco-operative | Obstructionist |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Fishing master | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Captain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Radio operator | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Ice master | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Deck crew | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Cook | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ACCOMMODATION

| | | | | |
|---|----------------------------------|---|--|---|
| <input type="checkbox"/> Fishing master's cabin | Was it clean? | <input type="checkbox"/> Y <input type="checkbox"/> N | Did you share your cabin? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <input type="checkbox"/> Captain's cabin | Was there adequate storage? | <input type="checkbox"/> Y <input type="checkbox"/> N | If so, did you share with deck crew? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <input type="checkbox"/> Junior officer's cabin | Was there a usable desk? | <input type="checkbox"/> Y <input type="checkbox"/> N | Were the ablution facilities clean? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <input type="checkbox"/> Crew's cabin | Was bedding supplied? | <input type="checkbox"/> Y <input type="checkbox"/> N | Did you have reasonable access to ablution facilities? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <input type="checkbox"/> Observer's cabin | Was the cabin excessively noisy? | <input type="checkbox"/> Y <input type="checkbox"/> N | Was the air conditioning clean? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <input type="checkbox"/> Other (note below) | | | | |

FOOD

| | | | | | |
|--|---|--|---|---|---|
| How many meals per day were you offered? | <input type="checkbox"/> | Was the food was nutritionally adequate? | <input type="checkbox"/> Y <input type="checkbox"/> N | Were there any western style meals? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| Was the food preparation area clean? | <input type="checkbox"/> Y <input type="checkbox"/> N | Was there sufficient quantity? | <input type="checkbox"/> Y <input type="checkbox"/> N | Did you eat the same food as the crew? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| | | Was the food palatable? | <input type="checkbox"/> Y <input type="checkbox"/> N | Did the cook attempt to cater to your tastes? | <input type="checkbox"/> Y <input type="checkbox"/> N |

COMMENTS

SIGNED

OBSERVER: _____ DATE: _____

Do not remove from book

Tuna Longline AFZ Observer Assessment Log March 1996

5.16 APPENDIX 16 – SAFETY INDUCTION CHECKLIST



Australian Government

Australian Fisheries Management Authority

Australian Fishing Zone
Observer Programme

Observer Safety Induction Checklist

This checklist is designed to aid in familiarising Observers with safety organisation procedures on board fishing vessels on which they may be required to serve. The induction is to be conducted by either the Skipper or Mate of the vessel, and the completed form will form part of the cruise records.

1. [] Emergency Alarms
2. [] Muster Area Location
3. [] Emergency Evacuation Procedures
4. [] Brief Outline of Emergency Drills Including Fire, Man Overboard, Casualty, Damage Control
5. [] Lifejacket Locations and Donning Demonstration
6. [] Liferaft Locations and Launching Instructions
7. [] Lifebuoy Locations
8. [] Push Button Fire Alarm Locations
9. [] Escape Routes
10. [] Portable Fire Extinguishers Location and Operation
11. [] Fire Hose and Hydrant Locations and Operation
12. [] Location of First Aid Kits
13. [] Lifeboat / Rescue Boat (if fitted) Overview, Including Launching Procedures
14. [] Location of Trawl Deck Shelter Areas and Evacuation Routes
15. [] Skipper to Outline High Risk Areas to Avoid and Location of Proposed Observer Position on Deck and Other Areas, and Measures to Ensure Observer Safety eg. Safety Harness, Lifelines and Guardrails

| | |
|----------------|--|
| Observers Name | |
|----------------|--|

| | | |
|--------------------|--------------------------|------|
| Observer Signature | Skipper / Mate Signature | Date |
| | | |

5.17 APPENDIX 17 – CODE OF PRACTICE FOR THE HANDLING OF SHARKS AND RAYS IN THE TORRES STRAIT PRAWN FISHERY

Sharks and rays are elasmobranchs which means they have a cartilaginous skeleton rather than one consisting of bone as in the majority of fish species. This cartilaginous skeleton leaves sharks and rays susceptible to damage if handled inappropriately.

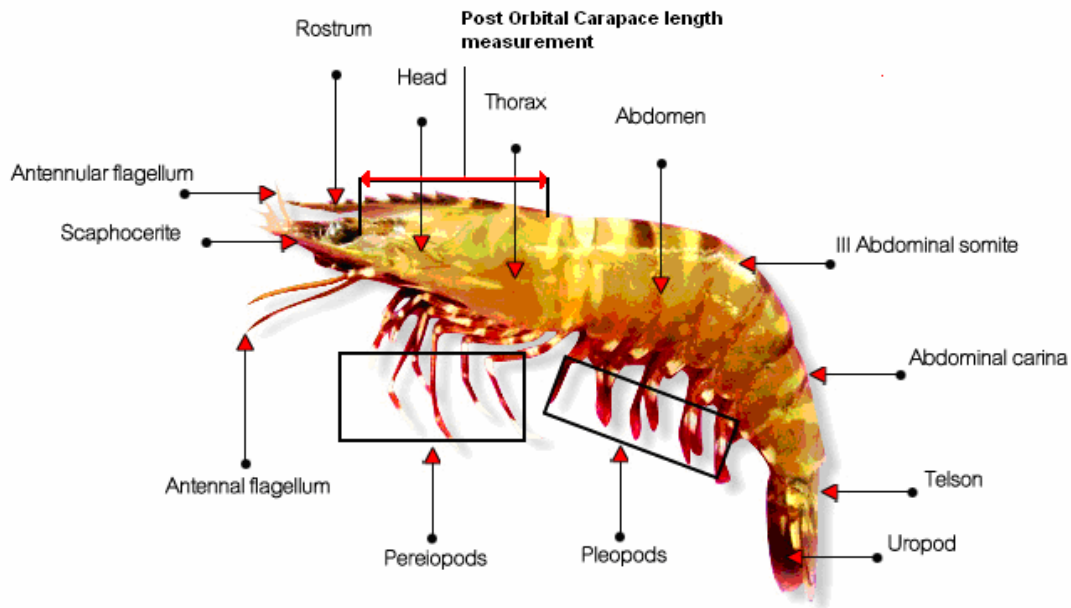
The internal organs of many shark and ray species are loosely held in place by connective tissue. When in the water these organs are supported, however when removed from the water, for example when on a sorting tray, the weight distribution changes and internal damage may occur. There is also the danger of damaging tendons which hold the vertebrae in place. This is particularly the case if the shark is lifted by the tail. These problems are less likely to damage small sharks, but it is best to try and lift sharks in a horizontal position. This is achieved by holding the shark by the tail with one hand, and placing the other hand under the stomach. The use of turtle excluder devices in the Torres Strait Prawn Fishery has all but eliminated the capture of large sharks and rays which are most at risk to internal damage when removed from the water. However, increased awareness and better handling can further reduce the impact of the TSPF on smaller sharks and rays.

The methods below should be followed when sharks and rays are captured:

- **Crew safety is the highest priority.** In the first instance ensure that sharks and rays are handled in a safe manner, avoid handling near the jaws of sharks and avoid the tails of rays
- **Return to the water quickly.** Sharks and rays should be the first species returned to the water. Not only will this result in reduced mortality for these species but also will reduce the damage caused to the prawns and other target species,
- **Handle carefully.** Sharks should be returned to the water as gently as possible and supported by the tail with one hand with the other hand supporting the shark under the stomach. Often, if a shark is turned over onto its back and held upside down, it will become quite calm and easy to handle, probably because it becomes disorientated in this position.
- **Don't swing.** Sharks should never be held solely by the tail and should never be swung into the water by the tail.

5.18 APPENDIX 18 – PRAWN IDENTIFICATION

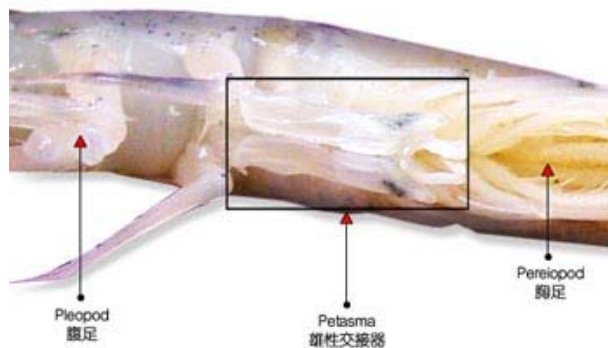
Penaeid Prawn



Post Orbital Carapace (POC) length is measured from the rear margin of the orbital socket to the rear edge of the thorax.

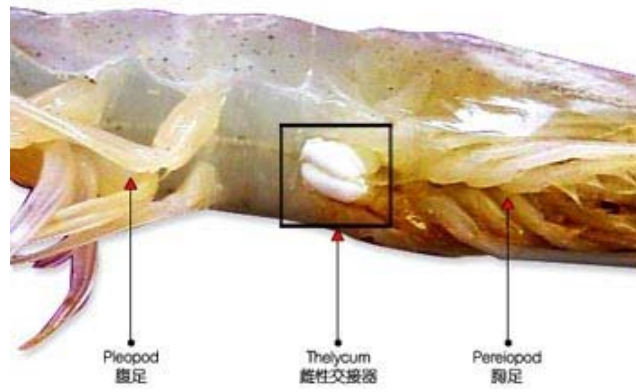
How to determine the sex of a Penaeid Prawn

The male prawn has a copulatory organ know as the Petasma located on the ventral surface of the abdomen at the base of the front two swimming legs.



The female prawn has a copulatory organ known as the Thelycum located on the ventral surface of the thorax at the base of the two rear walking legs (pereopods). The Thelycum consists of several (usually white) plates with a central groove. Female prawns are much larger

than their male counterparts.



Brown tiger prawn - PRB



Endeavour Prawn - ENS



Red spot king prawn - ELY



Coral prawn & other Penaeid Prawns - PEZ



Blue Leg King Prawn - WKP

COMMERCIAL PRAWN ‘SPECIES SPLIT’ VERIFICATION

Commercial Prawn ‘Species Split’ Verification

Endeavour and Tiger prawns are the species of interest for the ‘species split project’ regarding commercial prawns. Information for both species groups is needed – but Endeavour prawns in particular have more data gaps we are trying to address.

1) Endeavour Prawn Identification

Metapenaeus endeavouri (Blue –tail– Endeavour Prawn)

Key features (see figure below):

Blue tips on tail, telson (i) & (iii) with 3 pairs of small movable spines. Body has rough texture / feel



Other prawns that may appear similar (Next Pg):

- 1) Red Endeavour prawn – most notable difference is absence of the 3 spine pairs on telson
- 2) Western King prawn (body usually light yellow, legs light blue, glossy texture)
- 3) Banana prawn (different rostrum (ii), are glossy/smooth texture)

Metapenaeus ensis (Red Endeavour Prawn)

Key features:

Colour = pale brown – pinkish. The telson is without the spines (iii) that the Blue Endeavour has. Body has a roughish texture / feel



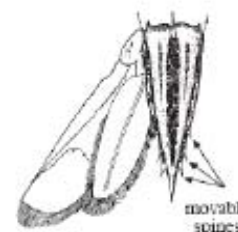
Other prawns that may appear similar (Next Pg):

- 1) Blue Endeavour prawn (blue tail + 3 pairs of spines on telson)
- 2) Red Legged Banana prawn (body yellow or translucent with dark ridges)
- 3) Banana prawn (glossy texture / different rostrum (ii))

(iii) Telson of Red Endeavour (*M. ensis*) and telson of another prawn that looks similar to telson of the Blue Endeavour (*M. endeavouri*)



a) *Metapenaeus ensis*



b) *Metapenaeus anchistus*

2) Endeavour Prawn Identification (Continued)

Until you're familiar with the species, Endeavours could be confused with the following prawns. Use the notes on the other page as a guide.

Penaeus latisulcatus (Western King Prawn)



Penaeus merguensis (Banana Prawn)



Photos and taxonomic information from:

A guide to the Australian penaeid prawns

D.L. Grey, W. Dall & A. Baker

NT Govt. Printing Office 1983

Penaeus indicus (Red Legged Banana Prawn)



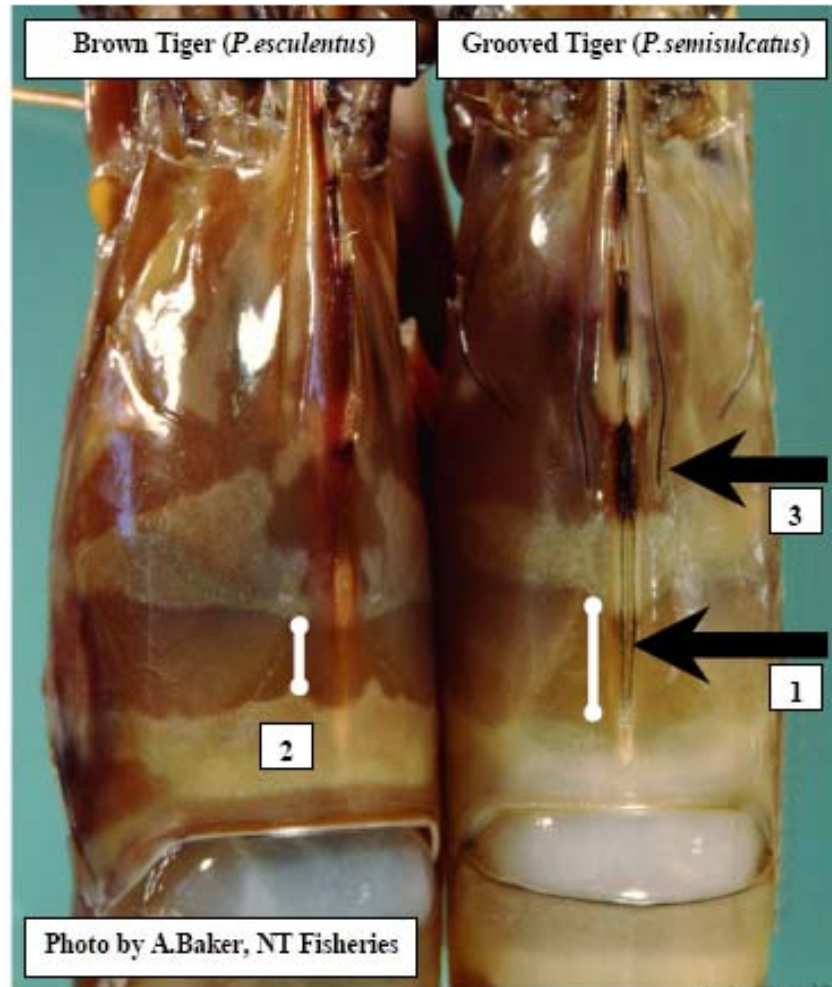
Telson figure from:

FAO Species identification guide for fishery purposes. The living marine resources of the Western Central Pacific, Volume 2.

Food and Agriculture Organisation of the United Nations, Rome. 1999

2) Tiger Prawn Identification

There are two species of Tiger prawn caught in the NPF. This identification sheet allows you to identify between the Brown Tiger prawn (*Penaeus esculentus*), and the Grooved Tiger prawn (*Penaeus semisulcatus*).



There are 3 identification features in the above pictures of the Brown and Grooved tiger prawns:

- 1) The best and safest way to differentiate between these species is to feel with your fingernail for the groove (groove present = *P. semisulcatus*). This groove is not always as visible as pictured above. With smaller prawns, the groove is not as deep in *P. semi*.
- 2) The width of the band toward the back of the carapace. This dark band is wider and less coloured on the Grooved tiger prawn (*P. semisulcatus*). Note that the bands are not always clearly visible.

2) Tiger Prawn Identification (Continued)

3) The length of the adrostral ridge (see diagram below)

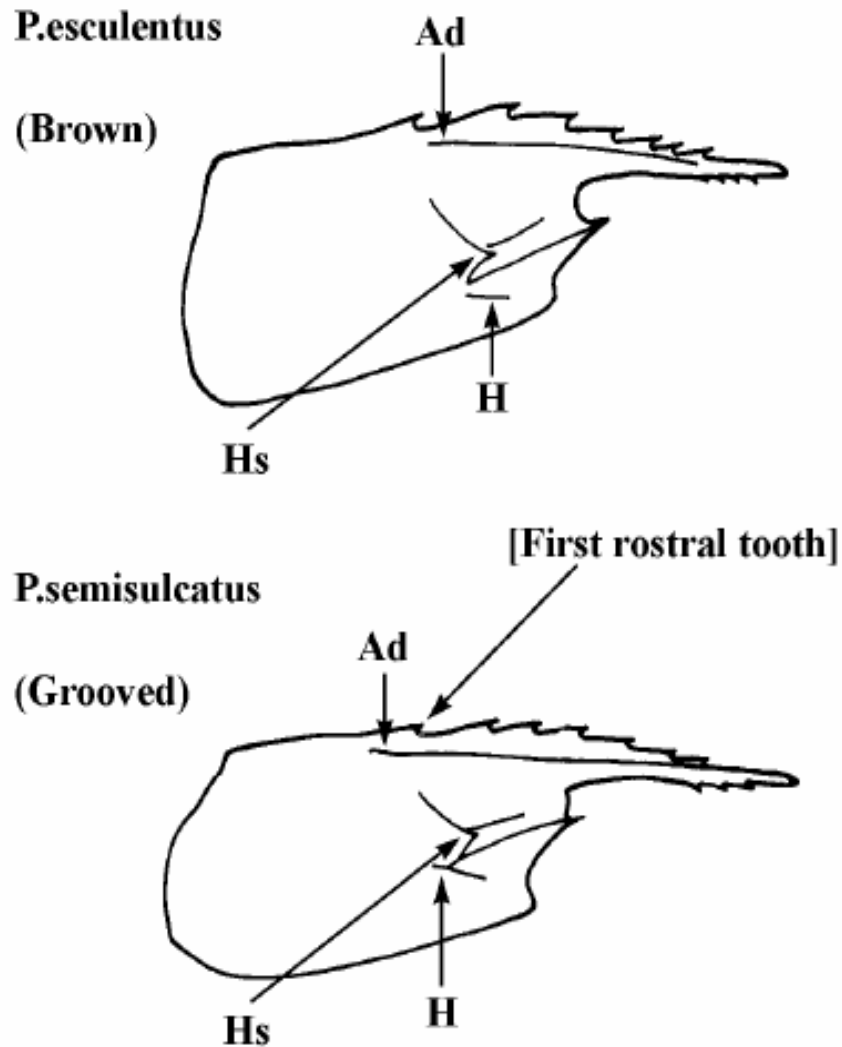


Figure compiled from: A guide to the Australian penaeid prawns,
D.L. Grey, W. Dall and A. Baker, NT Govt. Printing Office 1983.

- 1) *P. esculentus* (Brown Tiger prawn): On the above diagram, the Adrostral Ridge (Ad) stops at the first rostral tooth [and the Hepatic ridge (H) does not extend back past the Hepatic Spine (Hs)]
- 2) *P. semisulcatus* (Grooved Tiger prawn): On the above diagram, the Adrostral Ridge (Ad) extends

5.19 APPENDIX 19 – QDPI SAWFISH IDENTIFICATION

Queensland sawfish identification guide



Sawfish (family *Pristidae*) have a cartilaginous skeleton that groups them with sharks and other elasmobranchs. They are members of the skates and rays order—characterised by their gill openings being on the ventral surface. These unique elasmobranchs inhabit marine, estuarine and freshwater rivers, bays and lakes, placing them at times in direct contact with commercial net/trawl fishers and recreational fishers. This guide is designed to aid in the positive identification of these animals.

Narrow sawfish (*Anoxypristis cuspidata*)



© Stirling Powell

- Note:**
1. rostral teeth do not extend onto the base of the rostrum
 2. lobe on caudal fin, smooth skin.

Freshwater sawfish (*Pristis microdon*)



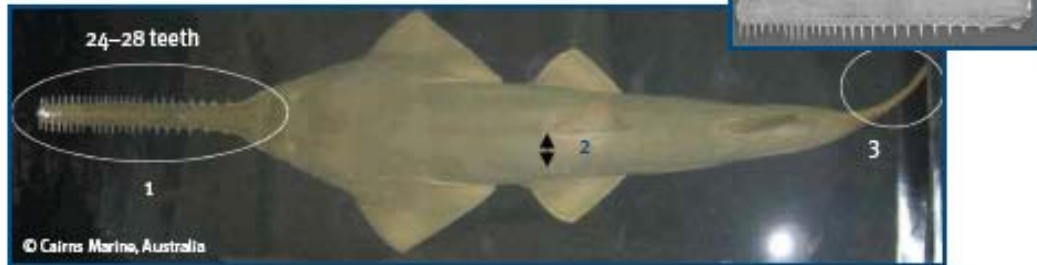
© Stirling Powell

- Note:**
1. first dorsal fin origin is well in front of pelvic fin origin
 2. lobe on caudal fin, rough skin

Queensland sawfish identification guide



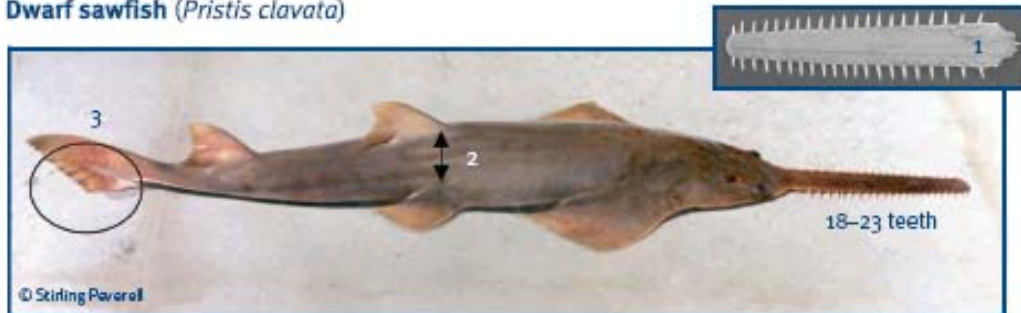
Green sawfish (*Pristis zijsron*)



Note:

1. rostral teeth spaced greater at base of rostrum
2. first dorsal fin origin well behind pelvic fin origin
3. straight caudal fin, rough skin

Dwarf sawfish (*Pristis clavata*)



Note:

1. rostral teeth generally opposite
2. first dorsal fin origin slightly behind or over the top of pelvic fin origin
3. straight caudal fin, rough skin

Please forward any information or sightings to:
Stirling Peverell, AFFS Fisheries Biologist
FRDC - Sustainability of Northern Australian Sharks and Rays
Email stirling.peverell@dpl.qld.gov.au
Phone (07) 4 035 0279
DPI Call Centre 13 25 23



5.20 APPENDIX 20 –TURTLE RECOVERY PROCEDURES

The following guidelines are intended to help skippers and crews reduce deaths of any sea turtles caught when prawn trawling. The guidelines below are a copy of those provided (in colour) in the TSPF logbooks.



Code of Fishing Ethics: The Capture of Sea Turtles

Sea turtle mortality is caused by a number of factors including direct harvest by indigenous people, ingestion of marine debris, predation by introduced animals, fungal and bacterial infections of eggs, entanglement in shark nets, boat propeller strikes and incidental capture in fishing gear. Although trawl related mortality is minimal, the commercial fishing industry still needs to assist in the conservation of endangered sea turtles.

By following this code of fishing ethics, fishers can assist in minimising the impact of their trawling operations on sea turtles. Individual fishers are encouraged to adhere to the code of fishing ethics.

Refrain from trawling within 2 to 3 nautical miles of 'major' turtle nesting beaches during turtle nesting season.

Why: to minimise the possibility of nesting turtles being caught in trawl nets.

Limit trawl shots to less than 90 minutes in areas of high turtle numbers.

Why: to minimise mortality of turtles caught in trawl nets. Turtles caught in trawl nets have better chance of surviving if trawl shots are less than 90 minutes.

Apply recovery procedures when appropriate. Return lively turtles to the water as soon as possible. Why: to help the recovery of turtles accidentally caught in trawl nets thereby minimising unnecessary mortality.

Forward information on tagged or marked turtles caught to Southern Fisheries Centre.

Why: to help find out about basic turtle biology such as distance moved and life spans.

Participate in research programs monitoring the incidental capture of turtles in trawl nets. Why: to assist the collection of data to determine if trawling does/does not affect sea turtles.

Participate in research programs trialing by-catch excluding equipment. Why: through fishers participating in these trials an excluder device which is most suitable to your fishing grounds is more likely to be developed, something which will advantage fishers and turtles.



For further information contact:

QCFO (07) 3262 6855

or

Southern Fisheries Centre (07) 3817 9500



Australian Fisheries Management Authority



FISHERIES
RESEARCH &
DEVELOPMENT
CORPORATION



Dealing with a Landed Turtle

Land the turtle, it may be comatose

Sea turtles caught in fishing gear may be stressed. Some are conscious and able to swim away after removal from the net, however others may appear to be tired or lifeless. Turtles that appear lifeless are not necessarily dead. They may be comatose. Turtles returned to the water before they recover from a coma will drown. Watch the turtle for activity (breathing or movement) and treat accordingly



If active

(moving strongly and breathing regularly)

Gently return the turtle to the water with:

- a) The engine in neutral;
- b) And without dropping the turtle on the deck.



If not active

Keep the turtle on board:

- a) Raise the rear flippers about 20 centimetres off the deck (to drain its lungs);
- b) Keep it shaded and damp and
- c) Allow to recover for up to 24 hrs



If the turtle doesn't become active after it has been allowed to recover, or rigamortis has set in it is probably dead. Report the capture in relevant logbooks.



Indo-Pacific marine turtles



Dermochelys coriacea (Leatherback turtle)



Lepidochelys olivacea (Olive ridley turtle)



Eretmochelys imbricata (Hawksbill turtle)



Caretta caretta (Loggerhead turtle)



Natator depressus (Flatback turtle)

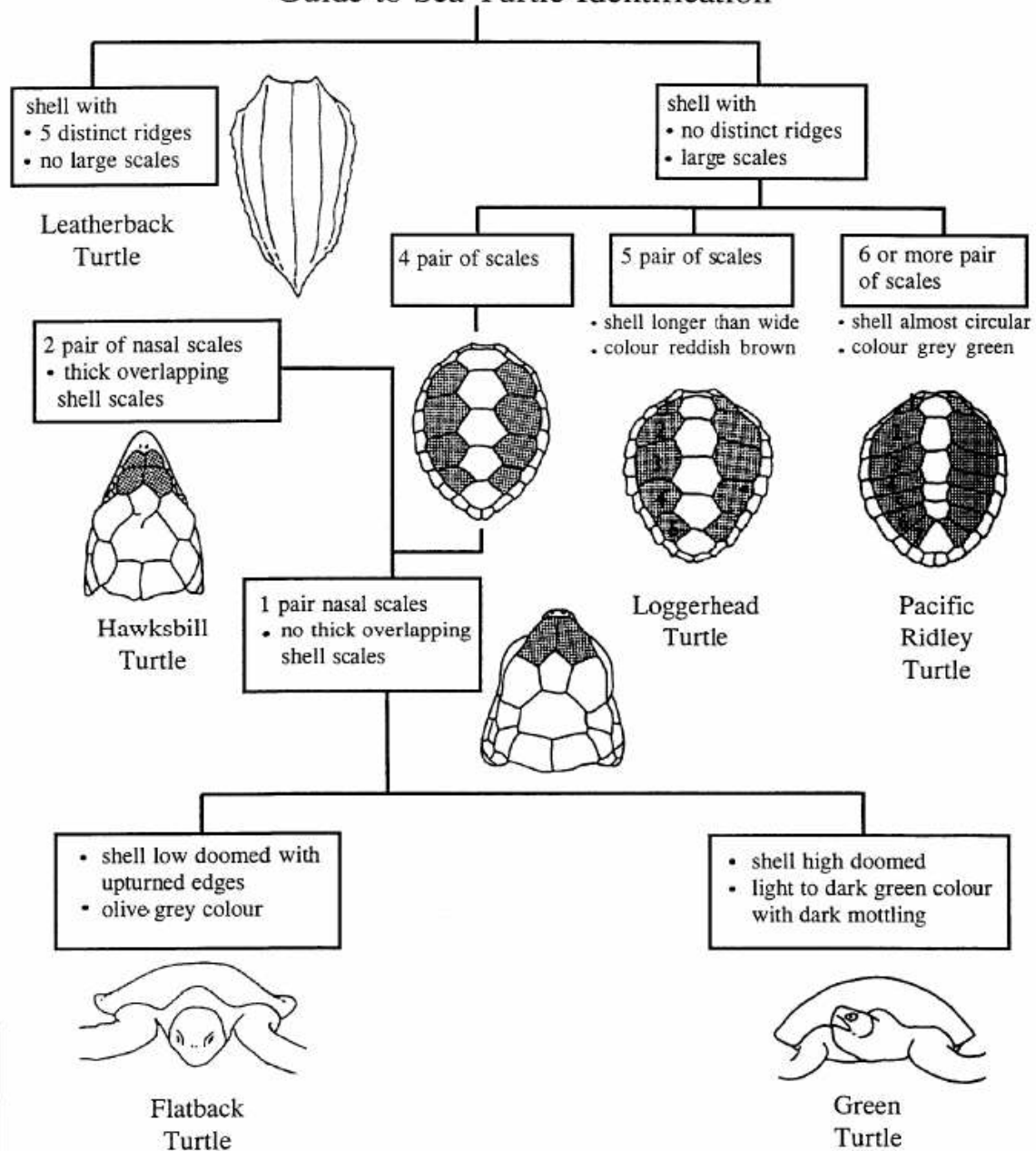


Chelonia mydas (Green turtle)



Queensland
Department of
Environment and
Heritage

Guide to Sea Turtle Identification



Note: The colour of the shell may vary within species.

Reporting the Capture

It is the role of the observer to report the capture to the AFMA Observer program. All interactions must be recorded on the interaction data sheet and a "Wildlife Incident Report" submitted with your data at trips end. It is the Skipper's duty to report the capture to other relevant agencies through the vessel logbook and if necessary to the DEWHA.

Information to Record

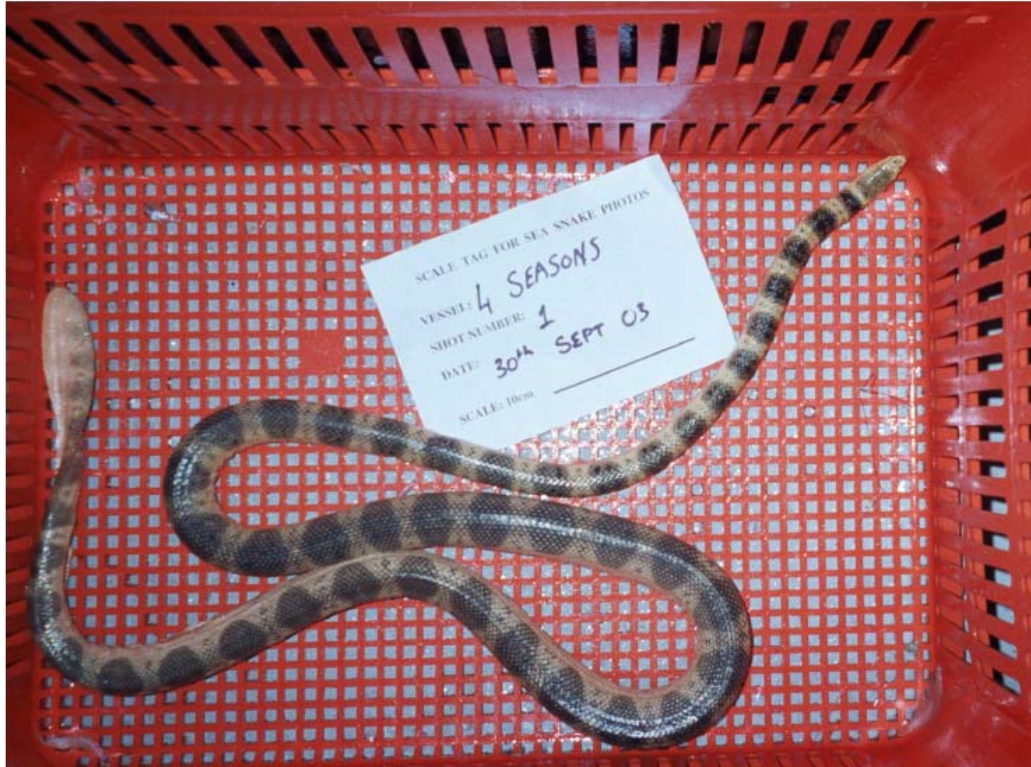
Collect the following biological characteristics and details upon the capture of a turtle:

Species Identification.

- Capture details including gear configuration and the capture event.
- Life status.
- Fate.
- Sex, mature adult males have a large tail (Sex can only be determined on sexually mature adult males, juvenile males and females all have a short tail, it doesn't extend past the shell)
- Length measurement if landed on deck. (carapace length)
- Tags present.
- Record whether hooked internally or externally or entangled in comments column.
- Hook number caught on.
- Photograph the animal.
- Date / time

5.21 APPENDIX 21 – SEA SNAKE IDENTIFICATION

A Rough Guide to Australian Sea Snakes in the NPF



Elegant Sea snake (*Hydrophis elegans*)

Distribution: Found throughout the NPF and is the most common sea snake caught in prawn trawls.

Identification: Long, thin sea snake, mainly pale, with a pattern of dark diamond-shaped blotches, with a thin dark band between each blotch. Grows to more than 2 m and has a relatively small head. Colour can vary between individuals with the intensity of the dark blotches varying. This depends on the size and age of the snake – older snakes are paler – and how recently they have shed their skin – recently shed snakes will appear brighter in colour.



Olive-headed Sea snake (*Disteira major*)

Distribution: Found in northern Australia and across to New Caledonia. Probably the second most common species caught in prawn trawls in the NPF. Appears to prefer more open, muddy habitats.

Identification: Grows to about 1.5 m, but most are about 1 m long. Similar colour pattern to an Elegant Sea snake, but is fatter than an Elegant Sea snake of similar length. Colour is more grey than most Elegant Sea snakes and the surface of the scales on the back are not as smooth as those of Elegant Sea snakes. Small black dots on the lower sides at the ends of the narrow bars, near the belly are distinctive (see tail part of picture above).



Green-banded Sea snake (*Lapemis hardwickii*)

Distribution: Widely distributed species, found from Taiwan and southern islands of Japan, through SE Asia to northern Australia and across to New Caledonia. Very common in prawn trawls in shallower water, or more coastal areas. Can catch several in a single trawl in their favourite habitats. Very common in banana prawn trawls on the east coast of Queensland.

Identification: Only greenish looking sea snake, with alternating dark and light olive-green bands. Only grows to 1 m and is fairly bulky for its size. Not necessarily aggressive, but gets upset when in confined spaces with other snakes or fish and will try and bite nearby objects.



Banded Sea snake (*Aipysurus eydouxiii*)

Distribution: Found in northern Australia, but not very common in prawn trawls.

Identification: A smaller species of sea snake that grows to about 1 m maximum size. Distinctively coloured pattern of alternating bands that go around the body, giving a tiger-like banding pattern. Head is small and not distinct from the neck. Scales are smooth and the snake has a shiny appearance.



Scaly-headed Sea snake (*Acalyptophis peronii*)

Distribution: Found only in northern Australia, from Exmouth Gulf to east coast of Queensland.

Identification: Has a small head, with small, rough or spiny scales, which is unlike any other species of sea snake in northern Australia. Body scales are quite small for the size of the snake and appear to have pale edges. Scales on the back also give a rough effect. Back colour pattern is a series of light and dark bands that go all the way round the body. Grows to about 1 m long and is moderately common in prawn trawls.



Olive Sea snake (*Aipysurus laevis*)

Distribution: Northern Australia and adjacent Coral Sea and Great Barrier Reef

Identification: Another variable sea snake that is usually uniformly dark on the back with small patches of pale scales. Can grow to 2 m and is large and bulky, weighing up to 5 kg. Has a broad flat head that is usually paler than the body. Prefers to feed around reefs on fish, but is moderately common in prawn trawls in the Gulf of Carpentaria. Scales are smooth, giving a shiny appearance



Ornate Sea snake (*Hydrophis ornatus*)

Distribution: Widely distributed species that is found from southern Japan, through SE Asia to Australia and across to New Caledonia. Lives in a wide variety of habitats and is moderately common in prawn trawls. Is caught throughout most areas of the Gulf of Carpentaria.

Identification: Moderate sized sea snake that grows to about 1.5 m and is moderately bulky compared with Elegant Sea snakes. Pattern is a series of pale brown saddles, with narrow lines between and around the outside of the saddles. Head is pale brown, usually with a pale cream front part. Skin is usually very loose, often with folds in the skin and the snake feels like it has no muscles. Younger snakes will have a darker colour than older, large animals.



Stokes's Sea snake (*Astrotia stokesii*)

Distribution: Found in northern Australia, mainly around reefs, like Olive Sea snakes.

Identification: Can grow to more than 1.5 m, but is large and bulky like Olive Sea snake. Has a distinctive pointy scale pattern on the belly scales that forms a ridge like pattern. Colour is usually a creamy brown, with mid-brown large blotches and thin bands between. These large blotches may get paler and less distinct as the snake gets larger.



Pacific Sea snake (*Hydrophis pacificus*)

Distribution: Only found in northern Australia, especially in the Gulf of Carpentaria and Torres Strait.

Identification: Another large, fairly thin species, like a paler version of Elegant Sea snake and grows to a similar size (2 m). Differs by having the dark blotches a paler brown colour, rather than dark brown or grey. Do not have the thin dark bands between the larger dark patches on the back. One of two species thought to be at risk from the effects of prawn trawling.



Black-headed Sea snake (*Disteira kingii*)

Distribution: Only found in northern Australia, from east coast of Queensland to Shark Bay, WA

Identification: Superficially looks like a small-headed Elegant Sea snake, but has a black head and throat, rather than a pale head. Body covered with dark diamond-shaped blotches with pale areas between. Belly has a dark line running down the middle. Blotches on neck give the impression of rings. Grows to about 1.5 m and is the second species believed to be potentially at risk from capture by prawn trawling.

5.22 APPENDIX 22 – CLOSURES

Seasonal and area closures of the TSPF are an important management tool, keeping sensitive areas free from trawling and allowing protection for areas at important times - such as during recruitment of small prawns to the fishery.

The summaries given below are to be used only as a guide and do not replace the formal legislation in Fisheries Management Notice No. 40 of 24 February 1994 provided in Section 7 of this Handbook. Minor amendments to Fisheries Notice No. 40 are contained in Fisheries Management Notices Nos. 49, 68, 72 and 72A. It is strongly recommended that you contact AFMA, QDPI&F or the QB&FP if you have any queries.

Seasonal closure of the entire fishery

The entire TSPF is closed between 0600 hours local time on 1 December in any year and 1700 hours local time on 1 March in the following year.

Carriage of equipment: During the seasonal closure of the entire fishery all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried either in the racks or on the deck; except;

1. between 1200 hours and 1700 hours local time on 1 March (in any year) if the boat is anchored; or
2. between 0600 hours and 1800 hours local time on 1 December (in any year);
 - if all equipment is out of the water; or
 - if any part of the equipment is in the water - that part is drawn up to the boat and is visible from nearby aircraft or boat, and if the equipment includes cod ends, the cod ends are open.

Carriage of prawns: Fisheries Management Notice No. 49 bans the carriage of prawns in the area of the TSPF from 0600 local time on 15 December to 1700 hours local time on 1 March each year. This regulation commenced on 15 December 1998.

West of Warrior Reef closure

The taking of prawns in the area west of Warrior Reef is permanently prohibited (FMN No. 40). The prohibition also specifies that prawns may not be carried in this area with the exception of the Thursday Island and Cape York Transit Corridor (see Subsection 5.3).

This closure, as well as providing some protection for smaller prawns, was introduced taking into consideration that most of the inhabited islands are in this region and that a significant concentration of traditional fishing for tropical rock lobster occurs in this area.

Carriage of equipment: In the west of Warrior Reef closure area all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried either in the racks or on the deck.

Thursday Island and Cape York transit corridor - exemption to closure

The Thursday Island and Cape York transit corridor was formally introduced in February 1994. The Thursday Island transit corridor, which overlaps the west of Warrior Reef closure, was designed to allow vessels safe passage into Thursday Island.

Carriage of equipment: In transit corridors all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried so that all of the equipment is out of the water, or if any part of the equipment is in the water that all cod ends are open and drawn up to the boat so that the cod ends would be visible from an aircraft or another boat and the boards are at the blocks.

Transit zone

The Cape York transit zone allows NPF endorsed vessels to transit between the ECOTF and the NPF. This area is not considered part of the TSPF and trawlers are required to log out of the fishery when entering the transit zone.

Carriage of equipment: In the transit zone all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried so that all of the equipment is out of the water, or if any part of the equipment is in the water that all cod ends are open and drawn up to the boat so that the cod ends would be visible from an aircraft or another boat and the boards are at the blocks.

Darnley Island closure

The Darnley Island permanent closure was introduced in response to Islanders' concern at the possible damaging effect of trawling on pearl shell beds in the area.

Carriage of equipment: In the Darnley Island closure area all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried so that all of the equipment is out of the water, or if any part of the equipment is in the water that all cod ends are open and drawn up to the boat so that the cod ends would be visible from an aircraft or another boat and the boards are at the blocks.

East of Warrior Reef seasonal closure

This closure was introduced at the request of industry to gain a better economic yield from the prawns harvested in this area. Background to the closure was provided in the article from QDPI&F in the 1998 Torres Prawn Handbook.

Timing: The east of Warrior Reef closure applies every year from 0600 hours local time on 1 December in any year and ends at 1700 hours local time on 31 July in the following year.

Carriage of equipment: During the seasonal closure of the entire fishery all equipment that is capable of being used for any kind of trawling, or being used for taking prawns (this includes nets, boards, beams, and skids) must be carried either in the racks or on the deck; except between 1200 hours and 1700 hours local time on 1 March (in any year), the boat is anchored; or between 0600 hours and 1800 hours local time on 1 December (in any year), all equipment is out of the water or if any part of the equipment is in the water - that part is drawn up to the boat and is visible from nearby aircraft or boat; and if the equipment includes cod ends, the cod ends are open.

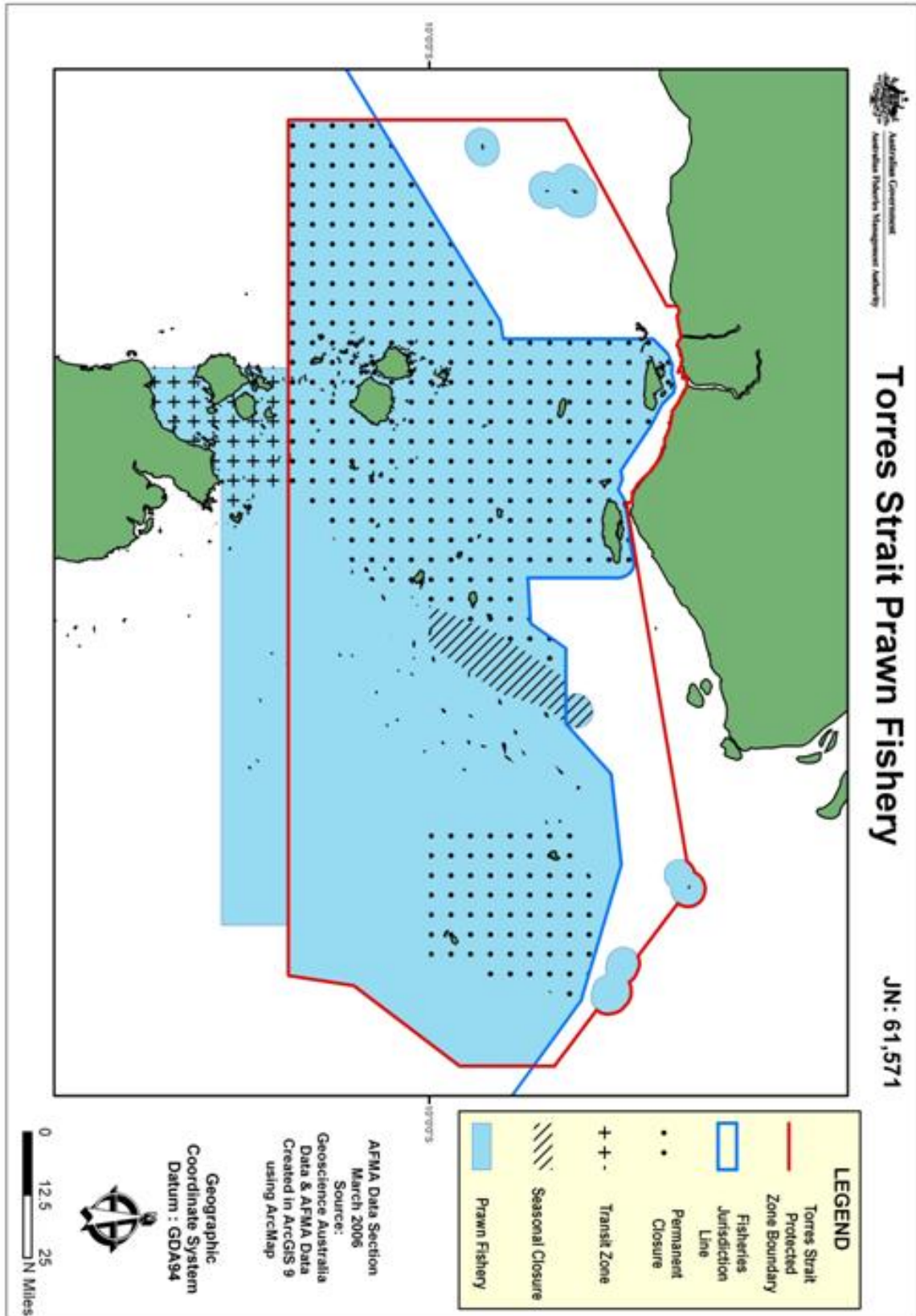


Figure 13 Closures of the Torres Strait prawn fishery

5.23 APPENDIX 23 – SCALE TAG FOR PHOTOS

SCALE TAG FOR PHOTOS -

Vessel:

Observer:

Shot Number:

Date:

SCALE: 10cm

5.24 APPENDIX 24 – SPECIES CODES, COMMON NAMES AND SPECIES NAMES FOR SPECIES COMMONLY CAUGHT IN THE TSPF

| Species Code | Common Name | Species Name |
|--------------|---|----------------------------------|
| ACV | Yellowspotted Bandfish | <i>Acanthocephala abbreviata</i> |
| AGS | Spotted sardine | <i>Amblygaster sirm</i> |
| AGU | Banded Moray | <i>Gymnothorax rueppelliae</i> |
| AJS | Starry Triggerfish | <i>Abalistes stellaris</i> |
| ANF | Anglerfishes nei | Lophiidae |
| APO | Cardinalfishes | Apogonidae |
| AUA | Salmon Catfish | <i>Arius leptaspis</i> |
| BAC | Pickhandle Barracuda | <i>Sphyraena jello</i> |
| BAR | Barracudas nei | <i>Sphyraena</i> spp |
| BAZ | Barracudas - Family | Sphyraenidae |
| BLE | Combtooth blennies | Blenniidae |
| BRA | Pomfrets | <i>Brama</i> spp |
| BSE | Seabasses nei | <i>Dicentrarchus</i> spp |
| BUS | Butterflyfishes | Chaetodontidae |
| BXF | Boxfishes | Ostraciidae |
| CAE | Eeltail catfishes | <i>Plotosus</i> spp |
| CAX | Catfishes nei | Ariidae |
| CLB | Soft Corals | <i>Spisula solidissima</i> |
| CCD | Whitecheek shark | <i>Carcharhinus dussumieri</i> |
| CCU | Australian blacktip shark | <i>Carcharhinus tilstoni</i> |
| CDX | Jewfish/Croakers, Drums nei | Sciaenidae |
| CGX | Scads/Trevallies nei | Carangidae |
| CHG | Gizzard Shad | <i>Anodontostoma chacunda</i> |
| CJH | Blotched Duckbill | <i>Chrionema chlorotaenia</i> |
| CRA | Crabs | Brachyura |
| CRF | Blue Trevally | <i>Carangoides ferdau</i> |
| CTL | Cuttlefish | Sepiidae, Sepiolidae |
| CUT | Cutlassfish (Hairtails, Scabbardfishes nei) | Trichiuridae |
| CUX | Sea Cucumber | Holothurioidea |
| CZP | Cornflake Crab | <i>Callianassa</i> spp |
| DGP | Painted Sweetlip | <i>Diagramma pictum</i> |
| DHT | Black-spotted whipray | <i>Himantura toshi</i> |
| DIO | Porcupinefish | Diodontidae |
| DOS | Wolf Herrings nei | <i>Chirocentrus</i> spp |
| DXU | Tufted Sole | <i>Dexillus muelleri</i> |
| EFX | Sixbar Grouper | <i>Epinephelus sexfasciatus</i> |
| EFY | Banded Grouper | <i>Epinephelus amblycephalus</i> |
| EMO | Coral trout | <i>Plectropomus leopardus</i> |
| ENS | Blue Endeavour Prawn | <i>Metapenaeus endeavouri</i> |
| EPR | Yellow spotted Rockcod | <i>Epinephelus areolatus</i> |
| ESU | Longfin Anchovy | <i>Setipinna tenuifilis</i> |

| | | |
|------------|-----------------------------------|--------------------------|
| EUB | Winghead shark (hammerhead) | Eusphyra blochii |
| FFX | Leatherjackets nei | Monacanthidae |
| FIP | Rough Flutemouth | Fistularia petimba |
| FIT | Flutemouth | Fistularia spp |
| FLH | Flatheads nei | Platycephalidae |
| GOX | Goatfishes | Upeneus spp |
| GPX | Groupers nei | Epinephelus spp |
| GUI | Indo-Pacific Gurnards | Chelidonichthys spp |
| GUX | Gurnards, searobins nei | Triglidae |
| GUY | Gurnards | Trigla spp |
| HAI | Indian halibut | Psettodes erumei |
| HEH | Sicklefin weasel shark | Hemigaleus microstoma |
| ILS | Northern Whiting (Silver sillago) | Sillago sihama |
| JEL | Jellyfishes | Rhopilema spp |
| JOA | Bearded croaker | Johnius amblycephalus |
| LEF | Lefteye flounders nei | Bothidae |
| LFX | Toadfishes nei | Lagocephalus spp |
| LGE | Common ponyfish | Leiognathus equulus |
| LHT | Largehead Hairtail | Trichiurus lepturus |
| LIB | Brushtooth Lizardfish | Saurida undosquamis |
| LIX | Lizardfishes nei | Synodontidae |
| LJL | Bigeye Snapper | Lutjanus lutjanus |
| LJT | Crimson seaperch | Lutjanus erythropterus |
| LOS | Bugs nei Slipper lobster | Scyllaridae |
| LRL | Striped trumpeter | Latris lineata |
| LRO | Oxeye Scad | Selar boops |
| LWQ | Fivelined Snapper/Seaperch | Lutjanus quinquelineatus |
| LXR | Orbicular Batfish | Platax orbicularis |
| MAL | Yellow lined sea perch | Lutjanus malabaricus |
| MAX | Mackerels | Scombridae |
| MIL | Milkfish | Chanos chanos |
| MOJ | Silverbiddies | Gerres spp |
| MOO | Moonfish | Mene maculata |
| MOW | Morwong | Nemadactylus spp |
| MPE | Red endeavour prawn | Metapenaeus ensis |
| MSH | Shells | Ex Mollusca |
| MUI | Morays nei | Muraenidae |
| MUL | Mullets nei | Mugilidae |
| MUM | Goatfishes nei | Mullidae |
| NPN | Coral Prawn | Parapenaeopsis cornuta |
| NSE | Lattice Monocle Bream | Scolopsis taeniopterus |
| OPP | Sea Perch | Sebastes alutus |
| ORB | Brownbanded Bambooshark | Chiloscyllium punctatum |
| ORO | Banded Wobbegong | Orectolobus ornatus |
| OSI | Golden Cuskeel | Sirembo imberbis |

| | | |
|------------|-----------------------------|--------------------------------|
| OWX | Snake Eels nei | Ophichthidae |
| PBA | Banana prawn | Penaeus merguensis |
| PEF | Blobfishes | Psychrolutes macrocephalus |
| PKL | Blotched Javelinfinh | Pomadasys maculatus |
| POB | Black pomfret | Parastromateus niger |
| PON | Ponyfishes (Slipmouths) nei | Leiognathidae |
| POY | Ponyfishes (Slipmouths) | Leiognathus spp |
| PQY | Purple spotted bigeye | Priacanthus tayenus |
| PRB | Tiger Prawn (Brown) | Penaeus esculentus |
| PUX | Pufferfishes | Tetraodontidae |
| RAG | Indian mackerel | Rastrelliger kanagurta |
| RCA | Whitespotted wedgefish | Rhynchobatus australiae |
| RDK | Blue-spotted stingray | Dasyatis kuhlii |
| RDN | Plain maskray | Dasyatis annotata |
| RDY | Painted maskray | Dasyatis leylandi |
| RGU | Australian butterfly ray | Gymnura australis |
| RHA | Milk Shark | Rhizoprionodon acutus |
| RHY | Australian sharpnose shark | Rhizoprionodon taylori |
| RIT | Threadfin Scats | Rhinoprenes pentanemus |
| RPA | Pointed sawfish | Anoxypristis cuspidata |
| RYH | Banded eagle ray | Aetomylaeus niehofii |
| SCD | Blue Swimmer Crab | Portunus pelagicus |
| SCO | Scorpionfishes nei | Scorpaenidae |
| SCS | Scorpionfish | Scorpaena spp |
| SCX | Scallops nei | Pectinidae |
| SDX | Scad | Decapterus spp |
| SIX | Sardinellas nei | Sardinella spp |
| SOX | Soles nei | Soleidae |
| SPI | Spinefoot | Siganus spp |
| SPL | Scalloped Hammerhead Shark | Sphyrna lewini |
| SPO | Sponges | Spongidae |
| SPS | Sicklefish | Drepane punctata |
| SQU | Squids | Loliginidae, Ommastrephidae |
| SQY | Mantis Shrimps | Squillidae |
| SWM | Swimming crabs, etc. nei | Portunidae |
| SWY | Pipefishes nei | Syngnathus spp |
| TBO | Humpback Anglerfish | Tetrabrachium ocellatum |
| TDF | Toadfishes | Batrachoides spp |
| THB | Threadfin Breams nei | Nemipterus spp |
| THE | Terapontidae | Terapontidae |
| THO | Terapon spp | Terapon spp |
| THQ | Morton Bay Bug | Thenus orientalis |
| TJB | Crescent Grunter | Terapon jarbua |
| TPF | Black-flag tripodfish | Tripodichthys angustifrons |

| | | |
|------------|------------------------------|-----------------------------|
| TRO | Trout | Salmo spp |
| TRX | Ribbonfishes | Trachipteridae |
| TRY | Yellowstripe scad | Selaroides leptolepis |
| TXW | Blacktip Tripodfish | Trixiphichthys weberi |
| TYF | Short tailed Pipefish | Trachyrhamphus bicoarctatus |
| UHE | Deep Flounder | Pseudorhombus elevatus |
| UMP | Asian moon scallop | Amusium pleuronectes |
| UPM | Goldband Goatfish | Upeneus moluccensis |
| UPS | Sunrise Goatfish | Upeneus sulphureus |
| UPU | Ochrebande goatfish | Upeneus sundaicus |
| URA | Stargazers - Uranoscopus spp | Uranoscopus spp |
| URX | Sea urchins, etc. nei | Echinoidea |
| VVH | Highfin Veilfin | Velifer hypselopterus |
| WHS | Whittings - Sillago | Sillaginidae |
| WRA | Wrasses nei | Labridae |
| ZBF | Soleudae (spottedtail sole) | Zebrias fasciatus |
| 1FB | Frigatebirds nei | Fregata spp. |
| 1SS | Horned seasnake | Acalyptophis peronii |
| 2SS | Dubois seasnake | Aipysurus duboisii |
| 3SS | Olive seasnake | Aipysurus laevis |
| 4SS | Hardwicks seasnake | Lapemis hardwickii |
| 5SS | Elegant seasnake | Hydrophis elegans |
| 6SS | Ornate seasnake | Hydrophis ornatus |
| AJK | Stokes seasnake | Astrotia stokesii |
| | | |
| | | |

5.25 APPENDIX 25 – FISHERIES LEGISLATION AFFECTING THE TORRES STRAIT PRAWN FISHERY

NOTE THE FOLLOWING FISHERIES MANAGEMENT NOTICES PROHIBIT THE TAKING OF SOME ITEMS FROM THE MARINE ENVIRONMENT INCLUDING PEARL SHELLS AND OTHER FISH PRODUCTS

FISHERIES LEGISLATION AFFECTING THE TORRES STRAIT PRAWN FISHERY

| Notice no. | Description |
|------------|--|
| 19 | Prohibition relating to the incidental taking and carrying of Tropical rock lobster by prawn trawlers in the Torres Strait Protected Zone and in certain waters outside but near the Zone. |
| 29 | Torres Strait Prawn Fishery - prohibition on taking of prawns by Papua New Guinea boats |
| 40 | Torres Strait Prawn Fishery - prohibition on taking prawns and carrying fishing equipment |
| 47 | Torres Strait Fisheries – restriction on size of boats |
| 49 | Torres Strait Prawn Fishery - prohibition on carriage of prawns and amendment to FMN No. 40 |
| 56 | Prohibition on taking Moreton Bay bugs (size restriction) |
| 61 | Shark bycatch restriction and shark finning prohibition |
| 65 | Prohibition on the taking of dugong (area, gear and method restrictions) |
| 66 | Prohibition on the taking of turtle (gear restrictions) |
| 68 | Torres Strait Prawn Fishery - prohibition on carriage of equipment and amendment to FMN No. 40 |
| 69 | Torres Strait Pearl Shell Fishery – prohibition on taking, processing and carrying of pearl shell (gear and size restrictions) |
| 70 | Torres Strait Prawn Fishery – requirement for use of Bycatch Reduction Devices |
| 71 | Torres Strait Prawn Fishery – restriction on net sizes |
| 72 | Torres Strait Prawn Fishery – prohibition on taking prawns (time allocation) and amendment to FMN No. 40 |
| 72A | Torres Strait Prawn Fishery – prohibition on taking prawns (time allocation) |
| 78 | Torres Strait Finfish Fishery – prohibitions relating to the taking, processing and carrying of finfish (gear, size and area restrictions and take and carry limit) |
| 79 | Torres Strait Spanish mackerel Fishery – prohibitions relating to the taking, processing and carrying of Spanish mackerel (gear and size restrictions and take and carry limit) |
| 81 | Torres Strait Prawn Fishery – requirement for use of Turtle Excluder Device |

Fisheries Management Notice No. 56

**TORRES STRAIT PRAWN FISHERY
PROHIBITION ON TAKING MORETON BAY BUGS
(SIZE RESTRICTION)**

I, WILSON TUCKEY, Commonwealth Minister for Agriculture, Fisheries and Forestry and Chairman of the Protected Zone Joint Authority, acting on behalf of the Authority in accordance with the powers conferred on the Authority by paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, make the following Notice under section 16 of the Act.

CITATION

1. This Notice may be cited as Torres Strait Fisheries Management Notice No. 56.

COMMENCEMENT

2. This Notice commences on 28 February 2001.

THIS NOTICE TO APPLY WITH OTHER NOTICES

3. This Notice applies in conjunction with any other notice in force in the area of the prawn fishery.

INTERPRETATION

a) In this Notice, unless the contrary intention appears:

"Moreton Bay Bugs" means fish of the genus *Thenus*; and "carapace width" means the width of the carapace when measured at its widest point; and

"the Act" means the *Torres Strait Fisheries Act 1984*.

b) terms used but not defined in this Notice have the same meaning as in the Act and the Torres Strait Fisheries Regulations.

PROHIBITION

5. Pursuant to paragraph 16(l)(b)(iii) of the Act the taking, processing or carrying of Moreton Bay bugs, in the area of the prawn fishery, that have a carapace width of less than 75 millimetres is prohibited.

EXEMPTION FROM PROHIBITION

6. Pursuant to paragraph 16(1A)(d) of the Act a person engaged in traditional fishing is exempt from the prohibitions in paragraph 5.

Approved by WILSON TUCKEY

Dated this forth day May 2001

Commonwealth of Australia Gazette No. S170, 15 May 2001

Fisheries Management Notice No. 70

**TORRES STRAIT PRAWN FISHERY
REQUIREMENT FOR USE OF BYCATCH REDUCTION
DEVICES**

The Protected Zone Joint Authority, acting in accordance with the powers conferred on the Authority by paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, and in accordance with the decisions made by the Authority, make the following Notice under section 16 of the *Torres Strait Fisheries Act 1984*.

CITATION

1. This Notice may be cited as Torres Strait Fisheries Management Notice No. 70.

COMMENCEMENT

2. This Notice commences on *Gazettal*.

THIS NOTICE TO APPLY WITH OTHER NOTICES

3. This Notice applies in conjunction with any other notice in force in the area of the Prawn Fishery.

INTERPRETATION

4.1 In this Notice, unless the contrary intention appears:

“prawns” means fish of the family *Penaeidae* spp;

“By-catch Reduction Device” means a device that allows fish and other animals to escape immediately after being taken in the net and is constructed in accordance with Schedule 1.

“bar” in relation to square mesh in a trawl net, means:

- a) for a knotted trawl net, a side of a mesh from one knot to the next knot on the same side of the mesh; or
- b) for a knotless net, a side of a mesh from one corner to the next corner.
- c) “the Act” means the *Torres Strait Fisheries Act 1984*.

4.2 Terms used but not defined in this Notice have the same meaning as in the *Torres Strait Fisheries Act 1984* and the *Torres Strait Fisheries Regulations*.

PROHIBITION

5.1 Pursuant to paragraph 16(1)(c) of the Act, the use or possession of otter trawl equipment in the area of the Torres Strait Prawn Fishery is prohibited unless each net that is rigged for fishing is fitted with a By-catch Reduction Device.

5.2 A net is rigged for fishing if part or all of the net is in the water, or if it is shackled, tied or otherwise connected to any trawl door or trawl board, or to any tow rope or cable, either on board the boat or attached in any manner to the boat.

5.3 However, if a try net is used, the try net is not required to be fitted with a By-catch Reduction Device.

SCHEDULE 1

SQUARE MESH COD END

- a) The net's cod end is a recognised BRD if:
- b) at least half the cod end's circumference is square mesh of at least 45mm; and
- c) the square mesh has at least 75 bars along each side of the mesh; and
- d) the square mesh net is no more than 5 meshes from the cod end drawn strings of the net; and
- e) nothing covers any of the square meshes during trawling.

SQUARE MESH PANEL

A panel of the net is considered to be a recognised BRD if:

- a) the panel:
 - i. is square mesh of at least 101 mm; and
 - ii. is at least 600 mm wide and 400 mm long; and
- b) the entire panel is no more than 100 meshes from the cod end drawstrings of the net; and
- c) nothing covers any of the square meshes during trawling.

FISHEYE

An opening in the net is a recognised BRD if:

- a) the opening is:
 - i. held open by a rigid frame; and
 - ii. at least 350 mm wide and 150 mm long; and
- b) the opening is no more than 100 meshes from the cod end drawstrings of the net; and
- c) nothing covers any part of the opening during trawling.

BIGEYE

- a) An opening in the net is a recognised BRD if:
- b) the opening is:
 - i. in the top of the net; and
 - ii. at least 1 metre across the width of the net;
- c) the opening is no more than 200 meshes from the cod end drawstrings of the net; and
- d) the opening has, during trawling, a weighted forward section and buoyed rear section; and
- e) the edges of the opening do not overlap by more than 285 mm; and
- f) nothing covers any part of the opening during trawling.

RADIAL ESCAPE SECTION

A combination of a funnel, hoops and an opening in the net is a recognised BRD if:

- a) the funnel:
 - i. is attached to the net by all of the funnel's front edge circumference; and
 - ii. has a number of meshes in its rear edge circumference of no more than 60% of the number of meshes in the circumference of the net at its rear edge; and
- b) the net has:
 - i. either:
 - 1. a hoop attached to it at the funnel's front edge that keeps the funnel fully open; or
 - 2. a TED within 900 mm of the front of the funnel's front edge; and
 - ii. a hoop (the rear hoop):
 - 1. with a diameter of at least 650 mm; and
 - 2. no more than 105 meshes from the cod end drawstrings of the net; and
- c) the openings are as follows:
 - iii. forward of the rear hoop; and
 - iv. the rear edge of the rear opening are within 5 meshes of the rear hoop; and
 - v. extend for at least 350 mm and cover at least half of the net's circumference; and
 - vi. are at least 101 mm in each of their dimensions; and

- vii. no more than 500 mm forward of the funnel's rear edge.

V-CUT / FLAP

An opening in the net is a recognised BRD if:

- a) the opening is:
 - i. in the top of the net;
 - ii. in the form of a triangular flap of netting which at its widest point is at least 250 mm across the width of the net and each edge at least 250 mm long;
 - iii. no more than 100 meshes from the cod end drawstrings of the net; and
- b) during trawling the opening is held open:
 - i. with the use of a weighted flap; or
 - ii. by the flap being stitched to the side of the cod end; and
- c) nothing covers any part of the opening during trawling.

Approved by IAN MACDONALD (Chairman of the PZJA)
Dated this eighteenth day of February 2004
Commonwealth of Australia Gazette No. S42, 23 February 2004

Fisheries Management Notice No. 71

**TORRES STRAIT PRAWN FISHERY
RESTRICTION ON NET SIZE**

The Protected Zone Joint Authority, acting in accordance with the powers conferred on the Authority by paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, and in accordance with the decisions made by the Authority, make the following Notice under section 16 of the *Torres Strait Fisheries Act 1984*.

CITATION

1. This Notice may be cited as Torres Strait Fisheries Management Notice No. 71.

COMMENCEMENT

2. This Notice commences on *Gazetta*.

THIS NOTICE TO APPLY WITH OTHER NOTICES

3. This Notice applies in conjunction with any other Notice in force in the area of the Torres Strait Prawn Fishery.

REVOCATION OF FISHERIES MANAGEMENT NOTICE NO. 59

4. Fisheries Management Notice No. 59, dated 21 February 2002, is revoked.

INTERPRETATION

5.1 In this Notice:

- "prawns" means fish of the family *Penaeidae* spp;
- "the Act" means the *Torres Strait Fisheries Act 1984*.

5.2 Terms used but not defined in this Notice have the same meaning as in the Act and the Torres Strait Fisheries Regulations.

PROHIBITION

6.1 Pursuant to paragraph 16(1)(f) of the Act, the use or possession of otter trawl equipment in the area of the Torres Strait Prawn Fishery is prohibited if:

- a) where only one net is used or in possession on board a boat or attached to a boat, the length of the net is longer than 88 metres; or
- b) where more than one net, including a try-net, is rigged for fishing, the total combined length of the nets is longer than 88 metres; and
- c) where more than one net is rigged for fishing, and a try-net is in possession on board the boat but not rigged for fishing, the total combined length of the nets rigged for fishing and the largest try-net in possession on board the boat is longer than 88 metres; and

- d) where a try net is rigged for fishing, in possession on board a boat, or is attached to a boat, the try net is of a length is longer than 10 metres, and
- e) where other nets, excluding try nets, are in possession on board a boat and are not rigged for fishing, the nets are of a size greater than 10% smaller than the largest net in possession on board the boat.

6.2 A net is rigged for fishing if part or all of the net is in the water, or if it is shackled, tied or otherwise connected to any trawl door or trawl board, or to any tow rope or cable, either on board the boat or attached in any manner to the boat.

6.3 Pursuant to paragraph 16(1)(c) of the Act, the use or possession of otter trawl equipment in the area of the Torres Strait Prawn Fishery is prohibited if:

- a) the size of the meshes in the cod end is less than 38 millimetres; or
- b) there are more than 150 meshes when measured in the vertical plane from the drawstring; or
- c) the size of the meshes in all other parts of the net other than the cod end does not exceed 45 millimetres; or
- d) there is more than 1 line of ground chain across the mouth of each net; or
- e) the diameter of the links of the ground chain exceed 10 millimetres; or
- f) the chain is used with a weight or an attachment, other than an attachment for joining the chain to the net.

MEASURING NETS AND MESHES

7.1 For the purposes of paragraph 6.1 the length of a net is determined by measuring the combined length, in metres, of the head rope and bottom rope when taut between the outermost points of the meshes that are attached to each rope respectively.

7.2 For the purposes of paragraph 6.3 the size of a mesh of a:

- a) knotless trawl net is determined by measuring the average distance when the net is taut, between the inner edges of 2 diagonally opposite corners of each of 10 meshes that are at least 30 centimetres from each other; or
- b) knotted trawl net is determined by measuring the average distance when the net is taut, between the inner edges of 2 diagonally opposite knots of each of 10 meshes that are at least 30 centimetres from each other.

*Approved by IAN MACDONALD (Chairman of the PZJA)
Dated this eighteenth day of February 2004
Commonwealth of Australia Gazette No. S42, 23 February 2004*

Fisheries Management Notice No. 81

Torres Strait Fisheries Act 1984

Fisheries Management Notice No. 81

TORRES STRAIT PRAWN FISHERY

REQUIREMENT FOR USE OF TURTLE EXCLUDER DEVICE

The Protected Zone Joint Authority, acting in accordance with the powers conferred on the Authority by paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, and in accordance with the decisions made by the Authority, make the following Notice under section 16 of the *Torres Strait Fisheries Act 1984*.

Dated this 19 day December of 2006

ERIC ABETZ
Chairman
Protected Zone Joint Authority

Eric Abetz

CITATION

1. This Notice may be cited as Torres Strait Fisheries Management Notice No. 81.

COMMENCEMENT

2. This Notice commences on 1 March 2007.

THIS NOTICE TO APPLY WITH OTHER NOTICES

3. This Notice applies in conjunction with any other notice in force in the area of the prawn fishery.

INTERPRETATION

4.1 In this Notice:

"prawns" means fish of the family *Penaeidae* spp;

"the Act" means the *Torres Strait Fisheries Act 1984*.

"Turtle Excluder Device" means a device fitted to a net, and modification made to a net, that allows turtles to escape immediately after being taken in the net, and which has:

- a) a rigid or semi rigid inclined barrier structure comprised of bars extending from the foot to the head of the net that is attached to the circumference of the net which must guide turtles towards an escape hole immediately forward of the grid. The minimum dimensions of this structure to be at least 80cm by 80cm. This structure is to be set within an angle range of 30 – 55 degrees in relation to the horizontal plane of water through the net;
- b) an escape hole which must be either

- (i) a double flap rectangular net opening where the cut immediately forward of the TED must allow a minimum opening of 61 cm when attached to the frame and the two forward cuts of the escape opening must not be less than 51 cm long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 142 cm stretched, or a double flap net triangular opening where the cut immediately forward of the TED frame must allow a minimum opening of 102 cm when attached to the frame with minimum forward cuts of 101 cm. The flaps must be composed of two equal size rectangular panels of mesh. Each panel must be a minimum of 147 cm wide and may overlap each other no more than 38 cm. The panels may only be sewn together along the leading edge of the cut. The trailing edge of each panel must not extend more than 61 cm past the posterior edge of the TED frame. Each panel may be sewn down the entire length of the outside edge of each panel, or;
 - (ii) a single flap rectangular net opening where the cut immediately forward of the TED must allow a minimum opening of 61 cm when attached to the frame and the two forward cuts of the escape opening must not be less than 66 cm long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 181 cm stretched, or a single flap triangular net opening where the cut immediately forward of the TED must be a minimum of 102 cm with minimum forward cuts of 136 cm. The flap must be a minimum of 338cm by 132 cm piece of mesh. The 132 cm edge of the flap is attached to the leading edge of the escape opening cut. The flap may extend no more than 61 cm behind the posterior edge of the TED frame;
- c) a maximum bar spacing of 120mm between bars; and
 - d) it is not permitted to attach any weights, chains or other devices on the escape flap which may prevent the flap from opening.

4.2 For the purposes of this Notice, all net measurements refer to the measurement from centre of opposing knots, when the mesh is pulled taut.

4.3 Terms used but not defined in this Notice have the same meaning as in the Act and the Torres Strait Fisheries Regulations.

REVOCAION OF FISHERIES MANAGEMENT NOTICE NO 60

5. Fisheries Management Notice No 60 dated 21 February 2002 is revoked.

PROHIBITION

6.1 Pursuant to paragraph 16(1)(c) of the Act, the use or possession of otter trawl equipment in the area of the Torres Strait Prawn Fishery is prohibited unless each net that is used is fitted with a Turtle Excluder Device.

6.2 However, if a try-net is used, it does not need to be fitted with a Turtle Excluder Device.