



Australian Government

Department of the Environment, Water, Heritage and the Arts

Assessment of the
Northern Territory Trepang Fishery

December 2007

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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 - 2nd 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 Part 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) Trepang Fishery

Publicly available information relevant to the fishery	<ul style="list-style-type: none"> • The Department of Primary Industry, Fisheries and Mines (DPIFM) submission - a report against the Guidelines for the Ecologically Sustainable Management of Fisheries – 2007; • NT <i>Fisheries Act 1988</i>; • NT <i>Fisheries Regulations 1995</i>; • NT Annual Fishery Status Reports; and • Department of the Environment, Water, Heritage and the Arts (DEWHA, formerly the Department of the Environment and Heritage) Assessment Report of the NT Trepang Fishery, 2004.
Area	The NT Trepang Fishery operates in waters seaward of the coast to 3 nautical miles seaward of baselines (i.e. the NT coastline and surrounding islands).
Fishery status	<p>The two performance measures for the fishery, catch rates and average size, indicate that the current level of harvest has not exceeded appropriate levels.</p> <p>Although the total catch and effort decreased from 2004-2006, the total catch and effort have increased since 2006, suggesting stability or increase in the target species population since 2004. There are currently no resource concerns for this species.</p>
Target Species	The target species for the fishery is the sandfish (<i>Holothuria scabra</i>) also known as trepang, beche-de-mer and sea cucumber.
Byproduct Species	Due to the method of operation of the NT Trepang Fishery, no by-product species are taken.
Gear	<p>Harvesting of sandfish usually takes place by walking at low tides and diving in shallow coastal bays and foreshores. Snorkel, scuba and hookah may be used when diving for trepang.</p> <p>Licensees are permitted to harvest all trepang species. Discussions with licensees indicate that the fishery continues to target sandfish in preference to other lower valued species found in tropical waters.</p>
Season	Collection is generally limited to neap tides and the dry season when water visibility improves and cyclone activity is minimal.
Commercial harvest 2004-2007	<p>Total harvest reported:</p> <p>2004 = 102.4 tonnes</p> <p>2005 = 83.1 tonnes</p> <p>2006 = 169.8 tonnes</p>
Value of commercial harvest	The small number of operators in the fishery currently prevents the public release of this data.
Take by other	The recreational take of trepang is not known but likely to be low. No

sectors	<p>trepang catch was reported by recreational fishers during either of the two recreational fishing surveys conducted in 1995 and 2000-01. The local Asian community may take limited amounts for personal consumption.</p> <p>There are no reports of trepang in the catch of fishing tour operator clients for 2006. No take of trepang was reported during the National Recreational Indigenous Fishing Survey of Northern Australia undertaken in 2000-01.</p>
Commercial licences issued	The fishery is permitted to have six commercial licences. There are currently three active licences.
Management arrangements	<p>The NT Trepang Fishery is managed under the NT <i>Fisheries Act 1988</i> and the NT <i>Fisheries Regulations 1995</i>.</p> <p>Management of the fishery seeks to satisfy legislative objectives of conserving, enhancing, protecting, utilising and managing the fish and aquatic life resources of the NT. Key management strategies to achieve the objectives of management include:</p> <ul style="list-style-type: none"> • limiting the number of commercial licensees to a maximum of six; • having two separate management zones, with not more than three licensees authorised to operate in each zone; • limiting fishing to an area extending from the high water to an imaginary line three nautical miles from baselines; • limiting the number of crew and collectors/divers; and • permitting the harvesting of trepang by hand only (gear restrictions).
Export	With limited domestic markets, the majority of the catch (after processing) is exported to Asia.
By-catch	No reported by-catch due to the highly selective hand harvest method.
Interaction with Protected Species	<p>No interactions have been reported to date.</p> <p>Interaction with protected species is likely to be minimal due to the highly selective hand harvest of the target species.</p>
Ecosystem Impacts	Collection of trepang by hand is likely to have minimal impact on the ecosystem.
Impacts on World Heritage property	The Kakadu National Park is listed as a World Heritage Area, however fishing activity (both commercial and recreational) is not permitted in the waterways of Kakadu National Park.

Table 2: Progress in implementation of conditions and recommendations made in initial assessment of the NT Trepang Fishery

Condition	Progress	Recommended Action
<p>Operation of the fishery will be carried out in accordance with the Northern Territory management regime made under the Northern Territory <i>Fisheries Regulations 1995</i> in force under the <i>Fisheries Act 1988</i>.</p>	<p>The fishery has operated in accordance with the legislated management regime over the course of the current export approval.</p>	<p>This condition has been met and will continue to apply under the new Wildlife Trade Operation (WTO) declaration for this fishery for the next three years (see Condition 1, Table 4).</p>
<p>The Northern Territory Department of Business, Industry and Resource Development (DBIRD) will advise the Department of the Environment and Heritage (DEH) of any material change to the Northern Territory Trepang Fishery's management arrangements that could affect the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based, within 3 months of that change being made.</p>	<p>DPIFM have advised that there have been no changes to management arrangements that may affect the sustainability of the target species or negatively impact on by-catch, protected species or the ecosystem.</p>	<p>As part of the new WTO declaration for this fishery, this condition remains in force for a further 3 years (see Condition 2, Table 4).</p>
<p>Reports to be produced and presented to DEH annually, and to include:</p> <ul style="list-style-type: none"> ○ information sufficient to allow assessment of the progress of 	<p>Fishery Status Reports for NT fisheries are prepared annually. The reports are publicly available from the DPIFM website at: http://www.nt.gov.au/dpifm/Fisheries/</p>	<p>As part of the new WTO declaration for this fishery, this condition remains in force for a further 3 years (see Condition 3, Table 4).</p>

<p>DBIRD in implementing the recommendations made in the <i>Assessment of the Northern Territory Trepang Fishery 2004</i>;</p> <ul style="list-style-type: none"> ○ A description of the status of the fishery and catch and effort information; ○ A statement of the performance of the fishery against objectives, performance indicators and measures once developed; and ○ Research undertaken or completed relevant to the fishery. 		
Recommendation	Progress	Recommended Action
<p>Recommendation 1 DPIFM to advise DEH of any material change to the NT Trepang Fishery's management arrangements that could affect the criteria on which EPBC decisions are based, within 3 months of that change being made.</p>	<p>No changes that could affect the criteria on which EPBC Act decisions are based have been made to the NT Trepang Fishery's management arrangements during the past three years. DPIFM will advise DEWHA of any changes to management arrangements within 3 months of that change being made.</p>	<p>This recommendation has been met and will continue to apply under the new WTO declaration for this fishery for the next three years (see Condition 1, Table 4).</p>
<p>Recommendation 2 DPIFM to cooperate with other jurisdictions in efforts to undertake research on key gaps</p>	<p>DPIFM are continuing to liaise with Queensland (QLD) and Western Australia (WA) to develop ways of undertaking further cost-effective</p>	<p>DEWHA acknowledges the substantial progress made on this recommendation, as demonstrated by DPIFM's continued liaison with QLD and WA in order to develop ways to undertake further cost-effective research.</p>

<p>in the knowledge of trepang biology and ecology.</p>	<p>research. There are strong links between the management arrangements in WA and the NT with the fisheries very similar in species make-up and environment.</p> <p>Additionally, the sole operator across these areas, Tasmanian Seafoods is able to provide a good link to ensure cooperative and complimentary research across the relevant states and territories.</p> <p>Precautionary management arrangements are in place for the NT Trepang Fishery. These precautionary arrangements were deliberately developed in acknowledgement of the limited knowledge on trepang biology and ecology. Many information gaps still exist with regard to NT stocks, including life history parameters, abundance, densities and stock structure.</p>	<p>This Recommendation has been revised and will remain in force for a further three years (see Recommendation 1, Table 4).</p>
<p>Recommendation 3 Within 2 years DPIFM to develop and implement a robust research and ongoing monitoring program to provide more accurate assessments of stock abundance and informal performance measures for the fishery. The research and</p>	<p>The development of a scientifically robust research and monitoring program is proceeding in order to provide accurate assessments of stock abundance and assist in the development of suitable performance measures for the fishery. Due to limited financial and human resources, DPIFM has garnered</p>	<p>While some information on species currently harvested exists, there is limited understanding of less valuable or new species. Gaining a basic understanding of new species before harvesting occurs should be of the highest priority. In addition, identified risks include the absence of a robust stock assessment, limited management measures for ensuring that harvest is limited to sustainable levels, limited information on critical elements of trepang biology and ecology, and the potential for localised and serial depletion.</p>

<p>ongoing monitoring program will also aim to determine whether a second species of sandfish, <i>H. scabra</i> var. <i>versicolor</i>, is present in the fishery.</p>	<p>industry support to conduct a research project to collect data on species composition and distribution. The project commenced in late 2006, and should determine whether the species <i>Holothuria scabra</i> var. <i>versicolor</i> is present within the area of the fishery. This industry funded, 3rd party audited research project is expected to take four years to complete. The final report will be peer-reviewed and any relevant findings will be incorporated into future management arrangements. It is anticipated that this project will be able to help fill many of the current information gaps on trepang life history parameters, abundance, densities and stock structure.</p>	<p>Recommendations have been made to continue collaboration with other jurisdictions, DPIFM to continue to identify and implement key research priorities regarding the biology and ecology of <i>Holothuria scabra</i>.</p> <p>Within 2 months of a species other than <i>H. scabra</i> being harvested in the fishery, DPIFM to develop precautionary reference points for that species.</p> <p>This Recommendation has been revised and will remain for a further three years (see Recommendations 1 and 5, Table 4).</p>
<p>Recommendation 4 DPIFM to develop sustainable yield estimates for the NT Trepang Fishery within 2 years.</p>	<p>With research projects in developmental stages, valid sustainable yield estimates for the NT Trepang Fishery are not yet available. In the interim, DPIFM considers the current catch levels to be sustainable and the fishery not to be under threat of over fishing. Low effort levels (three active licences) across a broad geographical range provide protection from over fishing and any perceived threat to sustainability.</p> <p>The status of the fishery is assessed</p>	<p>While some information on species currently harvested exists, there is limited understanding of less valuable or new species. Gaining a basic understanding of new species before harvesting occurs should be of the highest priority.</p> <p>In addition, identified risks include the absence of a robust stock assessment; limited management measures for ensuring that harvest is limited to sustainable levels and limited information on critical elements of trepang biology and ecology, potential for localised and serial depletion.</p> <p>This Recommendation has been revised and will remain for a further three years (see Recommendation 2, Table 4).</p>

	<p>through completion of the Annual Status Report and at the annual Northern Australian Fisheries Management Workshop. As sustainable yield estimates are not available, key variables are monitored to ensure that conditions and trends, principally species composition, catch, effort, catch per unit effort (CPUE), areas fished, average size of trepang and licensee ownership are consistent with ensuring the sustainability of the NT trepang resources.</p> <p>In the interim, DPIFM has adopted a precautionary and conservative approach to managing the fishery. The management arrangements aim to reduce the risk from uncertainties by limiting the total number of licences available, fishing capacity, permitted methods and protecting adequate numbers of breeding stock. The adoption of such a strategy aims to ensure there is a high probability of the fishery not exceeding sustainable harvest levels, acknowledging that historical limits were a significant magnitude higher than current catch .</p>	
<p>Recommendation 5 Within 6 months DPIFM to review the current interim limit</p>	<p>DPIFM have stated that a review of the current limit reference points for sandfish has been undertaken to</p>	<p>DEWHA notes that a review of the current reference points has been conducted using the latest information on biological characteristics. As noted above however, DEWHA considers</p>

<p>reference points for sandfish and implement revised limit reference points, to ensure that they provide a precautionary basis to detect changes and impacts to the target stock. The review will take into account available research on sandfish stocks of Australian beche-de-mer fisheries (including research conducted in the Northern Territory) and the biological characteristics of the target species.</p>	<p>determine if they are providing a precautionary basis to detect changes and impacts to the target stock. The review included the latest available literature and known research, and the biological characteristics of the target species.</p> <p>In summary, DPIFM stated that the review determined that the multi-faceted approach DPIFM is presently employing ensures the general health of the fishery. The current limit reference points are considered sufficiently precautionary in making certain the fishery will continue to be managed in a manner that will not lead to over-fishing. DPIFM state that the current triggers have not been exceeded and it is thus considered inappropriate at this point in time to implement revised limit reference points.</p>	<p>that there are still significant gaps in the knowledge of the basic biology and ecology of trepang.</p> <p>Therefore once further biological and ecological information in line with Recommendation 1 is available, DEWHA recommends that DPIFM carry out another review of the limit reference points, to ensure they are precautionary. This review should involve all relevant stakeholders.</p> <p>A new recommendation has been made (see Recommendation 3, Table 4).</p>
<p>Recommendation 6 DPIFM to develop and implement finer scale data collection and reporting and management measures to mitigate the risk of localised depletion of trepang in the fishery. These measures will be developed and implemented in</p>	<p>Fisheries are working with the sole trepang licence owner to develop and implement finer scale data collection and reporting.</p> <p>Tasmanian Seafoods are currently trialling the use of GPS data loggers on tender vessels used within the NT Trepang Fishery. This equipment,</p>	<p>DEWHA notes the progress within the fishery to develop methods of collecting detailed spatial information on catches, through the commencement of a trial with GPS data logger equipment by Tasmanian Seafoods (the sole trepang licence owner).</p> <p>DEWHA understands that there have been some issues with the technology and that further work is required before it can be implemented. DEWHA considers that the potential risk of</p>

<p>consultation with local indigenous communities, conservation groups and industry.</p>	<p>(produced by Scielex in Tasmania and used within the abalone industry), will provide detailed spatial information on catches taken within the fishery.</p> <p>It will provide more precise information on the time and spatial dynamics of fishery operations and mitigate the potential risk of localised depletion of trepang in the fishery. To date, however, extreme heat and humidity have caused data logger units to fail.</p> <p>Tasmanian Seafoods have commissioned the production of a unit with an external aerial to trial further in the NT. It is anticipated that this will improve reliability of units under extreme weather conditions.</p>	<p>localised depletion is still an issue. If the trial does not prove successful, other methods will need to be confirmed.</p> <p>A new recommendation has been made (see Recommendation 4, Table 4).</p>
<p>Recommendation 7 DPIFM to review the current size limits on target and by-product species to ensure that they are set in a precautionary manner consistent with available research on the size at first maturity of trepang reproductive biology.</p>	<p>Sandfish (<i>H. scabra</i>) is the most important species for the NT Trepang Fishery, being taken in preference to any lower valued species. As a condition of the licence it has a minimum size limit of 16cm. Other holothurians have been identified as possible harvest species and although none have been recorded as being harvested, these species also have minimum size limits set as a</p>	<p>DEWHA acknowledges that the recommendation has been addressed by DPIFM and that research is currently still underway and relevant findings will be incorporated into future management arrangements.</p> <p>The fishery has stated that no by-product is involved. Given the potential for other species to be taken, the fishery is to notify DEWHA within 2 months, of any change/addition to the intended target species and/or any additional trepang species harvested.</p>

	<p>condition of the licence.</p> <p>Current minimum size limits for sandfish have been set in a precautionary manner due to concerns about accurately determining the size at first maturity of trepang.</p> <p>A trepang aquaculture project being conducted at the Darwin Aquaculture Centre by Tasmanian Seafoods is producing good size class and life history data associated with NT trepang species, in particular, <i>H. scabra</i>. It is hopeful that the data produced from this project will aid in developing more accurate minimum size limits for commercially harvested trepang species in the NT.</p> <p>Additionally, further work on growth rates is planned to continue this year with a joint project in collaboration with ACIAR, World Fish and the people of the Warruwi community on Goulburn Island.</p>	<p>A recommendation has been made to continue research through continued collaboration with other jurisdictions, DPIFM to continue to identify and implement key research priorities regarding the biology and ecology of <i>H. scabra</i>.</p> <p>(See Recommendation 1, Table 4)</p> <p>DEWHA expects that any issues identified will be addressed through appropriate management arrangements and DEWHA will monitor this through NT annual reports.</p>
<p>Recommendation 8 Within 2 months of a species other than <i>H. scabra</i> being harvested in the fishery, DPIFM to develop a species-specific interim reference point for that species.</p>	<p>DPIFM state that <i>H. scabra</i> is currently the exclusive target species in the fishery and there are no records of species other than <i>H. scabra</i> landed for the fishery. If sufficient quantities of other species become available and they can be harvested sustainably in</p>	<p>DEWHA recognises that <i>H. scabra</i> is currently the only target species harvested in this fishery. However due to the potential for other species to be taken as by-catch/by-product, DEWHA recommends that precautionary reference points be established from the time other species begin to be targeted, or are taken as by-catch. This is particularly important given the limited knowledge on trepang biology and ecology.</p>

	economic quantities, then a species-specific interim reference point for that species will be developed.	This recommendation will continue. (see Recommendation 5 , Table 4)
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Table 3: The DEWHA assessment of the NT Trepang Fishery against the requirements of the EPBC Act related to decisions made under Part 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 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 13A

Section 303DC Minister may amend list	DEWHA assessment of the NT Trepang Fishery
<p>(1) Minister may, by instrument in published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <p>(a) including items in the list;</p>	<p>No amendment to the List of Exempt Native Specimens (LENS) is required as product sourced from the NT Trepang Fishery’s WTO is already included on the LENS.</p>
<p>(2) 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>DEWHA considers that the consultation requirements have been met. On 10 August 2004, the Minister wrote to Fisheries Ministers seeking their views on inclusion of WTOs on the Exempt List (see sub 04/1543). Responses in support of the proposal were received from all State, Territory and Commonwealth Fisheries Ministers. The public comment period on the DPIFM submission sought comment on the annual reports and submission for the NT Trepang Fishery and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>A letter to the Hon Chris Natt MLA, Minister for Primary Industry, Fisheries and Mines, advises him of the intention to declare the fishery an approved WTO under the EPBC Act.</p>
<p>A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.</p>	<p>The instrument for the NT Trepang Fishery made under sections 303DC will be gazetted and made available on the DEWHA website.</p>

Section 303FN Approved wildlife trade operation	DEWHA assessment of the NT Trepang Fishery
<p>The Minister may, by instrument published in the <i>Gazette</i>, declare that a specified wildlife trade operation is an <i>approved wildlife trade operation</i> for the purposes of this section.</p>	
<p>The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p> <p>(b) the operation will not be detrimental to:</p> <ol style="list-style-type: none"> i. the survival of a taxon to which the operation relates; or ii. the conservation status of a taxon to which the operation relates; and 	<p>The NT Trepang Fishery is consistent with objects of Part 13A (listed after this table) as:</p> <ul style="list-style-type: none"> ▪ the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species; ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1); ▪ the operation of the NT Trepang Fishery is unlikely to be unsustainable and threaten biodiversity within the next three years; and ▪ the <i>EPBC Regulations 2000</i> do not specify fish as a class of animal in relation to the welfare of live specimens. <p>DEWHA considers that the NT Trepang Fishery will not be detrimental to the survival or conservation status of a taxon to which it relates within the next three years, given the management measures currently in place, which include (list management arrangements, for example):</p> <p>Input controlled through:</p> <ul style="list-style-type: none"> ▪ Limited entry (six transferable licences); ▪ Restricted to waters within 3nm of high water mark; ▪ Two separate fishing zones; ▪ Harvesting by hand collection only; and ▪ Limitations on the number of harvesters/divers under each licence.

<p>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</p> <p>(c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and</p> <p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>Output controlled through minimum size limits for target and by-product species.</p> <p>DEWHA considers that the NT Trepang Fishery will not threaten any relevant ecosystem within the next three years, given the management measures currently in place, which include :</p> <p>Input controlled through:</p> <ul style="list-style-type: none"> ▪ Limited entry (six transferable licences); ▪ Restricted to waters within 3nm of high water mark; ▪ Two separate fishing zones; ▪ Harvesting by hand collection only; and ▪ Limitations on the number of harvesters/divers under each licence. <p>Output controlled through minimum size limits for target and by-product species.</p> <p>The <i>EPBC Regulations 2000</i> do not specify fish as a class of animal in relation to the welfare of live specimens.</p> <p>No other conditions are specified in relation to commercial fisheries in the <i>EPBC Regulations 2000</i>.</p>
<p>In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and</p>	<p>DEWHA considers that the NT Trepang will not have a significant impact on any relevant ecosystem within the next three years, given the management measures currently in place, which include:</p>

<p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>Input controlled through:</p> <ul style="list-style-type: none"> ▪ Limited entry (six transferable licences); ▪ Restricted to waters within 3nm of high water mark; ▪ Two separate fishing zones; ▪ Harvesting by hand collection only; and ▪ Limitations on the number of harvesters/divers under each licence. <p>Output controlled through minimum size limits for target and by-product species.</p> <ul style="list-style-type: none"> • limiting the number of commercial licensees to a maximum of six • having two separate management zones, with not more than three licensees authorised to operate in each zone • limiting fishing to an area extending from the high water to an imaginary line three nautical miles from baselines • limiting the number of crew and collectors/divers and • permitting the harvesting of trepang by hand only. <p>The management arrangements that will be employed for the NT Trepang Fishery are likely to be effective. Management arrangements for the fishery are included in the management regime, in force under the NT <i>Fisheries Regulations 1995</i> and the NT <i>Fisheries Act 1998</i>.</p>
<p>In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates</p>	<p>The NT Trepang Fishery will be managed under the NT <i>Fisheries Regulations 1995</i> and the NT <i>Fisheries Act 1998</i>.</p>

<p>is in force in the State or Territory concerned; and</p> <p>(b) whether the legislation applies throughout the State or Territory concerned; and</p> <p>(c) whether, in the opinion of the Minister, the legislation is effective.</p>	<p>The NT <i>Fisheries Regulations 1995</i> and the NT <i>Fisheries Act 1998</i> applies throughout NT waters.</p> <p>The management arrangements that will be employed for the NT Trepang Fishery are likely to be effective. Management arrangements for the fishery are included in the management regime, in force under the NT <i>Fisheries Regulations 1995</i> and the NT <i>Fisheries Act 1998</i>.</p>
<p>For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and:</p> <p>(d) the operation is a commercial fishery.</p>	<p>The NT Trepang Fishery is a commercial fishery.</p>

Section 303FR Public consultation	DEWHA assessment of the NT Trepang Fishery
<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>	<p>DEWHA considers that consultation requirements of the EPBC Act for declaring a WTO have been met. A public notice, which set out the proposal to declare the NT Trepang Fishery a WTO and included the submission, was released for public comment which closed on 22 November 2007 with one submission received.</p>
<p>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.</p>	<p>A public notice, which set out the proposal to declare the NT Trepang Fishery a WTO and included the submission was released for public comment on 24 October 2007 and closed on 22 November 2007, a total of 20 business days.</p>

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.	One public comment about the proposal was received and included in the brief to the Delegate of the Minister for the Environment, Heritage and the Arts.
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Section 303FT Additional provisions relating to declarations	DEWHA assessment of the NT Trepang Fishery
This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the NT Trepang Fishery will be made under section 303FN.
<p>The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p> <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	<p>The standard conditions applied to commercial fishery WTOs include:</p> <ul style="list-style-type: none"> • operation in accordance with the management regime; • notifying DEWHA of changes to the management regime; and • annual reporting in accordance with the requirements of the Australian Government <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. <p>It is recommended the standard conditions are applied to the NT Trepang Fishery WTO Declaration.</p> <p>The WTO instrument for the NT Trepang Fishery specifies the standard and any additional conditions applied.</p>
A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.
The Minister must, by instrument published in the <i>Gazette</i> , revoke a declaration if he or she is satisfied that a condition of the declaration has been contravened.	
A copy of an instrument under section 303FN, or this section is to be made available for inspection on the Internet.	The instrument for the NT Trepang Fishery made under sections 303FN and the conditions under section 303FT will be gazetted and made available on the DEWHA website.

Part 16

Section 391 Minister must consider precautionary principle in making decisions	DEWHA assessment of the NT Trepang Fishery
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 must be considered when making a decision to include specimens on the LENS.
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 DPIFM for the NT Trepang Fishery

The material submitted by DPIFM demonstrates that the management arrangements for the NT Trepang Fishery meet most of the requirements of the Australian Government *Guidelines for the ecologically sustainable management of fisheries – 2nd Edition*.

DEWHA recognises that the combination of input and output controls, such as limited entry, harvesting by hand collection only, and minimum size limits render it somewhat robust to fishing. As such, DEWHA considers that overall the management regime aims to ensure that fishing is conducted in a manner that does not lead to over-fishing and for fishing operations to be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.

While the fishery is relatively well managed, DEWHA has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised:

- The need for research into trepang biology and ecology;
- Establishment of sustainable yield estimates for the target species;
- The need to undertake further review of reference points;
- The need to further develop and implement data collection and reporting measures; and
- The need to develop precautionary reference points for any by-product, species.

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 short term. Similarly, it is not likely to threaten any relevant ecosystem in the short term. To contain and minimise the risks in the longer term the recommendations listed below have been made. The key challenges for this fishery will be obtaining knowledge of the target species and improving understanding of the species distribution and ecology. DEWHA considers that, until it can be demonstrated that these issues have been adequately dealt with, a three year Wildlife Trade Operation declaration is appropriate.

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 plan 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.

Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the declaration (three years). Note that a standard condition of a WTO is an annual reporting requirement, the details of which are provided in Condition 3.

Table 4: NT Trepang Fishery Assessment– Summary of Issues, Conditions and Recommendations December, 2007

	Issue	Condition
1	<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 needs to be advised of any changes that are made to the management regime (for example any changes to fishing methods) 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 and operational amendments that may affect sustainability of the target species or negatively impact on by-product, by-catch, protected species or the ecosystem.</p>	<p><i>Condition 1:</i></p> <p>Operation of the NT Trepang Fishery will be carried out in accordance with the management regime in force under the NT <i>Fisheries Regulations 1995</i> and the NT <i>Fisheries Act 1998</i>.</p> <p><i>Condition 2:</i></p> <p>The Department of Primary Industry, Fisheries and Mines to advise the Department of any intended change to the NT Trepang Fishery’s management arrangements that could affect the criteria on which EPBC Act decisions are based.</p> <p>[generic conditions]</p>

	<p><u>Annual reporting</u></p> <p>It is important that reports be produced and presented to the Department 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 (3 years).</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 <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> available from the Department website at http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html).</p>	<p>Condition 3:</p> <p>DPIFM to produce and present reports to the Department annually as per Appendix B of the <i>'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition'</i>.</p> <p>[generic condition]</p>
	<p>Issue</p>	<p>Recommendation</p>
2	<p><u>Further research into knowledge of Trepang biology and ecology:</u></p> <p>In the 2004 assessment of the fishery, a recommendation was made for DPIFM to cooperate with other jurisdictions in efforts to undertake research on key gaps in the knowledge of trepang biology and ecology.</p> <p>The Department acknowledges the substantial progress made on this recommendation, as demonstrated by DPIFMs continued liaison with Queensland (QLD) and Western Australia (WA) in order to develop ways to undertake further cost-effective research.</p> <p>However, the Department notes that there are still significant gaps in the understanding of the basic biology and ecology of <i>H. scabra</i> which is fundamental to the ecological sustainable management of the fishery including:</p>	<p>Recommendation 1:</p> <p>Through continued collaboration with other jurisdictions, DPIFM to continue to identify and implement key research priorities regarding the biology and ecology of <i>H. scabra</i>.</p>

<ul style="list-style-type: none"> • Juvenile ecology and habitat preference • Reproduction (fecundity, reproductive strategy, required density for successful fertilisation) • Recruitment patterns (source/sink populations or localised recruitment) • Basic biology (size at first maturity, growth rates, maximum size and age) • Species distribution • Ecological role of Trepang species <p>The Department recommends DPIFM continue to identify and implement key research priorities regarding the biology and ecology of <i>H. scabra</i>, through continued collaboration with other jurisdictions.</p>	
<p><u>Sustainable Yield Estimates:</u></p> <p>Identified risks in the NT Trepang Fishery include the absence of a robust stock assessment; limited management measures for ensuring that harvest is limited to sustainable levels; limited information on critical elements of trepang biology and ecology; and potential for localised and serial depletion.</p> <p>Sustainable yield estimates are important to the sustainable management of the fishery. A recommendation was included in the 2004 assessment for the development of sustainable yield estimates.</p> <p>The Department notes that a large scale research project has commenced in late 2006 which expects to collect data on a range of variables that will assist in determining a meaningful precautionary yield. The Department is also aware that the first phase of this project is nearing completion with a presence/absence survey of the 10m contour line between the WA and QLD borders finalised in late 2007. The project is expected to take up to four years.</p>	<p>Recommendation 2:</p> <p>Within 2 years, DPIFM to commence developing meaningful precautionary yield estimates for <i>H.scabra</i> in the NT Trepang Fishery, with the aim to commence implementing yield estimates within 3 years.</p>

	<p>The Department recommends that as the project has been conducted for 1 year so far, the Department considers that meaningful precautionary yield estimates be developed by DPIFM within the next 2 years, with the aim of implementing in 3 years (within the term of the WTO).</p>	
	<p><u>Review of reference points:</u></p> <p>The Department notes that a review of the current reference points has been conducted using the latest information on biological characteristics. As noted above however, the Department considers that there are still significant gaps in the knowledge of the basic biology and ecology of trepang.</p> <p>Therefore once further biological and ecological information (in line with Recommendation 1) is available, the Department recommends that DPIFM carry out another review of the limit reference points, to ensure that they are precautionary. This review should involve all relevant stakeholders.</p> <p>The review should take into account available research on <i>H. scabra</i> stocks and the biological characteristics of the target species.</p>	<p>Recommendation 3:</p> <p>Using information and research relevant to the fishery, DPIFM to review the current limit reference points for <i>H. scabra</i>, to ensure that they provide a precautionary basis to detect changes to and impacts on the stock.</p>
	<p><u>Development and implementation of data collection and reporting:</u></p> <p>Adequate data collection is important to prevent any risks associated with localised and serial depletion. The Department notes the progress within the fishery to develop methods of collecting detailed spatial information on catches, through the commencement of trial GPS data logger equipment. The Department understands that there have been some issues with the technology and that further work is required before it can be implemented.</p> <p>The Department recommends that within 12 months, DPIFM to develop and implement, where appropriate, data collection, reporting and management measures to mitigate the risk of localised and serial depletion.</p>	<p>Recommendation 4:</p> <p>Within 12 months, DPIFM to develop and implement appropriate data collection, reporting and management measures to mitigate the risk of localised and serial depletion.</p>

Precautionary reference points for potential by-product species:

The Department notes that *H. scabra* is currently the only target species harvested in this fishery and that to date there has been no records of other species landed in the fishery. DPIFM indicated in its submission that, if sufficient quantities of other species become available and they can be harvested sustainably in economic quantities, then a species-specific interim reference point for that species would be developed.

Due to the potential for other species to be taken as by-product, the Department recommends that precautionary reference points be established within 2 months of a species other than *H. scabra* being harvested in the fishery. This is particularly important given the limited knowledge on trepang biology and ecology.

Recommendation 5:

Within 2 months of a species other than *H. scabra* being harvested in the fishery, DPIFM to develop precautionary reference points for that species.

Acronyms

EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DEWHA	Australian Government Department of the Environment, Water Heritage and the Arts
DPIFM	Northern Territory Department of Primary Industry, Fisheries and Mines
IUU	Illegal, Unregulated and Unreported
LENS	List of Exempt Native Specimens
NSAG	Northern Stock Assessment Group
NT	Northern Territory
PMFES	Northern Territory Police Marine, Fisheries and Enforcement Section
WTO	Wildlife Trade Operation
QLD	Queensland
WA	Western Australia
CPUE	Catch per Unit (of) Effort
GPS	Global Positioning System