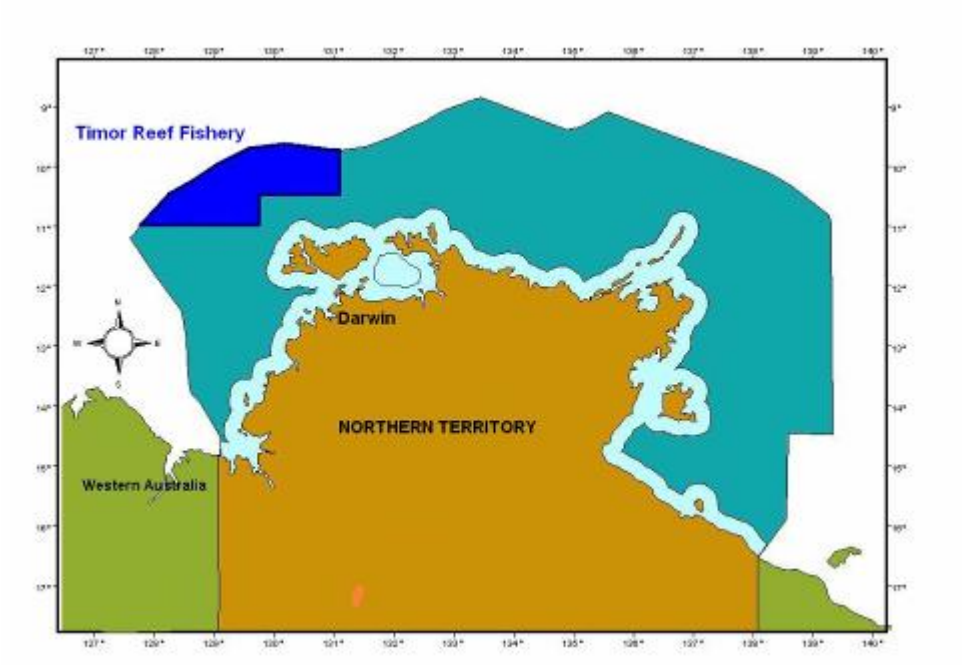
POLICY GUIDELINES FOR MANAGEMENT OF THE NORTHERN TERRITORY

Timor Reef Fishery



SUPPORTING AN INDIVIDUAL TRANSFERABLE QUOTA MANAGEMENT FRAMEWORK

November 2015

Explanatory notes. (Refer Appendix 2 for more detailed terminology definitions)

- Each current licence at the commencement of the new Management Plan will be granted equal numbers of FISHERY UNITS (or shares) for each of the combined species groups in the fishery.
- QUOTA UNIT allocation – the issue of quota units (i.e. an amount of fish of a particular species group allocated (in kgs) to a licensee), is based on the entitlement (fishery units) of the licence for that licensing year.
- Permanent transfers of Fishery units may occur. When a Fishery unit is permanently transferred it is referred to as a 'FISHERY UNIT' transfer.
- When a temporary transfer of an entitlements allocation occurs it is referred to as a 'QUOTA UNIT' transfer.

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INTRODUCTION / BACKGROUND

The Timor Reef Fishery is a limited entry, offshore demersal finfish fishery with an area of approximately 8400 nm^2. The fishery, currently managed via input controls, utilises trap and line gear to primarily target goldband snapper, with significant quantities of red snapper also harvested. The Department, at the request of Timor Reef licensees, is proposing to introduce output (catch based) controls as opposed to the current input (gear based) controls into the management arrangements in order to maintain sustainable catch levels and provide certainty, economic efficiency and flexibility for operators.

Total allowable catches have long been used to provide biological protection of fisheries. Once the annual quotas have been taken the fisheries are closed.

By setting a Total Allowable Catch (TAC) and allocating it to fishermen as Individual Transferable Quotas (as quota units), rights over a proportion of the catch are established. Market forces distribute the quota among those fishermen who value the rights most highly and are able to use the resource most efficiently. Because quota holders are guaranteed a proportion of the catch, they no longer need to compete for their catch and can concentrate on using the most economically efficient means of taking their share. In this way, quota units facilitate autonomous adjustment of fleet size and fishing operations.

The fishery covers all Teleost (bony fishes) species taken by approved methods. Other species (that are not targeted by fisheries operating under a Commonwealth permit as agreed under the Offshore Constitutional Settlement (OCS) for this fishery) taken as genuine byproduct may be retained. This excludes no-take species either defined under NT regulations or as defined in OCS agreements.

At the request of Industry, the NT Minister for Fisheries has given 'in principle' support, subject to satisfactory outcomes for government regarding any increased costs for management, research and compliance, for the introduction of Individual Transferable Quota (as quota units) into the management arrangements of the Timor Reef Fishery. Additionally, in concurrence with the planned rationalisation of the Demersal and Finfish Trawl fisheries, a community contribution scheme which recognises the individuals enhanced access rights to the community's resources will be canvassed and could be factored into the cost share structure of the fishery.

The Minister has established a Fishery Management Advisory Committee for the Timor Reef Fishery (TRFMAC). The role of this committee is to provide timely and considered advice to the Executive Director of Fisheries in preparing revised Fishery Regulations. This Committee may establish subsidiary working groups to assist in provision of scientific expertise, or other, specific advice to the TRFMAC.

This document describes the proposed framework for the new management arrangements, which in turn will be incorporated into a draft Timor Reef Fishery Management Plan. It is proposed the revised Regulations will be formally reviewed every five years, commencing from date of gazettal.

In proposing legislative change for the Timor Reef Fishery, it is important to recognise outcomes from research projects between the NT and other Jurisdictions, ie: Northern Australian Red Snapper Harvest Strategy framework, which may impact on the proposed changes. Additionally, management responsibility for the fishery is shared by the NT and Commonwealth via the Northern Territory Fisheries Joint Authority (NTFJA). At the appropriate time, approval will be sought from the NTFJA to implement the proposal.

FRAMEWORK PROVISIONS

There are three main components to a quota structured fishery, the 'permanent entitlement' (fishery unit or ownership share) *(Reg 141G*), the annual 'catch allocation' (quota units) *(Reg 141J)*

and the 'licence to fish' *(Reg 141D).* Within these three components lie a number of elements which permit the fishery to operate in a practical and sustainable manner.

A licence is required for a person to take fish for commercial purposes in accordance with Section 10 of the Fisheries Act. The licence is an authorisation to undertake an activity subject to the Fisheries Act 1988, Fisheries Regulations, Management Plans or licence conditions. Licences to fish sit outside the quota process to some extent. It is important to note that any financial 'value' a licence may have under the current management arrangements is likely to shift from the licence, to a licence's entitlements and allocations under this proposal. That is, the market will trade in fishery units and quota units and there may be little incentive, to purchase an existing licence as there will be minimal restrictions on the issue of new licences.

The number of new licences issued need not be restricted providing whole of fishery bycatch limits and overall ecological impacts of fishing are adequately addressed *(Reg 141E).* Sustainability of stocks within the fishery will be maintained via enforcement of proposed risk-based performance indicators and the annual catch allocation as described in the framework.

1. Total Allowable Commercial Catch (TACC) *(reg 141H)*

This document is focussed on the harvest of finfish by the commercial sector only, as there is currently little or no interaction with other resource user groups in the fishery. However, the introduction of the TACC mechanism (which may be conservative in terms of possible TAC) allows for consideration of potential resource allocation issues in the future, i.e. scope remains for any sector allocation issues to be considered in the future.

The Timor Reef Fishery Advisory Group (TRFAG) is a subsidiary scientific advisory group set up by the Fishery Management Advisory Committee. The role of this group is to assess the level of biological and stock assessment information available on target species in the fishery and ensure stock assessments provide confidence to enable a TACC to be recommended. The TRFAG has recommended the commercial fishery share an allowable catch of 900 tonnes for combined Goldband snapper species (*Pristipomoides multidens, Pristipomoides typus, Pristipomoides filamentosus*) and 1300 tonnes for combined Red snapper species (*Lutjanus malabaricus, Lutjanus erythropterus*). These levels are defined in *Regs 141G, 141H*.

Fisheries notes that when not all landed catch comprises quota species, the fisheries 'offshore' and 'onshore' compliance monitoring needs become more complex (i.e. an individual's capacity to deceive or conceal quota species increases). Currently, a dedicated 'offshore' compliance capacity is not considered to be necessary in this limited entry fishery because there are no specific catch restrictions and the risk to sustainability is deemed low. However, this risk assessment would be revised under a quota managed fishery. In order to maintain effective compliance with the proposed quota framework while keeping compliance costs to a minimum, a TACC will be assigned to all other retained species (group) (*Regs 141A, 141G, 141H*).

Provided here is an explanation of the background information used to estimate the Group TACC. Goldband fishing methods are quite targeted operations due to the species preferred habitat range and schooling nature. Historically, these methods have caught an average of ~8% (fisheries datasets 1995-2009) of additional species. This proportion should be considered when determining the amount of Group TACC.

Also considered in the context of assigning a group TACC were comments received from industry members advising that operators may intend to develop the shallower redfish sector of the fishery and potentially utilise different gears. Red snapper fishing methods vary due to the species broader habitat range and have a higher associated species catch of up to ~24% (fisheries datasets 1995-2008). This proportion should also be considered when determining the amount of group TACC to assign.

These factors have been carefully considered by Fisheries along with recognition of scientific knowledge gaps surrounding most species included in the group. To adequately address these issues, and to contain monitoring costs, it is proposed a TACC for all combined Group (retained) species be assigned 415 tonnes.

The proposed Group TACC should not inhibit fishery development and should enable operators who wish to operate in the fishery sufficient access to available group quota. Additionally, it is proposed to introduce a mechanism to identify, evaluate and if possible, set individual TACC for any dominant species which emerges through changing fishery practices in the future (note sections 2.1, 2.2).

The decision rules developed for the fishery (Appendix 1) have been amended to ensure the appropriateness of each TACC as the fishery develops. These amendments will align with daily logbooks being lodged at the completion of each trip, not monthly as is the case now. When required, additional single species safeguards would be incorporated into the decision rules to meet Fisheries environmental obligations.

To address a new species becoming dominant within the group, a potential TACC for that species may be considered through the process described in section 2.1. To address an operator wishing to develop a potentially abundant new species, a process to accommodate that has been proposed and is described in section 2.2. To address an operator wishing to trial new gear in the fishery a process has been developed and is described in section 6.

The setting of group catches at 415t, along with additional single species safeguards incorporated into the decision rules and maintenance of ecosystem sustainability would satisfy Fisheries environmental targets. Note, a trigger of 10-25% of the annual combined catch for byproduct species (includes red emperor) has been agreed with the SEWPAC as a suitable precautionary trigger in assessing the ecological sustainability of the fishery under the current management arrangements and the proposed new decision rule tables will need to be re-evaluated by SEWPAC.

SUMMARY (*Reg 141H*)

- 900 tonnes for combined Goldband snapper species (*Pristipomoides multidens, Pristipomoides typus, Pristipomoides filamentosus*) and,
- 1300 tonnes for combined Red snapper species (*Lutjanus malabaricus, Lutjanus erythropterus*) and,
- 415 tonnes for all other retained Group species.

1.1 Setting the TACC

Under Fisheries legislation, the Minister for Fisheries is responsible for setting a Total Allowable Commercial Catch (TACC) and may, before the start of each fishing season, review and/or determine the TACC for each quota species / or species group *(Fisheries Act s28, s47).* In reviewing and/or determining the allowable catch the Minister may consider:

- the agreed decision rules
- advice from the TRFMAC and TRFAG
- information about the sustainability of marine species in the area of the fishery
- potential impacts from other community sectors
- the reference points set for the stocks of quota species
- the precautionary principle; and
- any decision made by the NTFJA

The proposed regulations shall describe the parameters for determining TACC's, and annual

TACC may be prescribed by the Minister via regulatory amendments. The TACC will remain as set by the Minister until the Minister determines a new TACC by amendment. If the Minister for Fisheries does not set a new TACC prior to a fishing season, then the TACC set for the previous season will continue to apply.

The Executive Director of Fisheries ('the Director') may develop decision rules and management actions for confirming the TACCs and associated management arrangements in the fishery *(reg 209B)*. The decision rules should be included in the regulations and include at a minimum, performance indicators, trigger points and management actions covering:

- monitoring and minimising high grading / discarding
- maintaining and providing confidence in TACCs
- maintenance of bycatch levels below 10% of catch
- review of bycatch catch composition
- interactions with threatened, endangered, protected or listed species
- effects of fishing on the ecosystem

In approving any decision rules the Director may consider:

- information given by the Timor Reef Fishery Management Advisory Committee (TRFMAC), and any subsidiary Committee
- the total estimated catch by commercial, recreational, indigenous fishers and any other users of the fishery
- information about the sustainability of marine species and ecosystems in the area of the fishery
- the reference points set for the stocks of quota species
- the precautionary principle; and
- any decision made by the Minister

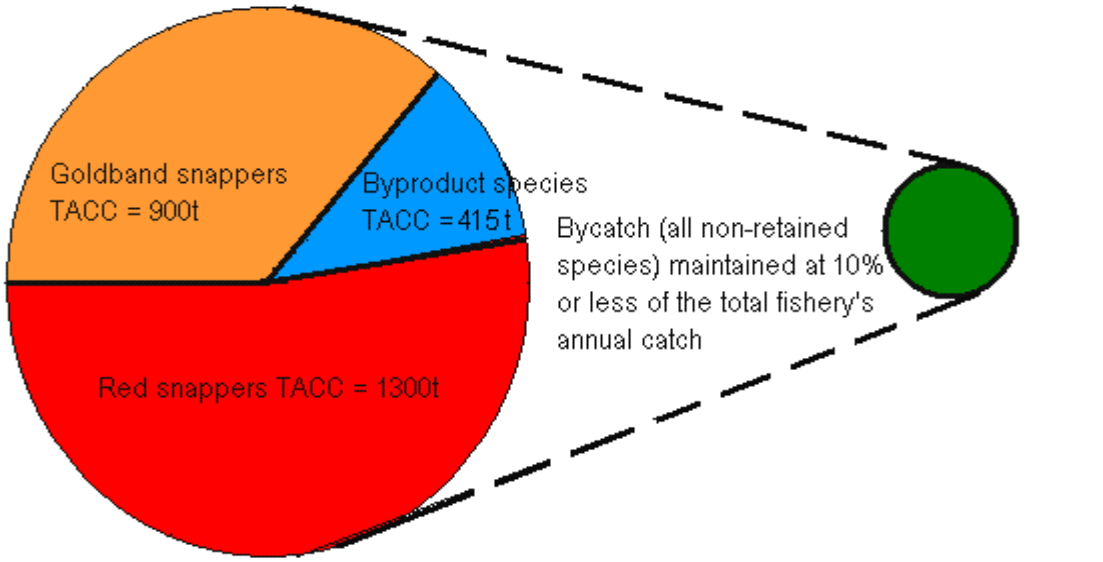

Figure 1. Proposed fishery TACC initial allocation.

2. Initial Access and Allocation *(regs 141F, G, transitional 219)*

There are currently 12 licences in the fishery, ten unrestricted and two restricted licences (refer section 4 for a definition of unrestricted and restricted licences). All licences current immediately prior to the commencement of the new Regulations (Regs) will remain in the fishery at the commencement of the new Regs. Each licence at the commencement of the new Regs will be

granted an equal allocation of Fishery units (or shares) for each combined species groups in the fishery, dependant upon which licence type they hold (i.e. restricted or unrestricted).
The number of Fishery units issued for specific species groups are as follows:

Combined Goldband snapper species	899,998 Fishery units
Combined Red snapper species	1,300,002 Fishery units
Combined Group species	415,008 Fishery units

The number of Fishery units will initially be equally allocated to each of the ten unrestricted licences are as follows:

Combined Goldband snapper species	81,818 Fishery units
Combined Red snapper species	118,182 Fishery units
Combined Group species	37,728 Fishery units

The number of Fishery units will initially be equally allocated to each of the two restricted licences are as follows:

Combined Goldband snapper species	40,909 Fishery units
Combined Red snapper species	59,091 Fishery units
Combined Group species	18,864 Fishery units

Grant of fishery units *(reg 219*)
Note: the current unrestricted licence and restricted licence types will be annulled and holders of these licences will be eligible to apply for a Timor Reef Fishery Licence (a TRF licence). The relevant amount of fishery units described above will be transferred to each approved licence.

2.1 Development of a Future New Target Species *(Agreed policy, not included in current regs)*

The current proposed species group categories for initial Fishery unit allocation encompass all retained catch from the entire fishery, ie: major target species or species groups as well as all lesser species or species groups. All of the lesser species or species groups are incorporated in the combined Group species category.

If, in the future, it is identified by Fisheries or through the TRFMAC annual review of catch composition (refer section 7.1 for catch composition guidelines) that a particular species or species group within the combined group species group category is becoming dominant, that species or species group may be referred to the scientific TRFAG for assessment. If the TRFAG considers there is adequate information on the species, the TRFAG may recommend to the TRFMAC that the species or species group may be allocated a TACC. Alternatively, Fisheries or the TRFAG may determine there is insufficient information to move the species or species group to the target category and it remains in the group. However, Fisheries or the TRFAG may recommend that a focused research program be established to gather the information required to reassess the species or species group.

A recommendation for this species or species group to be nominated target species status would be made to the Executive Director of Fisheries and, if approved, referred to the Minister for consideration. If the Minister agrees then the new target species could be allocated a nominal block of Fishery units (e.g. 100,000 Fishery units). The Fishery units would be allocated pro-rata between the holders of a licence based on their group Fishery unit holdings at the next annual allocation review. For an example, refer section 12.

It is proposed the TACC of 415 tonnes for the combined group species group 'pool' would remain the same and not be altered by the prospect of removal of an emerging 'target' group. Any expansion or reduction of the TACC for the combined group species group would be the subject of review by the TRFMAC and subsequent consideration by the Minister.

The new quota allocations would be made pro-rata based on a licensees group Fishery unit holdings at the next annual allocation review, ie. May -June, in time for 1 July, the start of the new fishing/licensing/quota year. An example of how this could occur is as follows. To determine a licences allocation, the licence's total group fishery units held (e.g. 37,727) are tallied and divided by the total group fishery units issued in the fishery (e.g. 414,998) = .0909. This figure is multiplied by the new species TACC (e.g.100,000) = licence holders entitlement (9,090 Fishery units) of the new species TACC.

Minimum holdings for the new species group will also be determined at this time based on catch composition. For information on how minimum holdings are determined, see section 7 for details. This capacity to expand total catch limits may encourage continued exploration and product development in the fishery.

2.2 Process to Develop a New Species *(Agreed policy, not included in current regs)*

Fisheries recognises Industry comments relevant to issues faced by an operator when evaluating a new venture to target a specific demersal species by changing bait type, modifying hook sizes or carrying out approved changes to hook and trap gear configuration. Dependant upon the target species sale value, a major inhibiting factor identified in an operator's business plan is likely to be the cost of purchasing sufficient group quota units to make the venture viable. If the value and / or expected quantity of a new species were such that a large amount of group quota units was required, the amount of quota units available for lease from the fishery, at an acceptable price, may be insufficient for the operator's requirements.

This issue could be overcome by establishing a process where the operator can harvest the new species outside the group TACC framework.

In order to address Industry's issue and encourage sustainable development, Fisheries proposes to enhance the capacity for a fisher to be able to outline his proposal to Fisheries through the TRFMAC process. Providing any species or ecosystem sustainability issues can be addressed, Fisheries will collaboratively develop an operational plan to implement the fisher's proposal.

A key variation to the normal quota process would be that the particular species will be permitted to be harvested outside of the group TACC framework for the duration of the permit. Minimum Holdings for all other species, including group, but excluding the new target species, would still apply. This should allow the operator to evaluate the feasibility of the proposal without unnecessary constraints caused by the introduction of group quota to the fishery.

If the new species can be evaluated as satisfying the conditions for a sustainable harvest level, the mechanism described in section 2.1 can be applied in allocating TACC pro-rata based on a licensee's group entitlement holding.

Note: Increasing the group TACC is a serious concern for Fisheries due to scientific uncertainty surrounding the lesser/minor species comprising the group. Even with further changes to the decision rules dealing with group species (to identify individual species being harvested in a timely manner) increasing the group TACC won't assist the fisher recoup his financial outlay (from the sourcing of large amounts of group quota units) if the new species or fishing method used to catch it is deemed unsustainable and a restriction is imposed on it. Thus an adhoc expansion of the amount of group TACC is not the answer.

3 Individual Transferable Quota (as Quota Units) *(reg 141JA)*

Quota units are the annual allocation to an individual based on that person's fishery unit holding in the fishery. Quota units for each quota species group would be allocated proportionately to fishery unit holders based on how many fishery units of a particular fish species group they hold. The entitlement holder must also be the holder of a current fishery licence to be eligible for quota unit

allocation. Methodology using the Industry agreed allocation method to determine the amount of quota units allocated to an individual is as follows:

The TACC for a particular species group will be allocated to fishery unit holders commensurate with their share of particular species group units within the fishery. For all species groups the allocation method is the same and can be calculated as follows:

(a) *To determine the amount of a fish species group (in Kgs) allocated to one fishery unit = TACC of a fish species group (in Kgs) / Total number of a fishery units for the species group in the fishery*

(b) *To determine a fishery unit holders total allocation of a fish species group (number of quota units issued) = (Number of a fish species group fishery units held / Total number of a fishery units for the species group in the fishery) X TACC for a fish species group (Kgs)*

As described in section 1.1, the TACC for a fish species group may vary and if amended, the quota units value (as determined by (a)) will vary. As such, the management plan will not include specific references to weights, just the processes described herein (*in Italics*) for determining the value of a fishery unit and allocation of quota units to an individual fishery unit holder. *(Reg 141J)*

4. Licensing *(regs 218, 141E)*

A fishing licence currently provides access to the fishery for licensees, subject to provisions in the Fisheries Act and additional management arrangements in place for that fishery. To assist in the administration of NT Fisheries, unique licence numbers are used as the lynchpin holding the various identifying elements of a complicated structure together. A number of elements, such as party, contact details, vessels, gear, catch and effort logs, fishery units and quota, any special catch or gear conditions and crew are linked to the licence within the database mainframe. The fishing licence is a mechanism that can be used to control bycatch (discards) and gear impacts on the ecosystem.

There are currently two licence categories in the fishery:

a) Unrestricted (have participated in the fisheries 2:1 licence reduction scheme and issued under Fisheries Regulation 141F); and

b) Restricted (have not taken part in the fisheries 2:1 licence reduction scheme and issued under Fisheries Regulation 141D).

Currently, a fishery licence number consists of two parts. One part is an identifier for the fishery, in this case, A18. The other part is the unique four digit licence identification number, either starting from the number 5, (signals participation in the 2:1 licence reduction scheme) or from the number 1, (has not participated in the 2:1 licence reduction scheme). When used to identify an Unrestricted licence, the number is displayed as A18/5xxx and when used to identify a Restricted licence, A18/1xxx.

Licence category for an Unrestricted licence - **A18/5**xxx series
Licence category for a Restricted licence - **A18/1**xxx series

It is proposed all licences current immediately prior to the commencement of the new Regulations will be annulled and licence holders will be eligible to apply for a Timor Reef Fishery (TRF) licence under the new Regulations. The current identifier system will be continued for the new TRF licences and reflect a current unrestricted licences unencumbered status and be shown as A18/5xxx series.

Additionally, it is proposed that a new entrant who is purchasing fishery units OR quota units in the fishery shall simultaneously apply for, and if the current legislative conditions (please refer S11, Fisheries Act) for the issue of licences are met, the Director shall issue a TRF licence (i.e. A18/5xxx series) to the new entrant *(reg 141E).*

All licences will stipulate an agreed minimum holding (refer section 7 for minimum holding details) of quota units before any fishing may commence (*reg 141JE*). Additionally, all licences will continue to allow for nomination of one vessel, using certain specified fishing gear.

5. Transfers

5.1 Licence Transfers

Licences issued under Fisheries Regulation 141F (Unrestricted) are currently fully transferable. Under this proposal, it is not necessary to temporarily transfer (lease) a unrestricted licence as new entrants to the fishery shall be issued an appropriate licence (upon successful application to the Director). A key difference under this proposal is that there will be fishery units attached to the licences which entitle the licence holder to an annual quota unit allocation.

Licences issued under Fisheries Regulation 141D (Restricted) cannot be temporarily transferred, and strict restrictions on future access are placed upon the new holder under the current regulations. Upon the introduction of the proposed Regulations, the restricted licence shall be revoked and one TRF fishery licence issued to the new entrant (upon successful application to the Director) and the now unencumbered fishery units shall be attached to the new licence.

Licences currently in the fishery will be revoked and these licensees are eligible to apply for similar TRF licences to operate in the new 'quota' fishery and will provide for the initial allocation of Fishery units and Quota units (*Regs 217, 218, 219, 221*). Refer to the previous section 4, licencing, for an explanation of licence issues to new entrants who are purchasing fishery units or purchasing quota units in the fishery *(reg 141E).*

5.2 Permanent Fishery Unit Transfer

A licence holder's fishery units may be permanently transferred with the following exceptions pertaining to their transfer *(Subdivision 5)*. The new holder of the transferred fishery unit will not have any quota unit allocation issued until the next licencing period. Additionally, the new holder of the transferred fishery units may not transfer them until the start of the next licencing year.

The minimum amount of fishery units that may be transferred is undecided but will depend on the varying cost of administration to transfer one or a set amount of fishery units. An entitlement holder may permanently transfer some of, or their entire fishery units.

5.3 Temporary Quota Unit Transfer (Seasonal lease)

Quota units may be seasonally leased. A quota unit holder may transfer some or their entire quota unit allocation. Quota units may be transferred only within the fishing period to which the quota relates (*reg 14IJ, JS*).

5.4 Undercatch Provisions *(reg 141JB)*

Undercatch (Carry over) provides relief to operators who encounter circumstances, within a fishing season, which prevent them from taking their quota for a species. Undercatch provides flexibility to take into account the variations in abundance and availability of individual species in this multi-species fishery. Due to legislative difficulties, overcatch will not be included at this time. However, overcatch may be revisited at the next Regulation amendment review.

As there is a delay between when the previous years fishing ceases and when all catch information is entered into the database, carryover is not able to be calculated until the last week of July. A licence holder will be notified of carryover amounts and holdings will be accessible for viewing on the web once the process is completed.

Note that to be eligible to receive carryover, a person must hold a current TRF licence. In the case of a licence holder who only held quota units in the fishery in the previous year, and who has eligible carryover, the licence would need to be renewed before any carryover could be acquitted. The licence holder has until December 31 to have the licence renewed and receive the carryover.

Undercatch arrangements allow eligible licensees the option of having undercatch in one year taken into account in the following year's quota allocation. The major effect of this system is that the take of quota species may vary from the TACC set for any given year.

Given industry structures and practices, retaining a minimal level of undercatch for operator flexibility would seem appropriate. Undercatch arrangements may be utilised if the Director of Fisheries has set a % for the particular species group in that licensing year. The Director of Fisheries will review and set the undercatch % for each species group at licensing time.

Undercatch arrangements would be set in conjunction with TACC's for a fishing year. Any quota unit undercatch amount taking advantage of these arrangements is to be acquitted first *(reg 141J (5 (b))* and is valid for that year only i.e. carried over quota units are not eligible for carryover the following year*, (reg 141JB (6)).*

Quota holders are authorised to carry over eligible ITQ that is not taken during the current fishing period to the next fishing period, up to a maximum 20% of the sum of his annual quota unit allocation if applicable, plus any additional quota units purchased during the year, less any transfers (*reg 141JB(2)).* (See working example in section 12)

6. Permitted fishing gear *(reg 141JD)*

At the commencement of the new plan, licensees will be entitled to use the gear currently permitted in the fishery (vertical lines, droplines and traps). There are currently no limits on the numbers of vertical or drop lines a fisher may utilise. Fish traps have a limit of 45 traps per licence. This current trap limit is proposed to be abolished under the amended regulations *(reg 141JD (1)).*

Developmental trials of finfish longline gear have been conducted in the TRF and nearby Demersal Fishery and the potential impacts of this gear have been evaluated as being sustainable with significant additional monitoring to ensure maintenance of the decision rules (appendix 1). The potential impacts on the fishery's catch composition, other fisheries using demersal longlines such as the Offshore Net & Line Fishery and the ecosystem are deemed to be acceptable. A 2mm limit on the type of mono snood thickness is regulated for finfish longline.

Additionally, increased monitoring rates, Standard Operating Procedures (SOP's), including soak time limits shall be considered for this gear to minimise shark and monitor and maintain TEP bycatch interactions within acceptable parameters. The Finfish longline gear is to be included in the fisheries permitted gear at commencement of the new regulations. Any information collected from intensive monitoring of this gear shall be analysed annually by Fisheries and outcomes discussed at the next review and relayed to the TRFMAC.

The development of alternative or innovative gear types in the fishery is encouraged and all new gear being proposed for trial in the fishery will be subject to approval by Fisheries. Fact finding trials would then be conducted on the gear by the operator to evaluate its potential impacts on the fishery's catch composition, other fisheries and the ecosystem.

7. Minimum Holdings *(reg 141JE)*

Minimum quota unit (quota) holdings, when used in this context, means a predetermined level of quota that must be nominated against a licence and vessel before fishing can commence. Minimum holdings are a mechanism used to reduce the incentive for high-grading and for managing access to non-quota species. A lesser advantage is to address excessive quota splitting resulting in too many vessels operating on fishing grounds and to reduce administration costs of servicing and policing many smaller quota holders.

The Regulations will include specific amounts for minimum holdings required to operate a gear type by an individual licence holder. The minimum holdings amounts will be determined and set by the Minister each year if change is required, at the start of the fishing season.

NOTE: As different gear methods used in the fishery have varying catch rates, the percentage (%) used to determine minimum holdings required by the vessel to fish will vary dependant upon which gear method is used. Minimum Holdings will nominally represent one and a half times the catch from a good fishing trip for each fishing gear type.

7.1 Dropline and Vertical line Minimum Holdings *(reg 141JE(1))*

It is proposed the following mechanism be used to identify the level of minimum holdings for each quota species group when **Dropline and Vertical line** gear methods are used:

- combined Goldband species (57%* of 10,900 kgs), rounded off to: **6200** kgs**
- combined Red snapper species (35%* of 10,900kgs), rounded off to: **3800** kgs**
- combined Group species (9%* of 10,900 kgs), rounded off to: **1000** kgs**

* These figures will change as the catch composition average changes over time.
**Figures rounded off to the nearest 50 kg.

7.2 Fish-traps or Finfish Longline gear Minimum Holdings *(reg 141JE (2))*

It is proposed the following method be used to identify the level of minimum holdings for each quota species group when **Fish-trap or Finfish Longline gear** methods are used:

- combined Goldband species (57%* of 21,800 kgs), rounded off to: **12450** kgs**
- combined Red snapper species (35%* of 21,800 kgs), rounded off to: **7650** kgs**
- combined Group species (9%* of 21,800 kgs), rounded off to: **1950** kgs**

* These figures will change as the catch composition average changes over time.
**Figures rounded off to the nearest 50 kg.

To summarize minimum holding process:

1. *"**When Dropline or Vertical line gear methods are used:** A total minimum holdings of 10,900 Kgs is set proportionate to the rolling three year average catch compositions for each quota species group."*

2. *"**When Fish-traps or finfish longline gear methods are used:** A total minimum holdings of 21,800 Kgs is set proportionate to the rolling three year average catch compositions for each quota species group."*

The level of minimum quota unit holdings are intended to be set so as not to prematurely place inappropriate restrictions on operators, i.e. not so large as to restrict entry to the fishery, but sufficient to discourage high-grading and unrestricted access to non-quota species issues.

A licensee must ensure minimum quota unit holdings for each species group is held prior to commencing a voyage. Suitable penalties for non compliance of these provisions will be imposed.

7.3 Mechanism to determine the rolling three year average quota species groups catch composition *(Agreed policy, not in regs)*

It is anticipated that the catch composition of the fishery may change with the introduction of quota units. To monitor this change the catch composition will be reviewed annually by the TRFMAC. The TRFMAC will recommend the average catch composition for each quota species group using the fisheries catch composition rolling average over the last three years. The current average catch composition will be used to identify the level of minimum holdings for each species group each year as described above.

It is proposed that minimum holdings be determined using the average of the last three years catch composition for the main quota species groups as reported in the annual fishery status reports. For example, average catch composition for years 2007, 2008, 2009 are as follows:

- combined Goldband species (2009-56%, 2008-57%, 2007-58%) average catch composition = 57%
- combined Red snapper species (2009-36%, 2008-33%, 2007-35%) average catch composition = 35%
- combined Group species (2009-8%, 2008-9%, 2007-8%) average catch composition = 9%

Note: the averaged catch composition, when totalled up, may not be 100% due to the multi-year averaging effect by species group.

8. Bycatch *(additional monitoring Reg 141JQ, JP, JR), Agreed policy, note Decision rule tables, not in regs, compulsory monitoring included in regs.*

All Combined bycatch species (e.g. Chinaman fish, red sea bass, toadfish, catfish, starry triggerfish and big eye trevally) currently has a review trigger of 10% of the total annual catch for the fishery.

Potential impacts resulting from changes to bycatch catch composition (particularly potential shark bycatch), arising from the introduction of quota or the use of finfish demersal longline fishing methods, if permitted, are addressed through application of the Decision Rules tables (refer Appendix 1). The issue is specifically addressed by revising the bycatch objectives to maintain shark bycatch weight below 50% of the previous years total bycatch weight estimate, amending performance indicators and placing precautionary triggers and appropriate management actions to be taken if triggered. If an operator wishes to use the finfish demersal longline gear, additional monitoring (at the gear user's expense) is proposed to ensure the fisheries objectives are met *(reg 141JP*).

The TRFMAC will annually review the fisheries catch composition to ensure the bycatch triggers are maintained at an appropriate level. The Decision Rules tables described in Appendix 1 allow for additional observer monitoring at Industry cost if concerns arise over bycatch or other catch issues *(reg 141JR).* The tables also allow for the modification or removal of certain gear from the fishery if concerns cannot be adequately addressed.

9. Monitoring and Reporting *(Regs, Subdivision 4)*

Onboard fishery observers record and monitor target, group and bycatch species. Logbooks currently record target and grouped species by number (trap and dropline gear) and weight (trawl gear). Bycatch species are recorded by weight. Observer data is often used to verify logbook data. To enable the timely identification of individual group species, it is proposed that daily logbooks will be completed and provided to Fisheries at the completion of each trip, and within seven days of

unloading, not monthly as is the case now. Market / product detail logbooks shall also be provided within seven days of the vessel unloading. *(Fisheries Act section 34)* An alternative to trip logbook returns would be modification of the CDR form to provide individual group species to be sorted, weighed and recorded by species. This alternative is considered to be inappropriate, onerous to operators and a needless replication of information gathered already.

Current levels of observer monitoring are sufficient to ensure coverage of fishing activity at current catches. This level of observer coverage will not be adequate to monitor changes in fishery practices anticipated under a quota system. It is proposed that an agreed mechanism be put in place to trigger additional monitoring (refer Appendix 1) *(reg141JR).* To ensure cost effectiveness, any increase in observer coverage should continue to record and validate fishery catches and be linked to the gathering of required scientific data to assist in the confirmation and annual review of the TACC.

Fishery unit and quota unit transfer applications must be made on approved forms to Fisheries and must be approved by the Executive Director of Fisheries (or a nominated person) prior to the quota unit being used *(reg 141JS(2)*).

To minimise 'offshore' compliance costs, enforcement of the quota system will be assisted through the licensee completing a Prior Landing Notice (given by phone 12-24 hrs before landing, nominating time and where in port) (*reg 141JL*), an Unloaded Fish Notice (given by phone within 1 hour after unload, detailing catch weights, transporters, processor) *(reg 141JO),* and a Catch Disposal Record (paper, CDR) designed to verify recorded information about fish catches *(Fisheries Act s34).* The notices and CDR are not intended to replace daily catch and effort logbooks. A Pre-Departure Notice is required to be given before leaving the mooring (given by phone at least 1 hr before undocking nominating time of departure, intended destination, type of gear to be used, confirmation of minimum holdings, etc) *(reg 141JC).*

For the purposes of this framework and subsequent Regulations, reference to a *record* may include a collection of data that contains information such as position marks on an electronic device e.g. a global positioning system (GPS) or plotter. This will allow for Fisheries Officers to examine the track of the vessels last voyage to enable cost effective validation of information provided by the fisher in his compulsory notices.

To ensure effective enforcement of quota, it will be a requirement that any unloading of catch by operators be carried out in Darwin. Fishermen returning to Darwin will be required to contact a nominated phone number twelve to twenty-four hours prior to entering the harbour (i.e. Prior Landing Notice) *(regs 141JM, 141JL).*

In order to ensure the compliance and administrative issues of the new arrangements can be simplified, the plan will **not** allow for transhipping of product *(reg 141JJ).* The capacity to tranship product at sea may be reviewed in the future once the new arrangements have been bedded in. A licensee may apply to the Director seeking once-off approval to tranship quota species at sea only in special circumstances (to be outlined in a written application) *(reg 141JJ (2)).* However, if special dispensation is granted, the unloading of catch in Darwin provision will remain *(reg 141JM).*

Conversion factors for various product forms for individual species will need to be developed in conjunction with Industry. Until these conversions are developed, only the current practice of whole fish product will be permitted to be unloaded *(reg 141JK).* Special arrangements will be considered by the Joint Authority in advance, for Timor Reef Fishery operators wishing to unload processed fish *(reg 141JK(3)).* Special arrangements will not be considered for Timor Reef Fishery operators wishing to unload in other Australian ports. Breaches of notification or unload provisions will attract a suitable penalty.

No quota species intended for sale will be allowed on board a vessel upon commencement of the next voyage *(reg 141JF).* This is required to assist enforcement activities and will greatly reduce the cost of ensuring compliance with the proposed management arrangements. Additionally, before un-docking, a fisher must declare which gear and fishery he intends to fish in that voyage and may only fish in one fishery during a single voyage *(reg 141JC).* Special approval may be sought to fish outside the TRF and, if granted, all fish taken during the voyage will be deducted from the licence holders TRF holdings *(reg 141JI (3)).*

The final design and printing of the CDR intended for use by licence holders is not yet complete. A small working group has been formed by Fisheries to further develop the necessary forms. It is proposed that Parts A & B of the CDR be common to all Parts and will only need to be filled out once as it will be 'carbon copied' to the other pages. Part A will consist of information on the quota holder's licence, vessel, trip, total catch, fish receiver and method of transport details.

Part B of the CDR will record the driver's confirming details. Part A and Part B will be recorded on the first page and will be sent to and received by Fisheries, within three calendar days of the fish being unloaded. A second 'carbon' copy of the first page remains in the book, with a third 'carbon' copy of the first page accompanying the fish to the fish receiver (Trader/Processor, etc.). Part C of the CDR, filled out by the fish receiver or his authorised nominee, shall be completed (and signed) within 50 metres of the vessel unloading and received by Fisheries within three calendar days of receiving the fish. Fish may only be sold to the holder of a current fish trading licence issued by NT Fisheries such as a Fish Retailer licence, Fish Broker licence or a Trader/processor licence *(reg 158A)*.

Penalties to an operator for submitting an *incomplete* notice or CDR record shall reflect the seriousness of the breach and be a significant deterrent to operators (*Schedule 6, FINS*). Penalties for submitting *incorrect* information in a notice or CDR form shall be deemed to be a fraudulent act against the sustainability of the fishery and the penalty shall reflect the seriousness of the act *(Fisheries Act s34).*

A guide booklet to assist operators in filling out the new forms and giving notices is being prepared by Fisheries. It is intended the forms and notices guide will be distributed to all holders of quota. A risk based compliance program and catch monitoring program will be implemented on commencement of the amended regulations *(regs 141JQ, 141JR).* In addition, Vessel Monitoring Systems (VMS) or Electronic Monitoring (EM) to be required on all vessels in the fishery is being considered to assist in offshore compliance matters. VMS or EM in the TRF is proposed to be introduced in conjunction with the Demersal and Finfish Trawl fisheries move to QMS. Trials of global positioning or electronic monitoring systems may occur in the TRF prior to this event.

9.1 Scales and weights to be used when quota species are unloaded from vessel. *(reg 141JN)*

A quota unit holder must not unload or attempt to unload a quota species for sale unless the fish is in a whole product form and the quota unit holder has in his or her possession scales suitable for weighing quota species. A quota unit holder must not unload or attempt to unload quota species for sale unless the quota unit holder has in his or her possession a suitable trade weight (certified mass with a current certificate of verification) for the purpose of testing the scales used by the quota unit holder to weigh quota species. On any day that quota species is unloaded, the quota unit holder must use the suitable trade weight to test the scales for accuracy before weighing the quota species. A contravention of this clause is proposed to be a quota unit holder offence.

9.2 Catch not to be transferred between vessels *(reg 141JJ)*

A quota unit holder must not transfer any quota species from one vessel to another without the approval of the Director (*reg 141JJ (2).* A contravention of this clause is a quota unit holder offence.

10. Costs

It is anticipated that there will be some additional financial costs to Government and industry as the fishery moves to a Quota Management System (QMS). With QMS, the timing of CDR data entry becomes critical to effective monitoring of quota allocations. Additionally, strict enforcement of catch landings to ensure compliance becomes critical to maintain confidence in the TACC. This will entail additional resources to be sourced.

Government is unable to support, on behalf of the community, any increase in current management costs that have been associated with implementation of QMS into the TRF.

AFMA's licence fee and quota tiered cost recovery system has been suggested by industry to be used as a guide for setting up a similar cost recovery process for the Timor Reef Fishery quota management. The commonwealth's cost recovery mechanism will be used to attribute costs to individual species group fishery units.

10.1 Review of Current costs

Fisheries have reviewed research, management and administration costs associated with the current administration of the fishery. Fisheries provides funding for two observer monitoring trips per year, a portion of a manager's time (generally as required), a portion of a scientist's time (generally in-depth analysis of fishery) and licensing, registration and logbook data entry and verification.

The current costs of administering the Timor Reef Fishery have not been included into the additional costs referred to in section 10.2. New costs identified as a consequence of moving to quota are outlined below.

10.2 Additional Administration, Management and Research costs

A change to quota management will generate additional costs to government and industry. There may be further costs yet to be identified uncovered as implementation of quota is advanced in the fishery. These costs are additional to those costs attributed to breaches and triggers of management objectives and performance indicators.

Additional 'one off' and ongoing management costs which have been identified and preliminary costings completed are detailed below;

- Design and printing of Catch Disposal Record logbooks
- 'Once off' cost - design and development of an expanded database 'pages' to accommodate entry and acquittal of catch quota
- 'Once off' cost - design, development and maintenance of an expanded Licensing database to enable tracking of fishery unit ownership and quota transfer amongst operator
- additional logbook and licensing operator resources (.5 FTE at AO2 level) to enter and acquit units and CDR data
- database maintenance 5% (TRF ITQ component) of database budget
- Call Centre costs
- Compliance Costs (Est.)

Additional 'once off' setup costs and ongoing costs have been identified for 2010. There are potential savings from current duplicate processes not required under the proposed management (e.g. Timor Reef Fishery Trader/Processor logbooks) which lower the ongoing costs.

10.3 Additional Compliance Costs

An estimate of resources required for risk-based monitoring of the fleet is still being determined by the department and as a result, only a draft costing is included in this study. Compliance costs will need to be included at a later date into the overall recovery proposal. As with the additional management and research costs, details will be provided for industry consideration once available.

Draft:

- 'At Sea' Inspections, activated upon fishery not complying with Management Objectives and triggering an agreed Management Action (refer to Appendix 1) = approx. $xx,xxx k per trip
- Inspection of 5% (TBR) of landings. Based on current charge out rates for police members = approx $xxx per inspection
- Processor inspections, as required inspection regime.

10.4 Cost sharing mechanisms

Revenue raising measures required to share additional costs from industry would start as soon as the scheme is implemented into the fishery. If the scheme is implemented prior to the start of a licencing year, costs will be recovered on a pro-rata basis.

The Northern Territory Seafood Council (NTSC) levy, currently collected at licence application or renewal time by Fisheries on behalf of the NTSC, will not be affected by these measures *(reg 207).* New licences issued to new entrants will be liable for the full NTSC levy in addition to the base level licencing fees discussed in section 10.4.2.

10.4.1 Recovery of 'Once off' start up management costs *(reg 206)*

At the last meeting of the TRFMAC it was resolved to apply to the NTFIRDF for funding of the costs involved in upgrading the database to enable quota monitoring to be effective. Members at the meeting reasoned that the upgrade would not only benefit the TRF but also a number of other fisheries when moving to quota management in the near future.

It is proposed to increase annual licence fees in the first year to account for the once off costs to government. This can be determined by the non-database upgrade, once off costs (CDR's) identified in section 4.1, divided by the total number of licences in fishery. If the regulations commencement date is delayed, then the costs will be applied on a pro-rata basis. These costs are in addition to the base level annual licence fee and fees proposed to cover on-going management costs discussed in the text below.

10.4.2 Recovery of 'on-going' Management Costs *(reg 206)*

It is proposed to retain annual licence administration fees and to increase those fees annually by CPI to offset existing costs to government (i.e. the current 'base level' fee $1015 for 2010-11). This base level fee will also be used to share in the expected additional administration costs of fishery unit and quota unit transfers.

Additionally, determination of a licence holder's 'ongoing' additional costs **after** the first year will be from the Tier 1 mechanism of cost recovery and their licence fee each year will be adjusted accordingly: i.e. Based on a licence holders unit holdings for each species group, not just holding a licence.

As new entrants enter the fishery through purchase of units from other participants, the 'on-going' administration, compliance and management costs will increase proportionately; it is also proposed to apply a 'base level' licence fee to new entrants at the time of fishery unit or quota unit purchase. It is proposed a new entrant successfully applying for a TRF licence would pay a licence fee of 100% of the base level licence fee upon the issue of the licence.

10.4.3 Recovery of Fishery Unit and Quota Unit Transfer Costs (if required)

It is proposed to initially include the administration and management costs of registering changes in the ownership of units and quota in the base level fees outlined in section 10.4.2 above. However, if the transfer costs prove higher than expected, Government reserves the right, in consultation

with industry, to introduce a separate fee for registering changes in ownership (where the individual licensee would pay).

10.4.4 Proposed Mechanism for funding of triggered Decision Rules Management Actions *(regs 206, 208A)*

Management actions need to be defined justified and the cost estimated in order to develop an acceptable, agreed system of cost sharing.

This will be done for each management action and will sit behind the Performance Indicator tables (refer to Appendix 1). Proposed Management Actions (MA) for specific breaches of the Trigger Points (TP) relating to Performance Indicators (PI) have been developed. In the attached PI table, each MA has been allocated a number (MA1, MA2, etc.) to distinguish one MA from another in order to estimate a cost if the MA is activated by a breach of a PI.

A cost recovery mechanism proposed to recover 'ongoing' additional management costs based on a licence holders entitlement holdings, is described below in section 10.4.5 (tier 1).

In addition, it is proposed to structure a two tiered levy which will be applied when a performance indicator trigger point is breached. The costs to be recovered can be put into two different categories, one is a fixed cost per day for an observer to go on a vessel (tier 2), and the other is a variable cost applied to whole of industry to recover the cost to Government in arranging for analysis and reports on behalf of TRFMAC (tier 3). Refer to section 12 for working examples of the tiered mechanisms.

10.4.5 Tier 1 mechanism*(reg 206)*

A Tier 1 cost recovery mechanism is proposed to recover 'ongoing' additional management costs after the first year, plus CPI increases, including any additional compliance costs (yet to be verified). Tier 1 cost recovery is automatically activated annually at allocation/licence renewal time. Licences will not be renewed, or quota units allocated until all outstanding fees and charges are addressed.

10.4.6 Tier 2 mechanism *(Invoiced directly to individual, licence will not be renewed or quota units issued, until all fees are paid) (Fisheries Act, s12, reg 206, 141JA(5))*

It is proposed to apply a Tier 2 cost recovery mechanism to recover the cost of additional observers = 700 penalty units / day. This is applied to an individual licence, when a trigger point is activated and a management action is required. Tier 2 will be applied to an individual licence holder when Management Action (MA) 1 have been activated (refer Appendix 1). When Tier 2 is applied costs will be recovered through the issue of an invoice payable before the next quota or undercatch allocation can be issued.

10.4.7 Tier 3 mechanism*(reg 208A)*

A Tier 3 cost recovery mechanism is proposed to recover the cost to Government in arranging for monitoring, analysis and reports on behalf of TRFMAC. Tier 3 cost recovery is automatically activated when MA 4, 6, 11, 16, 21 or 26 are triggered (see Appendix 1). Industry agrees to fund the cost of the monitoring, analysis and reporting through the automatic activation of Tier 3 – an annual Fishery unit fee per unit allocated to each species group.

10.4.8 Management Costs Recovery Summary

It is proposed to recover costs via the three tier mechanism. Tier 1 will be used to recover 'on-going' additional costs; tier 2 will be used to recover the cost of additional observers (to an individual licence holder) and tier 3 to recover observers, monitoring, research and compliance costs for analysis and reports on behalf of TRFMAC.

Cost sharing arrangements in the **first** year of quota introduction to the fishery are estimated to be ~$3,185.00 per full allocation, or ~$1,592.00 for a half allocation. These figures are derived from applicable 'once-off' costs + the pro-rata application (5/12ths) of the ongoing additional cost estimate. Note that due to the delayed commencement of ITQ's, the base level fee and the NTSC levy have been recovered through current licence renewal processes. The licence fee will be payable on grant of the new TRF licence on the introduction of the Regulations. Once all fees are paid, quota units will be allocated to the licence holder pro-rata to fishery unit holdings.

Ongoing additional administration costs from year 2 are comprised of the estimated ongoing additional costs + base level licence fee for 2011-12 + CPI and will be recovered from the Tier 1 method of cost recovery. These costs will be evaluated each year by the department and amended if required. Compliance costs are still being reviewed and as a result, estimates may change.

11. Additional Considerations

SEWPAC supports the continued reporting of future assessment needs for the fishery, but reinforces the need for the DoR to advise SEWPAC of any intended change to the NT TRF management arrangements, including legislated amendments that may affect sustainability of the target species or negatively impact on group, bycatch, protected species or the ecosystem.

SEWPAC is aware of an industry request to review the levels of permitted gear with a view to develop a formal plan of management. In the event that a formal plan is adopted, DoR will need to seek re-accreditation under Part 13 and Part 13A of the EPBC Act for the new management plan as the current accreditation would be deemed invalid.

12. Working Examples

12.1 Future New Target Species Fishery unit Allocation example

In 2 years time, say a Cod species group makes up ~60% (the actual % will be recommended to the TRFMAC by the TRFAG and considered by the Director) of the combined group species group. The TRFMAC/TRFAG may recommend that a TACC of 100t can be issued. The following amendments are made to the allocation process;

- Combined Goldband snapper species = 899,998kg, 899,998 fishery units, Conversion factor (CF) = 1.000kg/ fishery unit.
- Combined Red snapper species = 1,300,002kg, 1,300,002 fishery units, Conversion factor (CF) = 1.000kg/ fishery unit.
- **New combined Cod species = 100,000kg, 100,000 fishery units, Conversion factor (CF) = 1.000kg/ fishery unit.**
- Combined group species = 415,008kg, 415,008 fishery units, Conversion factor (CF) = 1.000kg/ fishery unit.

Distribution of the cod species fishery units is on a pro-rata basis to TRF licence holders based on licence holders' group fishery unit holdings.

12.2 Fishery unit & Quota unit Transfer examples

The following 4 examples are of likely transactions and how they would occur:
In the first 3 examples, a TRF licence series operator (Lessor) has fishery units to the equivalent of 81,818 kgs Goldband quota units

(1) I wish to transfer 15,000 kgs of Goldband quota units to another licensee in the fishery.

The lessor (operator) completes a temporary quota unit transfer form as lessor for 15,000 kgs of Goldband quota units and the lessee (other licensee) signs the form in acceptance of the quota units. Once approved by Fisheries, the result is as follows:

- Lessor's holdings

- 81,818 Goldband Fishery units (unchanged)
- 66,818 Goldband quota units (note: initially 1 fishery unit = 1 kg = 1 quota unit)

- Lessee's holdings
  - 15,000 Goldband quota units i.e. 15,000kgs quota available for fishing.

(2) I wish to retain my entire quota (to continue fishing this year) but sell my fishery units to a new entrant.

The operator (Lessor) completes a permanent fishery unit transfer form as holder of the entitlement, the new fishery unit holder (Lessee) also completes their details on the form. A start date for the permanent transfer to be effective from is nominated on the transfer forms. The new fishery unit holder must concurrently apply for, and be granted, a TRF licence. The fishery unit transfer and issue of the fishery licence to the new entrant do not occur until the starting period. Once approved by Fisheries, the result is as follows:

- Lessor's holdings
  - 81,818 kgs Goldband quota units available for fishing

- New fishery unit holder's (Lessee) holdings (also applies for a fishery licence)
  - 81,818 Goldband Fishery units i.e. fishery units only, no quota available for fishing in the current year

Note: Lessee would receive quota unit allocation at the start of next licensing year.

(3) I wish to sell all my Goldband fishery units and transfer 50,000 kgs of my Goldband quota units to a new entrant, while retaining 31,818 kgs of Goldband quota units.

The operator completes a permanent fishery unit transfer form as holder of the fishery units and a temporary transfer form for the quota units. The new fishery unit holder (lessee) also completes details on forms. The lessee must concurrently apply for, and be granted, a TRF licence. The operator also completes a quota unit transfer form for 50,000 kgs of Goldband quota units also signed by the lessor. Once approved by Fisheries, the result is as follows:

- Lessor's holdings
  - 31,818 Goldband quota units (1kg = quota unit)

- New fishery unit holder (Lessee) (also applies for a fishery licence) holdings
  - 81,818 Goldband fishery units
  - 50,000 Goldband quota units (1kg = quota unit)

Note: Lessee would receive quota units for his 81,818 Goldband Fishery units at the start of next fishing season.

12.3 Tier 1 mechanism and example

A Tier 1 cost recovery mechanism is applied to recover 'ongoing' additional management costs after the first year of $67,630, plus CPI increases, including compliance costs (yet to be verified). Tier 1 cost recovery is automatically activated annually at allocation/licence renewal time. Licences will not be renewed, or quota units allocated until all outstanding fees and charges are addressed.

Activation of the Tier 1 cost recovery mechanism will apply to all unit holders on a pro rata basis, meaning that every unit holder pays an equal proportion of the costs due for each of the various species groups unit he or she owns.

Quota species	Economic Value To Fishery (2yr ave.)	Species group displayed as	Tier 1 Cost recovery	Cents/unit per Species

	2008 $M	2009 $M	Ave. $M	a % of average Economic Value	(~$67,630* species group %) Total	group quota allocated Tier 1 fee =
Goldband Species group	$4.21	$3.46	$3.84	73.13%	$49,370	$.055 cents/unit
Red snapper Species group	$.77	$.74	$.76	14.4%	$9,468	$.007 cents/unit
Group species group	$.78	$.50	$.64	12.2%	$8,116	$.020 cents/unit

* The $67,630figure used to demonstrate the Tier 1 cost recovery mechanism is only an example to enable the cents/kg fee to be displayed. The actual amount that needs to be recovered will depend upon the final cost once all costs have been verified.

Example; A licence holder owns 81,818 Goldband fishery units, 118,182 Red snapper fishery units and 37,727 by-product fishery units at licence renewal/allocation time. The licence holder would be charged the pro-rata rate from tier 1 of 81,818 @ $.055 cents/fishery unit, 118,182 @ $.007 cents/fishery unit and 37,728 @ $.020 cents/fishery unit, totalling $6,081.82 for that licence holder's share of the costs.

12.4 Tier 3 mechanism and example

Activation of the Tier 3 cost recovery mechanism will apply to all unit holders on a pro rata basis across the differing species groups (to account for varying unit values).

Quota species	Economic Value To Fishery (2yr ave.)			Species group displayed as a % of average Economic Value	Tier 3 Cost recovery (~$65,000* species group %) Total	Cents/unit per Species group quota allocated Tier 3 fee =
	2008 $M	2009 $M	Ave. $M			
Goldband Species group	$4.21	$3.46	$3.84	73.13%	$47,450	$.053 cents/unit
Red snapper Species group	$.77	$.74	$.76	14.4%	$9,100	$.007 cents/unit
Group species group	$.78	$.50	$.64	12.2%	$7,800	$.019 cents/unit

* The $65,000 figure used to demonstrate the Tier 3 cost recovery mechanism is only an example to enable the cents/unit fee to be displayed. Costs applied using a Tier 3 method will be in addition to those 'ongoing' management Tier 1 costs.

Example; A licence holder owns 75,000 Goldband fishery units, 100,000 Red snapper fishery units and 15,000 by-product fishery units at licence renewal/allocation time. The licence holder would be charged the pro-rata rate from tier 3 of 75,000 @ $.053 cents/fishery unit, 100,000 @ $.007 cents/fishery unit and 15,000 @ $.019 cents/fishery unit, totalling $4,960 for that licence holder's share of the costs.

12.5 Undercatch mechanism and example

Rule:

Quota holders are authorised to carry over eligible ITQ that is not taken during the current fishing period to the next fishing period, up to a maximum 20% of his annual quota unit allocation, if applicable plus any additional quota units purchased during the year, less any transfers. (*Reg 141 JA*)

Example:

After all transfer and fishing activity has been accounted for a licence holder still holds the following quota units (i.e. eligible quota units) at the end of the season (midnight 30 June);
25,000 Goldband quota units
15,000 red snapper quota units and,
8,000 Group quota units

To work out what he is entitled to carryover we look at his total quota unit holdings and any transfers to his licence throughout the year. A two step process.

In step one, we review his annual quota unit allocation (1 July, based on his fishery unit holdings, if held, reg 141JA). In this example it was;
80,000 Goldband quota units
110,000 red snapper quota units and,
35,000 Group quota units

In step two we look at quota unit transfers and find that during the year he purchased 20,000 Goldband quota units, 25,000 red snapper quota units and 5,000 Group quota units; and he made no sales giving him total quota unit holdings of (made up from annual allocation + purchases - sales);
100,000 Goldband quota units
135,000 red snapper quota units and,
40,000 Group quota units

Under the undercatch provision, he may carryover 20% of this amount, up to his remaining quota units as at 30 June. In this example, 20% of quota unit holdings are;
20,000 Goldband quota units
27,000 red snapper quota units and,
8,000 Group quota units

The licence holder is entitled to carryover of 20,000 Goldband quota units, 15,000 red snapper quota units and all 8,000 Group quota units.

Note: Any carryover quota units from the year before are not included in these calculations as they cannot be carry-overed. In this example, the licence holder would **not** be entitled to carryover 5,000 of his remaining goldband quota units as the amount was **greater** than the allowed 20% of goldband quota unit holdings. He also had **less** remaining red snapper quota units than he could have carried over. The amount of group quota units remaining equalled the permissible 20% amount so all were eligible for carryover. Note that he is only eligible to carryover remaining (i.e. unused) quota units, up to a maximum of 20% of holdings.

NOTES ON DECISION RULE TABLES:

- Current group level is 87t; expected first year group growth is ~30-40%. Initial activation of data gathering processes should start before this level to ensure adequate protection of minor species. By the time group has doubled from present (2010) levels, TRFMAC should have the necessary information to conduct an informed review of the fishery. To ensure the guidelines are achieved, the following triggers are to be placed at appropriate levels; depending on the amount of group TACC allocated. At 415t, group triggers are, ~30% (=125t), ~40% (=165t), ~45% (=185t).
- The decision rules tables have been updated to replace the specific tonnes triggers with a similar % trigger. This will allow the TACC to be set independently without having to amend the decision rules tables each time.
- Additionally, in order to accommodate industry group amount concerns and maintain environmental integrity of individual species within the increased group TACC, additional group triggers have been included to maintain confidence in the TACC, identify any 'growth' species earlier, and if required, carry out specific research (at industry cost) to ensure its sustainability.
- Observer rates have been clarified with one industry funded trip per year for every 500t over 1000t (total combined annual catch). Fisheries currently monitors fishery under 1000t per annum.
- T.E.P. and Ecosystem component tables consolidate the fisheries decision rules into one set.

APPENDIX 1. DECISION RULES OUTLINING FISHERY OBJECTIVES, PERFORMANCE INDICATORS, TRIGGERS AND MANAGEMENT RESPONSES

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
All quota / non-quota species	Minimise high grading, transhipping or discarding through; 1. monitoring of quota transfer 2. Observer coverage of a min. 2 trips per year. One observer monitoring trip is carried out for every 250t caught. 3. monitoring of catch lengths and compositions 4. monitoring of minimum holdings 5. in port inspection of vessels on arrival as required 6. Monitoring market conditions 7. monitoring of multi-agency offshore reports relating to transhipping of catch at sea	1. Analysis of individual catch return data shows no anomalies 2. No reported incidences of high grading or discarding occurring 3. Minimum holdings verified 4. Observer data validates catch composition and catch returns. Length frequency data shows no anomalies No indications of localised depletion of a species 5. Industry, Scientists, SEWPaC or Managers are satisfied with operations 6. No reported incidences of transhipping. Fisheries Officers satisfied with compliance in offshore operations 7. Validation of catch required when finfish long-line is on a vessel.	1. Breach of performance indicators by operator/s (relates to PI1, 2). MA1, MA3 activation. 2. Scientists have a concern for sustainability of a species (PI2, 4, 5). MA3 activation. 3. Breach of minimum holdings (PI3). MA2 activation. 4. Breach of compliance in offshore operations (PI1, 6). MA1, MA3 activation. 5. Total combined annual catch is higher than 1000t (PI4, 5). MA4 activation. 6. Finfish long-line is on a vessel (PI2, 7). MA1 activation.	MA1. Any operator in breach must arrange for at least 1 additional observer trip to evaluate their fishing operations within 1 month. If TP 6 is activated, any operator who uses finfish longline must either; install approved monitoring equipment; or, notify the Director within 14 days of first voyage to arrange for additional monitoring with the Director within two months at own cost approx. 700 penalty units / day. It is proposed to have one monitored trip for each three months of operations thereafter. Costs are proposed to be recovered via the Tier 2 mechanism. MA2. No entry to the fishery until formal verification of minimum holdings MA3. TRFMAC to review fishery operating practices MA4. Observers to carry out one additional trip per year for every 500t over 1000t to validate catch composition and catch returns at industry expense. Additional costs are proposed to be recovered annually via Tier 3 mechanism. Note: The Joint Authority may require an operator who has been convicted of an offence, or has been issued and has paid a FINS notice, to either, take an observer on board or install an electronic monitoring system within 3 months.

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
Combined Goldband species	8. Maintenance of TACC 9. TRFMAC, Scientists, SEWPaC and Managers satisfied with sustainability and TACC value	8. Confirmation of TACC 9. Analysis of individual catch return data shows no anomalies 10. No reported incidences of high grading or discarding occurring 11. Minimum holdings verified 12. Observer data validates catch composition and catch returns. Length frequency data shows no anomalies No indications of localised depletion 13. Industry, Scientists, SEWPaC or Managers are satisfied with operations	7. Breach of performance indicators by operator/s (PI9, 10, 11). MA1, MA5, MA6, MA8 activation. 8. A 30% decline in catch from the previous year (PI12, 13). MA5, MA7 activation. 9. When 55% of the TACC is taken in a year (PI8). MA5 activation. 10. When 80% of the TACC is taken in a year (PI8, 12, 13). MA6 activation. 11. When 90% of the TACC is taken in a year (PI8, 12, 13). MA7 activation. 12. When TACC is taken in a year. MA9 activation.	MA5. Observers gather data (~500 otoliths, lengths etc) to assist in future research. This information may either be collected 'at sea' or from landed catch. MA6. Analysis of gathered data is undertaken. Approx. $20 per otoliths, + ~$33,000 for Stock Assessment report. Additional costs are proposed to be recovered from industry annually via Tier 3 mechanism. MA7. A review of the appropriateness of the current TACC is undertaken using all data. MA8. TRFMAC to review fishery operating practices. MA9. All activity in the fishery is halted until the next quota allocation period.

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
Combined Red snapper species	10. Maintenance of TACC 11. TRFMAC, Scientists, SEWPaC and Managers satisfied with TACC value	14.Confirmation of TACC 15.Analysis of individual catch return data shows no anomalies 16.No reported incidences of high grading or discarding occurring 17.Minimum holdings valid 18. Observer data validates catch composition and catch returns. Length frequency data shows no anomalies No indications of localised depletion 19.Industry, Scientists, SEWPaC or Managers are satisfied with operations	13. Breach of performance indicators by operator/s (PI15, 16). MA1, MA10, MA11, MA13 activation. 14. A 30% decline in catch from the previous year (PI12,13). MA10, MA12 activation. 15. When 30% of the TACC is taken in a year (PI14, 18). MA10, MA11 activation. 16. When 70% of the TACC is taken in a year (PI14, 18,19). MA11, MA12 activation. 17. When 80% of the TACC is taken in a year (PI19). MA13 activation. 18. When the TACC is taken in a year. MA 14 activation.	MA10. Observers gather data (need ~500 otoliths, lengths etc) to assist in future research. This information may either be collected 'at sea' or from landed catch. MA11. Detailed analysis of all gathered data is undertaken. Approx. $20 per otoliths, + ~$33,000 for Stock Assessment report. Additional costs are proposed to be recovered from industry annually via Tier 3 mechanism. MA12. A review of the appropriateness of the current TACC is undertaken using all data. MA13. TRFMAC to review fishery operating practices MA14. All activity in the fishery is halted until the next quota allocation period.

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
Group species	12. Maintenance of TACC 13. TRFMAC, Scientists, SEWPAC or Managers satisfied with TACC value 14. To identify key group species	20. Confirmation of TACC 21. Analysis of individual catch return data shows no anomalies 22. No reported incidences of high grading or discarding occurring 23. Minimum holdings verified 24. Observer data validates catch composition and catch returns. Length frequency data shows no anomalies No indications of localised depletion of a species 25. Industry, Scientists, SEWPaC or Managers are satisfied with operations	19. Breach of performance indicators by operator/s. MA1, MA15, MA16, MA19 activation. 20. Scientists or Managers have a concern for sustainability of species. MA15, MA16 activation. 21. Breach of minimum holdings. MA18 activation. 22. A species increases by more than 15% of the species previous years weight or, becomes dominant relative to other species in the group. MA15, MA16, MA19 activation. 23. A 30% decline in catch from the previous year. MA15, MA17 activation. 24. When 30% of the TACC is taken in a year. MA15 activation. 25. When 45% of the TACC is taken in a year. MA16 activation. 26. When 50% of the TACC is taken in a year. MA17, MA19 activation. 27. When the TACC is taken in a year. MA17, MA 20 activation.	MA15. Observers gather data (otoliths if required, lengths etc) to assist in future research. This information may either be collected 'at sea' or from landed catch. MA16. Detailed analysis of all gathered data is undertaken. Fisheries to investigate species and compile & review biological data, this may require modelling, spatial & stock assessment. Additional costs are proposed to be recovered from industry annually via Tier 3 mechanism. MA17. A review of the appropriateness of the current TACC is undertaken using all data. MA18. No entry to the fishery until formal verification of minimum holdings MA19. TRFMAC to review fishery operating practices MA20. All activity in the fishery is halted until the next quota allocation period.

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
Bycatch species	15. To maintain bycatch at or below 10% of the annual estimated catch weight for dropline and fish-trap fishing gear 16. To maintain bycatch below 25% of the annual estimated catch weight for finfish long-line gear 17. To maintain shark bycatch below 50% of the annual estimated bycatch weight 18. To identify key bycatch species	26. Observer data identifies key species, validates reported discard ratios, including sharks 27. Industry, Scientists, SEWPaC and Managers are satisfied with sustainability of species and general operations 28. Observed or reported shark bycatch increases by more than 30% of the previous year's shark bycatch weight	28. Breach of Performance Indicators (PI26) by operator/s. MA1, MA22, MA23 activation. 29. Scientists, SEWPaC or Managers have a concern for sustainability of a species (PI27, 28). MA21, MA22 activation.	MA21. Fisheries to investigate species and compile & review biological data, this may require modelling, spatial & stock assessment. Additional costs are proposed to be recovered from industry annually via Tier 3 mechanism. MA22. TRFMAC to review fishery operating practices MA23. Gear in the fishery to be reviewed by TRFMAC to evaluate bycatch. Gear may be modified or abolished to address identified issues.

Species or group	Objectives (O)	Performance Indicator (PI)	Trigger point (TP)	Management action (MA)
Endangered, threatened or protected species and/or communities and/or ecosystem components	19. Maintain present levels of interaction between Timor Reef fishing operations and endangered, threatened or protected species and communities. 20. Minimise effects of fishing on ecosystem components 21. Fish traps are individually set, not attached to each other and are not set on reef habitat areas.	29. No unreported incidences of protected species interactions 30. Observer data validates Endangered, Threatened or protected species and/or communities reporting practices. 31. No fish trap damage to reef habitat areas observed or reported. 32. No identification of threatening processes. 33. Industry, Scientists, SEWPaC or Managers are satisfied with sustainability of all species and/or ecosystem components.	30. Breach of Performance Indicators (PI29, 30) by operator/s. MA1, MA24, MA25 activation. 31. Scientists, SEWPaC or Managers have a concern for sustainability of a species and/or ecosystem component (PI32, 33). MA24, MA26 activation. 32. Fish traps are not individually set (PI31). MA25, MA26 activation.	MA24. TRFMAC to review fishery operating practices. MA25. Gear in the fishery to be reviewed by TRFMAC to evaluate impacts. Gear may be modified, or abolished to address identified issues. MA26. Fisheries to investigate species and/or ecosystem component and compile & review relevant data. Additional costs are proposed to be recovered from industry annually via Tier 3 mechanism.

APPENDIX 2 Terminology Definitions

Some new specific definitions may be required:

Combined Red snapper species when used in this division means fish of the species *Lutjanus malabaricus* and *Lutjanus erythropterus.*

Combined Goldband snapper species when used in this division means all fish of the species *Pristipomoides.*

Combined Group species when used in this division means all retained species other than the combined Goldband species or combined Red snapper species and no-take species.

Combined By-catch species when used in this division means all non-retained species.

A18/5xxx series licence means an existing Unrestricted licence category

A18/1xxx series licence means an existing Restricted Licence category

TRF Fishery licence means a licence issued to existing licence holders under the new Regulations or to new entrants who have purchased Fishery units or Quota units.

A **Fishery Unit,** when used in this division means a single share of the total shares available to the Fishery (Initially, a total of 1 fishery unit for each kilogram of quota species TACC are to be issued for the whole fishery).

Entitlement (as fishery units) reflects the number of fishery units held by a licence at the commencement of the new Regulations. It is proposed each unrestricted licence type and restricted licence type will be granted fishery units (or shares) for each of the combined species groups in the fishery dependant upon licence type. Permanent transfers of fishery units may occur. When fishery unit is permanently transferred it is referred to as a 'fishery unit' transfer.

Quota unit when used in this division means the fishery unit allocation. The issue of quota units, i.e. 1 kg of whole fish of a particular species group allocated (in 1 kg units) to a licensee, is based on the entitlement of the licence for that licensing year and the TACC. When a temporary transfer of an entitlements allocation occurs it is referred to as a 'quota unit' transfer.

Individual Transferable Quota (as quota units), when used in this division means the same as a quota unit.

Minimum Holdings (of quota units) when used in this division means a set amount (in kilograms) of quota units for each quota species group a licensee must have attached to the vessel prior to commencing fishing operations. To be reviewed annually and revised if necessary. The reviewed catch composition is applied to this figure and adjusted if necessary.