



**Australian Government**

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**Department of the Environment, Water, Heritage and the Arts**

Assessment of the  
**Northern Territory Demersal Fishery**

**May 2009**

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Assistant Secretary  
Marine Biodiversity Policy Branch  
Department of the Environment, Water, Heritage and the Arts  
GPO Box 787  
Canberra ACT 2601

#### **Disclaimer**

This document is an assessment carried out by the Department of the Environment, Water, Heritage and the Arts of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2<sup>nd</sup> Edition*. It forms part of the advice provided to the Minister for the Environment, Heritage and the Arts on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment, Heritage and the Arts or the Australian Government.

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**Table 1: Summary of the Northern Territory (NT) Demersal Fishery (DF)**

<b>Publicly available information relevant to the fishery</b>	<ul style="list-style-type: none"> <li>• NT <i>Fisheries Act 1988</i></li> <li>• NT <i>Fisheries Regulations 1993</i></li> <li>• NT Annual Fishery Status Reports</li> <li>• NT Fisheries <i>Ecological Risk Assessment of the Northern Territory Offshore Snapper Fisheries, January 2009.</i></li> <li>• <i>Northern Territory Finfish Trawl Fishery Export Exemption Submission, Re-assessment Report February 2009</i></li> <li>• <i>Northern Territory Strategic Plan, fisheries research and development update for 2007-2011</i></li> </ul>
<b>Area</b>	Waters 15 nautical miles from the NT coast to the outer limit of the Australian Fishing Zone (AFZ) excluding the Timor Reef Fishery area (<5% of area currently fished).
<b>Fishery status</b>	The 2007 Annual Status Report for the NTDF notes that catch per unit effort (CPUE) has fluctuated considerably over the history of the fishery. However this is believed to be a reflection of the amount of activity in the fishery rather than changes in fish abundance. Since 2003 effort has greatly increased and this is believed to be a result of greater understanding of the fishing grounds by operators.
<b>Target Species</b>	<ul style="list-style-type: none"> <li>• goldband snapper (<i>Pristipomoids multidentis</i>, <i>P. typus</i> and <i>P. filamentosus</i>);</li> <li>• saddletail snapper (<i>Lutjanus malabaricus</i>); and</li> <li>• red snappers (<i>L. erythropterus</i>).</li> </ul> <p>Information on the biology of these species can be found in the NT Fisheries <i>Ecological Risk Assessment of the Northern Territory Offshore Snapper Fisheries, January 2009.</i></p>
<b>Byproduct Species</b>	<ul style="list-style-type: none"> <li>• red emperor (<i>Lutjanus seabaes</i>);</li> <li>• mixed cods; and</li> <li>• mixed reef fish.</li> </ul>
<b>Gear</b>	<p>Droplines – multiple droplines with 30 to 40 hooks</p> <p>Traps – baited traps set on suitable substrate</p>
<b>Season</b>	Year round
<b>Commercial harvest 2007</b>	330 tonnes (t)
<b>Value of commercial harvest</b>	\$1.94 million
<b>Take by other sectors</b>	Catch of target species taken from inshore waters by recreational and indigenous fishery is considered to be negligible.
<b>Commercial licences issued</b>	There are 60 commercial licences within the NTDF with only eight active in 2007.
<b>Management arrangements</b>	<p>Input controlled through: limited entry, catch and area restriction and gear limitation.</p> <p>Outputs monitored through reference trigger points for the catch of</p>

	target, byproduct and bycatch species.
<b>Export</b>	None reported.
<b>Bycatch</b>	Minimal – estimated to be less than 1% of the catch.
<b>Interaction with Protected Species<sup>1</sup></b>	No interactions reported.
<b>Ecosystem Impacts</b>	Due to the selectivity of the gear utilised in the NTDF, impacts to the physical ecosystem are negligible. In addition, impacts on the food web are unlikely given that take of the target species is limited to estimated ecologically sustainable levels.

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<sup>1</sup> 'Protected species' means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and threatened, marine and migratory species.

**Table 2: Progress in implementation of recommendations made in initial assessment of the NTDF**

Recommendation	Progress	Recommended Action
1. Inform Environment Australia of any future amendment to the management regime for the Demersal Fishery.	<i>Met and ongoing.</i> There have been no changes to the management regime in the Demersal Fishery. A 'Future Plans' section, detailing proposed changes to the fishery (if any), is reported in the Annual Status Reports from 2004. The NT Department of Regional Development, Primary Industries, Fisheries and Resources (DRDPIFR) will inform DEWHA of future amendments to management arrangements in the fishery if they fall outside of annual reporting timeframes. Potential changes to the Demersal Fishery have been published in the 2007 Status Report. As these future plans are further developed, DEWHA will be informed of progress in a timely manner.	Ongoing, generic recommendation ( <b>Recommendation 2, Table 4</b> ).
2. NT Fisheries to move towards analysing effort using a more accurate measure of effort in the fishery than days fished.	<i>Met.</i> Reporting of catch and effort to finer, shot by shot resolutions has been introduced to compulsory logbooks in order to provide information at the appropriate scale to enable better assessment of effort.	DEWHA commends DRDPIFR for introducing finer resolution data collection for catch and effort.
3. NT Fisheries to undertake a risk assessment of the species	<i>Met and ongoing.</i> DRDPIFR has completed a combined offshore	DEWHA commends DRDPIFR for completing the combined offshore snapper fisheries workshop looking at target,

	<p>snapper fisheries risk assessment workshop looking at target, byproduct, bycatch and threatened, endangered and protected (TEP) species. Outcomes from this workshop have revealed no significant impacts from fishing are discernable for species making up red Snapper, goldband snapper and cod groups in the DF. No additional management arrangements are considered necessary at this time.</p>	<p>byproduct, bycatch and protected species and compiling the report to DEWHA including the results from this workshop. A recommendation has been made in this assessment that DRDPIFR updates the information available to management for use in management tools such as risk assessments (<b>Recommendation 4, Table 4</b>).</p>
<p>4. NT Fisheries to maintain data validation mechanisms for target, byproduct, bycatch and protected species interactions and implement alternative data collection validation techniques if observer trips are no longer feasible or are insufficient to provide robust information on the fishery.</p>	<p><i>Ongoing.</i> Capacity to conduct cross-validation analysis between catch returns, market returns and relevant trader-processor returns is available and extensive reviews are conducted as required. Alternative data collection validation is not considered necessary by DRDPIFR at this time due to the scale of the fishery. Observer coverage is planned for 2009 as increasing catches from the fishery indicate further validation processes may be justified.</p>	<p>A recommendation has been made in this assessment for DRDPIFR to implement an observer program adequate to monitor bycatch and interactions with protected species in the NTDF (<b>Recommendation 6, Table 4</b>).</p>
<p>5. NT Fisheries to continue to seek alternative cost effective fishery independent sampling</p>	<p><i>Ongoing.</i> Given the small size and nature of the fishery, DRDPIFR considers logbook monitoring of</p>	<p>As there have been no cost effective fishery independent sampling techniques identified which would be appropriate to the needs of this small fishery, a recommendation has been made</p>

	<p>the fishery remains a feasible measure to provide robust information on the fishery. DRDPPIFR has not identified any cost effective fishery independent sampling techniques which would be appropriate to the needs of this small fishery.</p> <p>Any outcomes from alternative cost effective fishery independent sampling techniques trialled will be reported in the annual status reports.</p>	<p>for DRDPPIFR to review and update stock assessments for goldband snapper, saddletail snapper, red emperor and red snapper by 31 May 2013 and to review trigger reference points for target and key byproduct species, ensuring catch from other sectors is included (<b>Recommendation 4, Table 4</b>).</p>
<p>6. NT Fisheries to continue to work towards more refined yield estimates of principle target species to determine sustainable harvest levels, particularly for Goldband Snapper. By 2006 NT Fisheries to implement an interim precautionary trigger reference point for Goldband Snapper.</p>	<p><i>Ongoing.</i> The identification and analysis of goldband snapper research in order to refine yield estimates is ongoing. This matter will also be referred to the Timor Reef Fishery Assessment Group due to the possibility of shared goldband stocks with the Timor Reef Fishery (TRF). Preliminary results from the GIS project have been able to provide further information on spatial distribution of goldband catch and effort in the fishery to better inform analysis.</p> <p>Fishing activity in the Demersal Fishery increased moderately in 2006, and substantially in 2007. The increased number of participants active in the fishery</p>	<p>DEWHA commends DRDPPIFR for its efforts in commissioning the GIS project aimed at gathering further information on spatial distribution of goldband catch and effort. To improve the data available for the management of target species such as goldband snappers, a recommendation has been made for DRDPPIFR to review and update stock assessments for goldband snapper, saddletail snapper, red emperor and red snapper by 31 May 2013 and to review trigger reference points for target and key byproduct species, ensuring catch from other sectors is included (<b>Recommendation 4, Table 4</b>).</p>

	<p>will assist the catch and effort data gathering process required to refine goldband yield estimates.</p> <p>In the 2004 ecological assessment report, DRDPIFR reports that participants at the 1996 Northern Trawl Fisheries Assessment Working Group workshop considered the 100 tonne sustainable yield estimate for goldband in the Timor Sea (area adjacent to the TRF) and the 100-400 tonne sustainable yield estimate for goldband in the Arafura Sea derived from trawl surveys to be unreliable. Workshop participants considered that these values were likely to underestimate potential yields. Despite their utility, trawl surveys cannot obtain quantitative samples from rough, rocky habitats, and thus have a limited ability to sample all habitats representatively. Recent work from the GIS study would support this assumption as goldband appear to prefer nontrawlable habitats.</p>	
7. NT Fisheries to determine spatial distribution of effort and catch in the fishery and	<i>Ongoing.</i> Preliminary results from the GIS project analysed spatial distribution of effort and catch in	DEWHA commends DRDPIFR for undertaking the GIS project to provide further information on spatial distribution of catch and effort of goldband snappers in the TRF, the information



	<p>the fishery for goldband species. No significant risks for this species have been identified to date given the relatively low level of fishing activity in the fishery.</p> <p>The final GIS report has not yet been published. No significant risks of localised depletion have been identified in the draft report. DRDPIFR will analyse the final report when available to ensure consistency with this position. A copy of the final report will be provided to DEWHA.</p> <p>Over the next two years, DRDPIFR will continue to explore spatial distribution of effort and catch in the fishery and investigate the risk of localised depletions for other major species caught in the fishery.</p>	<p>acquired by this project will also inform the management of the NTDF and progress this recommendation. A recommendation has been made for DRDPIFR to review and update stock assessments for goldband snapper, saddletail snapper, red emperor and red snapper by 31 May 2013 and to review trigger reference points for target and key byproduct species, ensuring catch from other sectors is included. This recommendation will assist DRDPIFR to ensure currency in the estimation of biomass and increase certainty around the estimation of the level of risk of localised depletion for the different species (<b>Recommendation 4, Table 4</b>).</p>
8. NT Fisheries to continue to cooperate with other relevant jurisdictions to pursue complementary management and research of shared stocks for all target and byproduct species, that may be affected by cross-jurisdictional issues.	<p><i>Met and ongoing.</i> The NT participates in cross-jurisdictional workshops with its neighbours annually. In 2008, the annual Northern Australian Fisheries Management workshop was held in Darwin, with the NTDF forming part of discussions regarding complementary research and management arrangements for</p>	<p>DEWHA commends DRDPIFR for participating in annual cross-jurisdictional workshops. A recommendation has been made seeking continuation of this contribution (<b>Recommendation 5, Table 4</b>).</p>

	shared stocks. A number of collaborations, such as the development of a Northern Australian Red Snapper Harvest Strategy framework are currently in place and more are planned.	
9. NT Fisheries to monitor the species composition of bycatch and byproduct with a view to undertaking a more rigorous risk analysis, if there is a significant increase in the catch of individual species.	<i>Ongoing.</i> Logbooks have been upgraded to increase data collected on bycatch and byproduct species. The catch species composition is reviewed annually and to date, DRDPIFR advises that no significant increases in the number of byproduct or bycatch species have been noted. Monitoring of catch species composition will continue.	DEWHA commends DRDPIFR for upgrading logbooks to increase data collection on byproduct and bycatch species and for reviewing this information to monitor the levels of take. A recommendation has been made for DRDPIFR to ensure that an adequate observer program is implemented in the NTDF to ensure detailed monitoring of take ( <b>Recommendation 6, Table 4</b> ).
10. NT Fisheries to continue to monitor the proportion of juvenile/adult snapper landed and implement appropriate management strategies, such as temporal/spatial restrictions, as appropriate.	<i>Ongoing.</i> The size distribution of catch is monitored annually and appropriate management arrangements are in place.	DEWHA considers further progress on this recommendation is required, as there is no information on the collection or utilisation of size distribution data. DEWHA sees the need for DRDPIFR to collect, analyse and appropriately utilise size distribution data in the NTDF. A recommendation has been made to ensure that DRDPIFR introduces an adequate observer program to the fishery. In its submission, DRDPIFR has stated that data collection on size of catch is collected by observers. Therefore, ensuring that an adequate observer program is in place will facilitate the collection of this data. Furthermore, DEWHA has recommended DRDPIFR progresses projects identified as medium and high priorities in the <i>Northern Territory Strategic Plan - Fisheries research and development update for 2007-2011</i> , including projects on the monitoring of species and size composition of the commercial catch as well as the determination of the location of juvenile snapper sites.

**Table 3: DEWHA assessment of the NTDF against the requirements of the EPBC Act related to decisions made under Parts 13 and 13A**

**Please Note** – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Parts 13 and 13A. A complete version of the EPBC Act can be found on the DEWHA website.

**Part 13**

<b>Division 1 Listed threatened species</b> <b>Section 208A Minister may accredit plans or regimes</b>	<b>DEWHA assessment of the NTDF</b>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> <p>if <b>satisfied</b> that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing; and</p> <p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p>	<p>The NTDF will be managed under the Northern Territory <i>Fisheries Act 1988</i> and the Northern Territory <i>Fisheries Regulations 1993</i>.</p> <p>The Management regime for the NTDF was accredited in April 2004. The management arrangements for the NTDF have not significantly changed since this accreditation was granted. As such, the fishery will be reaccredited under Part 13.</p> <p>Currently, evidence suggests that the NTDF has had no interactions with listed threatened species. Therefore, DEWHA considers the current operation of the NTDF not likely to adversely affect the survival or recovery in nature of any threatened species. As such, the NTDF will be reaccredited under Part 13 of the EPBC Act.</p>

<b>Division 2 Migratory species</b> <b>Section 222A Minister may accredit plans or regimes</b>	<b>DEWHA assessment of the NTDF</b>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> <p>if <b>satisfied</b> that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing; and</p> <p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed migratory species or a population of that species.</p>	<p>The NTDF will be managed under the Northern Territory <i>Fisheries Act 1988</i> and the Northern Territory <i>Fisheries Regulations 1993</i>.</p> <p>The management regime for the NTDF was accredited in April 2004. The management arrangements for the NTDF have not significantly changed since this accreditation was granted. As such, the fishery will be reaccredited under Part 13.</p> <p>Currently, evidence suggests that the NTDF has had no interactions with migratory species. Therefore, DEWHA considers the current operation of the NTDF not likely to adversely affect the conservation status of any listed migratory species. As such, the NTDF will be reaccredited under Part 13 of the EPBC Act.</p>
<b>Division 3 Whales and other cetaceans</b> <b>Section 245 Minister may accredit plans or regimes</b>	<b>DEWHA assessment of the NTDF</b>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing</li> </ul>	<p>The NTDF will be managed under the Northern Territory <i>Fisheries Act 1988</i> and the Northern Territory <i>Fisheries Regulations 1993</i>.</p>

<p>if <b>satisfied</b> that:</p> <ul style="list-style-type: none"> <li>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</li> <li>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a species of cetacean or a population of that species.</li> </ul>	<p>The Management regime for the NTDF was accredited in April 2004. The management arrangements for the NTDF have not significantly changed since this accreditation was granted. As such, the fishery will be reaccredited under Part 13.</p> <p>Currently, evidence suggests that the NTDF has had no interactions with whales or other cetaceans in the NTDF. Therefore, DEWHA considers the current operation of the NTDF not likely to adversely affect the conservation status of a species of whales and other cetacean or a population of that species. As such, the NTDF will be reaccredited under Part 13 of the EPBC Act.</p>
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<p><b>Division 4 Listed marine species</b> <b>Section 265 Minister may accredit plans or regimes</b></p>	<p><b>DEWHA assessment of the NTDF</b></p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <ul style="list-style-type: none"> <li>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is: <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> </li> </ul> <p>if <b>satisfied</b> that:</p> <ul style="list-style-type: none"> <li>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</li> </ul>	<p>The NTDF will be managed under the Northern Territory <i>Fisheries Act 1988</i> and the Northern Territory <i>Fisheries Regulations 1993</i>.</p> <p>The Management regime for the NTDF was accredited in April 2004. The management arrangements for the NTDF have not significantly changed since this accreditation was granted. As such, the fishery will be reaccredited under Part 13.</p>

(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed marine species or a population of that species.	Currently, evidence suggests that the NTDF has had no interactions with listed marine species. Therefore, DEWHA considers the current operation of the NTDF not likely to adversely affect the conservation status of a listed marine species or a population of that species. As such, the NTDF will be reaccredited under Part 13 of the EPBC Act.
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<b>Section 303AA Conditions relating to accreditation of plans, regimes and policies</b>	<b>DEWHA assessment of NTDF</b>
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	DEWHA recommends that the NTDF be accredited under sections 208A, 222A, 245 and 265.
(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: <ul style="list-style-type: none"> <li>(a) during a particular period; or</li> <li>(b) while certain circumstances exist; or</li> <li>(c) while a certain condition is complied with.</li> </ul> In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	To satisfy the requirements of section 208A we recommend that NTDF be accredited under Part 13. No condition has been imposed on the NTDF.
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	

### **Part 13A**

<b>Section 303DC Minister may amend list</b>	<b>DEWHA assessment of the NTDF</b>
(1) Minister may, by instrument in published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by: <ul style="list-style-type: none"> <li>(a) including items in the list;</li> <li>(b) deleting items from the list; or</li> <li>(c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or</li> <li>(d) varying of revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or</li> </ul>	

(e) correcting an inaccuracy or updating the name of a species.	
<p>(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <p>(a) must consult such other Minister or Ministers as the Minister considers appropriate; and</p> <p>(b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and</p> <p>(c) may consult such other persons and organisations as the Minister considers appropriate.</p>	<p>The public comment period on the DRDPIFR's submission sought comment on the submission for the NTDF and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>A letter to The Hon Kon Vatskalis MLA, the NT Minister for Primary Industry, Fisheries and Resources advises him of the intention to declare the fishery exempt from the export provisions of the EPBC Act.</p>
(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.	The instrument for the NTDF made under sections 303DC will be gazetted and made available on the DEWHA website.

<b>Section 303FR Public consultation</b>	<b>DEWHA assessment of the NTDF</b>
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <p>(a) setting out the proposal to make the declaration; and</p> <p>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</p> <p>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</p>	Under the EPBC Act, a decision to amend the LENS does not require a public consultation period. However, a public notice, which set out the proposal to grant export approval to the NTDF and included the submission for the NTDF, was released for public comment which closed on 3 April 2009 with no submissions received.
(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.	A public notice, which set out the proposal to grant export approval to the NTDF and included the submission for the NTDF was released for public comment on 5 March 2009 and closed on 3 April 2009, a total of 20 business days.
(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.	No public comments about the proposal were received.

## Part 16

<b>Section 391 Minister must consider precautionary principle in making decisions</b>	<b>DEWHA assessment of the NTDF</b>
(1) The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.	The precautionary principle has been considered when making a decision to include specimens on the LENS.
(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.	

### **Objects of Part 13A**

- (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;
- (b) to protect wildlife that may be adversely affected by trade;
- (c) to promote the conservation of biodiversity in Australia and other countries;
- (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;
- (e) to promote the humane treatment of wildlife;
- (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and
- (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.



## **Final recommendations to DRDPFR for the NTDF**

The material submitted by DRDPFR indicates that the NTDF operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries 2<sup>nd</sup> edition*. DEWHA considers that the fishery is well managed and unlikely to have an unacceptable or unsustainable impact on the environment in the medium term. Overall, DEWHA recognises that the limited entry, catch and area restriction, gear limitation, reference trigger points for the catch of target, byproduct and bycatch species and the Ecological Risk Assessment (ERA) are sufficient to suggest that the fishery is being managed in an ecologically sustainable way.

In making its assessment, DEWHA considers that the range of management measures is sufficient to ensure that the fishery is conducted in a manner that does not lead to overfishing and that stocks are not currently overfished. Taking into account the selectivity of the gear, DEWHA considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.

DEWHA is satisfied that the fishery will not be detrimental to the survival or conservation status of the taxon to which it relates in the medium term. Similarly, it is not likely to threaten any relevant ecosystem in the medium term. To contain and minimise the risks in the longer term the recommendations listed below have been made. DEWHA believes that product taken in the fishery should be exempt from the export controls of Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), with that exemption to be reviewed in five years.

DEWHA considers that the operation of the fishery does not, or is not likely to, adversely affect the survival in nature of a listed threatened species or population of that species, or the conservation status of a listed migratory species, cetacean or listed marine species or a population of any of those species. DEWHA also considers that under the management regime operators are required to take all reasonable steps to avoid the killing or injuring of protected species, and the level of interaction under current fishing operations is low.

For these reasons, the management arrangements as in force under the NT *Fisheries Act 1988* and NT *Fisheries Regulations 1993* were accredited under Part 13 of the EPBC Act in April 2004. As there have been no changes to the management arrangements since the last assessment of the fishery and the level of reported interactions with protected species in the fishery remains very low, DEWHA considers that the fishery should be reaccredited under Part 13.

**Table 4: NTDF Assessment– Summary of Issues, Conditions and Recommendations May 2009**

ISSUE	DEWHA Recommendation
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment, Water, Heritage and the Arts (DEWHA) needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.</p>	<p><b>Recommendation 1:</b></p> <p>Operation of the fishery will be carried out in accordance with the management regime in force under the <i>NT Fisheries Act 1988</i> and the <i>NT Fisheries Regulations 1993</i>.</p> <p><b>Recommendation 2:</b></p> <p>DRDPIFR to inform DEWHA of any intended amendments to the management arrangements that may affect the assessment of the NTDF against the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based.</p>
<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to DEWHA annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration.</p> <p>Annual reports should include: a description of the fishery; management arrangements in place; research and monitoring outcomes; recent catch data for all sectors of the fishery; status of target stock; interactions with protected species; impacts of the fishery on the ecosystem in which it operates; and information outlining progress in implementing conditions and recommendations resulting from the previous accreditation of the fishery (for a complete description of annual reporting requirements, see Appendix B of the Guidelines available from the DEWHA website at <a href="http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html">http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html</a>).</p>	<p><b>Recommendation 3:</b></p> <p>DRDPIFR to produce and present reports to DEWHA annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries 2<sup>nd</sup> Edition</i>.</p>

<p><u>Stock assessment and management arrangements</u></p> <p>The Finfish Trawl Fishery (FTF) and Timor Reef Fishery (TRF), which lie adjacent to the NTDF, target many of the same species as the NTDF, particularly goldband snappers (<i>Pristipomoids multidentis</i>, <i>P. typus</i> and <i>P. filamentosus</i>) saddletail snapper (<i>Lutjanus malabaricus</i>) and red snapper (<i>L. erythropterus</i>).</p> <p>As there is the potential for an increase in effort in the NTDF (there are currently 60 NTDF licenses with only 8 operational), there is potential for an increased take of target and byproduct species. This highlights the need for current stock assessments, and for incorporating take by other fisheries when reviewing the trigger reference points for target and key byproduct species in the NTDF.</p> <p>DEWHA notes that stock assessments for goldband (<i>P. multidentis</i> and <i>P. typus</i> only), red and saddletail snappers and red emperors (<i>Lutjanus sebae</i>) were undertaken in 1994 with the latest stock assessment workshop carried out in 2003. Although stock assessments have been undertaken it is important to ensure they are up-to-date and relevant. Environmental impacts such as cyclones or poor recruitment years could potentially have an unexpected impact on species numbers and may influence sustainable yield estimates.</p> <p>The methodology used for the collection of the data for the original stock assessment in 1994 was trawl survey. As stated by DRDPIFR in its 2009 submission to DEWHA for re-assessment of the NTDF, trawl surveys have their limitations in regards to these species as they have a limited ability to sample all representative habitats particularly rough, rocky habitats.</p> <p>In its 2004 assessment of the NTDF, DEWHA recommended that DRDPIFR develops an interim precautionary trigger reference point for goldband snappers due to low levels of confidence surrounding the potential productivity estimates. DEWHA notes the progress to date (detailed below). However, DEWHA considers that more</p>	<p><b>Recommendation 4:</b></p> <p>DRDPIFR to:</p> <ul style="list-style-type: none"> <li>(a) review and update stock assessments for goldband snapper, saddletail snapper, red emperor and red snapper by 31 May 2013; and</li> <li>(b) review trigger reference points for target and key byproduct species, ensuring catch from other sectors is included.</li> </ul>
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information is required to inform the setting of trigger reference points for goldband snappers as well as for the remaining target species caught in the NTDM, namely the saddletail snapper, red snapper and the red emperor.

DRDPIFR has recently commissioned a GIS project to provide further information on spatial distribution of catch and effort of goldband snappers in the TRF, the information acquired by this project will also inform the management of the NTDF and progress DEWHA's 2004 recommendation mentioned above.

Currently, the information from the 1994 stock assessment is the most recent data available and still being used for the setting of trigger points and to inform the risk assessment for the fishery. DEWHA considers it important that stock assessments are updated on a regular basis, usually every five years. The stock assessment update should also trigger a review of other management tools such as the risk assessment and a review of the effectiveness of the management arrangements in place.

In its 2004 assessment of the NTDF, DEWHA also recommended that DRDPIFR continues to monitor the proportion of juvenile/adult snapper landed and implement appropriate management strategies such as temporal/spatial restrictions as appropriate.

Tropical snappers are particularly vulnerable to fishing pressure due to their biological characteristics of early growth to maximum size, long life, relatively large size at sexual maturity and low natural mortality. Goldband snappers and red emperor stocks have endured overexploitation in other regions in Australia and DRDPIFR must ensure that this does not occur in the NT. The potential for illegal, unregulated and unreported fishing in the area and the fact that species caught in this fishery are also caught in other commercial fisheries in the region are of concern.

In its Ecological Risk Assessment of the NT Offshore Snapper Fisheries, DRDPIFR states that, where possible, observers measure the length of most landed species.

<p>DRDPIFR also presents research findings on size at maturity for several species caught in the fishery. DEWHA notes that there are currently no management measures in place to make use of this information.</p> <p>Although catch levels of target species are currently below the maximum sustainable yield identified in the 1994 stock assessments, due to the reasons identified in this document, DEWHA considers it necessary to update the stock assessments to ensure that catch of these species throughout the FTF, DF and TRF remains at sustainable levels.</p> <p>DEWHA notes that the trigger reference points for goldband and red snappers include catch in the FTF. The setting of trigger points for other major target species such as saddletail snapper should also be considered when reviewing trigger reference points. When reviewing the management arrangements for the NTDF, catches in the FTF and TRF as well as any other commercial fisheries which operate in the region or fish the same stocks should be taken into account.</p> <p>DEWHA also considers DRDPIFR should incorporate all the information available, such as size distribution, size at maturity and spatial distribution of catch and effort when making management decisions or developing management strategies.</p>	
<p><u>Collaborative management</u></p> <p>DEWHA recognises the efforts of DRDPIFR in collaborating with other relevant jurisdictions mainly through the Northern Australian Fisheries Management Forum along with other annual meetings and encourages continued cooperation to enable complementary management and research strategies.</p> <p>Red snapper, red emperor, saddletail snapper and goldband snappers are caught in commercial fisheries in other jurisdictions such as the Queensland Gulf of Carpentaria fisheries, and the Western Australia Northern Demersal Scalefish Managed Fishery.</p>	<p><b>Recommendation 5:</b></p> <p>DRDPIFR to continue to cooperate with other relevant jurisdictions to pursue complementary management and research of target, byproduct and bycatch species, which may be affected by cross-jurisdictional issues.</p>

<p>DEWHA considers that although the interrelationship of stocks across jurisdictions is uncertain, management of these species would benefit from a cooperative approach with other agencies responsible for nearby finfish fisheries.</p>	
<p><u>Bycatch and protected species interactions</u></p> <p>In its 2004 assessment of the fishery, DEWHA recommended that DRDPIFR monitors the species composition of bycatch and byproduct with a view to undertaking a more rigorous risk analysis if there was a significant increase in the catch of individual species.</p> <p>In its 2007 Fishery Status Report, DRDPIFR stated that no observer trips were conducted in the NTDF and that bycatch levels were estimated from the TRF monitoring due to similarities in fishing methods, gear, fishing grounds and catch composition.</p> <p>DEWHA notes that DRDPIFR has planned to incorporate observer trips into the monitoring of this fishery in 2009. However, DEWHA is concerned about the current lack of monitoring of bycatch in the NTDF and the lack of information on the number/percentage of trips planned for 2009.</p> <p>DEWHA acknowledges the current monitoring of byproduct species through logbooks. However, in order to increase the confidence on the assessment of impacts that this fishery may have on bycatch species and species protected under the EPBC Act, it is important that DRDPIFR ensures the implementation of observer trips in the NTDF to collect qualitative and quantitative data on the non-retained catch including bycatch and interactions with protected species.</p>	<p><b>Recommendation 6:</b></p> <p>DRDPIFR to implement an observer program adequate to monitor bycatch and interactions with protected species in the NTDF.</p>

### Research

In the previous assessment of the NTDF, recommendations were made for DRDPIFR to maintain a data validation mechanism for target, byproduct and bycatch catches and protected species interactions, to monitor the proportion of adult and juvenile snapper landed and to work closely with other jurisdictions regarding management and research of shared stock.

DEWHA commends DRDPIFR on the development of the *Northern Territory Strategic Plan - Fisheries research and development update for 2007-2011* (the plan). The plan is reviewed and prioritised annually by DRDPIFR and identifies research needs for 2007-2011 and notes that several of the research projects identified are aligned with DEWHA's concerns outlined in 2004.

The plan states that the outputs of targeted research are integral to the development and monitoring of the efficacy of management arrangements for DRDPIFR, including the NTDF. The plan adopts a hierarchical approach that assigns priority based on the importance of individual projects for the fishery.

The plan identifies multiple research needs for the fishery. Some of the research projects identified are considered high priority by DEWHA in ensuring ecologically sustainable management of the fishery.

DEWHA agrees with DRDPIFR that the determination of sustainable harvest levels for red emperor is a high priority and should be undertaken within the term of this accreditation. This species has been overexploited in other regions and so the careful management of the harvest of this species in the NTDF area is paramount.

The plan classifies the monitoring of species and size composition of the commercial catch as well as the determination of the location of juvenile snapper sites as medium priority projects. DEWHA considers that these projects are aimed at high priority

### **Recommendation 7:**

DRDPIFR to progress projects identified as medium and high priorities in the *Northern Territory Strategic Plan - Fisheries research and development update for 2007-2011*.

uncertainties and are crucial in ensuring ecologically sustainable management of the fishery, as outlined in DEWHA's 2004 assessment of the fishery. DRDPIFR should also aim to undertake these projects during the term of this accreditation.	
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## Acronyms

AFZ	Australian Fishing Zone
CPUE	Cost Per Unit Effort
DEWHA	Department of the Environment, Water, Heritage and the Arts
DF	Demersal Fishery
DRDPIFR	Department of Regional Development, Primary Industries and Fisheries
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ERA	Ecological Risk Assessment
FTF	Finfish Trawl Fishery
GIS	Geographical Information System
NT	Northern Territory
NTDF	Northern Territory Demersal Fishery
TRF	Timor Reef Fishery