



Australian Government

Department of the Environment, Water, Heritage and the Arts

Assessment of the
East Coast Bêche-de-mer 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*. It forms part of the advice provided to the Minister for the Environment, Water, 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 East Coast Bêche-de-mer Fishery (ECBDMF)

<p>Publicly available information relevant to the fishery</p>	<ul style="list-style-type: none"> • Queensland (QLD) <i>Fisheries Act 1994</i>. • QLD <i>Fisheries Regulation 1995</i>. • QLD <i>Marine Parks Act 2004</i>. • <i>Great Barrier Reef Marine Park Act 1975</i> (Commonwealth) • Annual Status Report 2005 – East Coast Bêche-de-mer fishery, December 2005. • Annual Status Report – East Coast Bêche-de-mer Fishery, April 2007. • Annual Status Report – East Coast Bêche-de-mer Fishery, 2007.
<p>Area</p>	<p>All waters adjacent to the QLD east coast, from Tin Can Bay to Cape York.</p>
<p>Fishery status</p>	<p>Largely unknown, however data suggests:</p> <ul style="list-style-type: none"> Black teatfish – overfished Sandfish – overfished in some areas White teatfish – fully exploited Other species – unknown
<p>Target Species</p>	<p>All species of sea cucumber can be harvested, with the exception of black teatfish (<i>Holothuria whitmaei</i>) whose quota is currently 0 tonnes (t).</p> <p>The primary target species currently include:</p> <ul style="list-style-type: none"> - Burrowing blackfish (<i>Actinopyga spinea</i>) - White teatfish (<i>Holothuria nobilis</i>) - Blackfish (<i>Actinopyga miliaris</i>) <p>Other sought after species include:</p> <ul style="list-style-type: none"> - Prickly redfish (<i>Theleota ananas</i>) - Sandfish (<i>Holothuria scabra</i>) - Golden sandfish (<i>Holothuria scabra</i> var. <i>versicolor</i>) - Elephant trunkfish (<i>Holothuria fuscopunctata</i>) - Deepwater redfish (<i>Actinopyga echinites</i>) - Surf redfish (<i>Actinopyga mauritiana</i>) - Lollyfish (<i>Holothuria atra</i>) - Greenfish (<i>Stichopus chloronotus</i>) - Curryfish (<i>Stichopus variegates</i>)
<p>Byproduct Species</p>	<p>None.</p>
<p>Gear</p>	<p>Hand harvest. Divers use hookah, Self Contained Underwater Breathing Apparatus (SCUBA) or free dive.</p>
<p>Season</p>	<p>All year, highest harvest usually in summer months.</p>
<p>Commercial harvest (2004/05-2006/07)</p>	<p>2004/05: 285 t. 2005/06: 276 t. 2006/07: 284 t.</p> <p>In 2006/07 burrowing blackfish made up approximately 69% of the total catch. White teatfish (15%) and blackfish (7%) were other key species</p>

	harvested. There was a major drop in the catch and catch rate of sandfish from 2005/06 to 2006/07.
Commercial Gross Value of product 2006/07	Approximately \$6.5 million.
Take by other sectors	Recreational and Indigenous harvest levels are uncertain but considered negligible.
Commercial licences issued 2006/07	18 licences held by 3 operators. 7 boats accessed the fishery in 2006/07.
Management arrangements	<p>Output controlled through a Total Allowable Catch (TAC), which was 380 t gutted wet weight in 2006/07. Split into 0 t of black teatfish, 89 t of white teat fish (further divided into 2 zones) and 291 t of all other species. Also a number of species specific size limits.</p> <p>Input controlled through limited entry and a rotational zoning scheme (RZS). The fishery is divided in 154 zones (each approximately 100 to 150 square nautical miles). Each zone can be fished for a maximum of 15 days in any one year and each zone is allocated for fishing in one out of every three years.</p>
Export	Primary markets are Hong Kong and Singapore.
Bycatch	None.
Interaction with Protected Species	None reported and hand harvest methods poses negligible risk.
Ecosystem Impacts	Minimal in respect to harvest method. However, preliminary research indicates that sea cucumbers play an important role in the nutrient recycling pathways of benthic environments.
Impacts on World Heritage property	<p>The assessment also considered the possible impacts on the World Heritage values of the Great Barrier Reef World Heritage Area (GBR WHA).</p> <p>Since the rezoning of the Great Barrier Reef Marine Park (GBRMP) came into effect on 1 July 2004, approximately 37% of commercially diveable beche-de-mer habitat in the GBRMP is closed to fishing.</p> <p>On this basis, the Department of the Environment, Water, Heritage and the Arts (DEWHA) considers that an action taken by an individual fisher, acting in accordance with the ECBDMF's management regime, would not be expected to have a significant impact on the World Heritage values of the Great Barrier Reef.</p> <p>Any significant change to existing practices, which is likely to significantly impact on the Great Barrier Reef's World Heritage values, may require approval by the Australian Government Minister for the Environment, Heritage and the Arts.</p>

Table 2: Progress in implementation of recommendations and conditions made in initial assessment of the ECBDMF

Condition	Progress	Recommended Action
<p>Operation in accordance with the management regime.</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 (WTO Condition 1).</p>
<p>Annual reporting on the following:</p> <ul style="list-style-type: none"> • Progress on implementation of the recommendations; • Status of the fishery and annual catch and effort information; • Performance against objectives, performance measures and reference points once developed; and • Research undertaken or completed relevant to the fishery. 	<p>Annual status reports for the ECBDMF have been prepared for the 2004/05, 2005/06 and 2006/07 fishing seasons. These reports are publicly available from the Department of Primary Industries and Fisheries (DPI&F) website. The reports contain information on progress in implementing recommendations, catch and effort trends and research undertaken or completed relevant to the fishery. DPI&F has developed a draft Performance Measurement System (PMS) for the ECBDMF that includes performances measures and reference points for key target species, protected, endangered and threatened species and ecosystem impacts. The draft PMS also includes a recovery strategy for overfished species. DPI&F will report on the performance of the ECBDMF against the performance measures outlined in the PMS, once finalised, in the annual status reports.</p>	<p>DEWHA considers that this condition has been met and notes that, as part of the new WTO declaration for this fishery, this condition remains in force for a further three years (WTO Condition 3).</p>
Recommendation	Progress	Recommended Action
<p>DPI&F to inform the Department of the Environment and Heritage (DEH, now DEWHA) of any intended amendments to the management arrangements that may affect sustainability of the target species or negatively impact on the ecosystem.</p>	<p>DPI&F have advised DEWHA of several amendments to the management arrangements of the ECBDMF since the December 2004 assessment.</p> <p>In 2005/06 the quota for the white teatfish southern zone was reduced from 70 t to 32 t. The quota for the 'other species' was increased by 38 t to account for this reduction.</p>	<p>This recommendation has been met. DEWHA expects that DPI&F will advise of any changes to the management regime in the future. This remains a condition in force under this new export approval (WTO Condition 2).</p>

	<p>In 2006/07 a requirement for prior reporting to the Automated Interactive Voice Response system was introduced. A change was also made to set quota for salt/blanced weight rather than wet gutted weight which changed the TAC and species specific TACs according to conversion factors.</p> <p>In 2007/08 DPI&F advised DEWHA of proposed adjustments to the quota for the northern zone white teatfish, with the reduced portion reallocated to the 'other species' component.</p>	
<p>From 2005, DPI&F to report publicly on the status of the fishery on an annual basis, including explicit reporting against each performance measure once developed.</p>	<p>Annual status reports for the ECBDMF were prepared for the 2004/05, 2005/06 and 2006/07 fishing seasons. Annual status reports are publicly available from the DPI&F website. The reports contain information on progress in implementing recommendations, catch and effort trends and research undertaken or completed relevant to the fishery. DPI&F will report on the performance of the ECBDMF against the performance measures outlined in the PMS, once finalised, in the annual status reports.</p>	<p>None. DEWHA considers that DPI&F has met this recommendation.</p>
<p>DPI&F to conduct a risk assessment to ensure compliance resources are targeted to the areas of greatest risk within two years.</p>	<p>A Compliance Risk Assessment (CRA) was completed in 2005. The highest priority risks identified for the ECBDMF were exceeding the annual quota, failure to comply with vessel monitoring system (VMS) and manual reporting conditions and failure to provide buyers return within the required period. A number of activities were also rated as having a moderate risk.</p> <p>Detailed strategies addressing the identified risks have been developed and implemented through the Queensland Boating and Fisheries Patrol.</p>	<p>None. DEWHA considers that this recommendation has been implemented.</p>
<p>DPI&F to develop and implement a robust system to validate commercial</p>	<p>The first data validation exercise for the ECBDMF was conducted in 2005/06. While this indicated a high</p>	<p>None. DEWHA considers that this recommendation has been implemented and</p>

<p>logbook reporting of catch and effort in the fishery within two years.</p>	<p>degree of accuracy in catch reporting some key areas for improvement in the data collection systems were identified. These have been addressed through the implementation of a new logbook and a new quota reporting system.</p> <p>DPI&F have an ongoing commitment to validating fishery dependent data. The next validation exercise for the ECBDMF is planned for 2007/08.</p>	<p>notes DPI&F's ongoing commitment to undertake further validation exercise in the ECBDMF. DEWHA congratulates DPI&F on the development of new reporting procedures and logbooks in response to the findings of the first validation exercise.</p>
<p>DPI&F to cooperate with other jurisdictions in efforts to undertake research on key gaps in beche-de-mer biology and ecology.</p>	<p>DPI&F are collaborating with the Australian Fisheries Management Authority (AFMA) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in the development of a spatially-based model for estimating the beche-de-mer resource for the ECBDMF and the Coral Sea Fishery.</p> <p>DPI&F continue to identify beche-de-mer research as a high priority for funding through the Queensland Fishing Industry Research Advisory Committee (QFIRAC).</p>	<p>The implementation of this recommendation is ongoing. DEWHA is concerned that limited information is available on the burrowing blackfish, which is now a key target species of the fishery. The importance of sea cucumbers to marine ecosystem functioning is also poorly understood (Recommendation 3).</p>
<p>DPI&F to continue to refine analysis of fishery dependent data to ensure that the status and performance of the fishery can be adequately reviewed.</p>	<p>Review reference points (RRPs) are in place for all species taken in the fishery. These have been set conservatively, based on information on beche-de-mer population dynamics from surveys undertaken in the Torres Strait. When reached, RRP trigger a resource assessment for the relevant species. Assessment methods and results are reviewed by the Harvest Fishery Scientific Advisory Group (SAG) and translated into appropriate TACs. If a resource assessment is not completed within 12 months of a RRP being triggered, the RRP becomes the TAC for that species until an assessment is completed. This process has already been undertaken for burrowing blackfish in Gould Reef and Lizard/Waining Reef</p>	<p>DEWHA congratulates DPI&F and Industry on the development of the RRP for all the species taken in the ECBDMF. However, DEWHA is concerned that the total catch of some species, such as burrowing blackfish, is currently significantly above the RRP and there is no performance measures included in the draft PMS to monitor the status of these species. DEWHA notes that when catches increase above the RRP a resource assessment is required, therefore performance measures related to the outcomes of the resource assessments, such as limit reference points related to available biomass estimates</p>

	following triggering of the RRP in 2003/04.	should be incorporated into the PMS (Recommendation 2).
DPI&F to develop and implement a robust method of monitoring stock status for key target species.	In addition to the RRP and trigger process described above, DPI&F have introduced a new logbook in 2006 which was designed to improve the collection of species-specific fishery-dependent data and will be used in monitoring stock status for target species.	DEWHA considers that this recommendation has been implemented through the RRP's and resource assessment process in place. DEWHA considers that there is scope to strengthen the performance measures for key target species in the draft PMS (Recommendation 2).
DPI&F to obtain estimates of sustainable harvest levels for key target species in the fishery within three years.	TACs are currently set for two species, black teatfish (0 t) and white teatfish (56.8 t in the northern zone and 13 t in the southern zone). DPI&F are currently developing a spatially-based resource assessment for white teatfish in the ECBDMF. Resource assessments have been undertaken for burrowing blackfish in two key areas (see above) and have translated into conservative TACs of 45 t (of an estimated Maximum Sustainable Yield (MSY) of 116 – 185 t) for Gould Reef and 150 t (of an estimated MSY of 605 – 967 t) for Lizard/Waining Reef.	The implementation of this recommendation is on-going. DEWHA considers that the RRP's system in place will ensure that resource assessments are undertaken for species that are taken in significant numbers by the ECBDMF.
DPI&F to develop fishery specific objectives linked to performance indicators and performance measures for all beche-de-mer species and for fishery impacts on the ecosystem within two years. Within three months of becoming aware that a performance measure has not been met, DPI&F to finalise a clear timetable for the implementation of appropriate management responses.	The draft PMS includes three objectives for principal species including: to ensure that fished stocks of sea cucumber are maintained at sustainable levels; to minimise the risk of localised and serial depletion in the fishery and to recover stocks of sea cucumber species, considered to have been fished to below sustainable levels. Performance measures for the objectives include: annual catch against species specific RRP's; effort in any Memorandum of Understanding (MOU) zone exceeding 15 days per year and population density is estimated to be at least 70% of the unfished population	The implementation of this recommendation is ongoing, with the development of a draft PMS. DEWHA considers that there is some scope to include additional performance measures for key target species, such as burrowing blackfish, whose annual catch is significantly higher than the RRP's (Recommendation 2).

	<p>density, respectively.</p> <p>The draft PMS includes the requirement for a review to be undertaken within three months of an indicator being triggered. Pending the outcome of that review, DPI&F will finalise a timetable for the implementation of appropriate management responses if required.</p>	
<p>DPI&F to implement within one year, measures to minimise localised depletion and serial depletion in the fishery.</p>	<p>A RZS (described in detail in Table 1) was introduced to the ECBDMF in 2004/05 through an Industry MOU. There has been no formal incorporation of the MOU provisions into the management arrangements for the ECBDMF.</p> <p>While DPI&F have not formally adopted the industry MOU, the Great Barrier Reef Marine Park Authority (GBRMPA) has mirrored a significant number of the conditions of the MOU in their permits to the fishery operators that allow fishery operations to occur in the marine park.</p> <p>DPI&F have also incorporated adherence to the 15 day rule and spatial zone limitations in the draft PMS.</p>	<p>While DEWHA considers that the intent of this recommendation, the formalisation of MOU provisions, has not been implemented, DEWHA is confident that provisions of the RZS are being closely monitored. There is good alignment between analyses conducted on VMS data by DPI&F and GRBMPA, which suggest there is good adherence to the 15 day rule. Given the high level of cooperation existing between industry and DPI&F, DEWHA does not consider that a recommendation is required at this time. DEWHA expects that if this situation were to change, DPI&F would respond by formally incorporating these provisions into the management regime.</p> <p>DEWHA does consider it a priority that DPI&F conduct an analysis of the effectiveness of the RZS and provide a report to DEWHA on the species composition of the RZS zones (Recommendation 1).</p>
<p>DPI&F to develop and implement a precautionary recovery strategy for overfished species, that specifies reference points linked to management actions, within two years.</p>	<p>The draft PMS includes an operational objective to recover stocks of beche-de-mer species, considered to be below sustainable levels, to a level where a sustainable harvest may be determined. The performance measure is that the available biomass is</p>	<p>The implementation of this recommendation is ongoing; with the development of a draft PMS that includes a specific recovery strategy for overfished species that includes specific targets that need to be met before any</p>

	<p>estimated at above 70% of virgin biomass on historically fished reefs. Upon reaching this level the harvest limit would be set a less than 10% of the estimated biomass. A limit reference point of 50% unfished biomass with three yearly surveys required to ensure biomass remains above this level is also included.</p> <p>While this appears an appropriate recovery strategy at first glance, DEWHA requires further clarification on the implementation of this strategy. It is not clear whether discrete areas could be reopened for an overfished species if the 70% of virgin biomass performance measure was met, if other areas could not meet this requirement.</p>	<p>consideration will be given to allowing the harvest of an overfished species.</p>
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Table 3: The DEWHA assessment of the ECBDMF against the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) related to decisions made under Parts 13 and 13A

Part 13

Section 208A Minister may accredit plans or regimes	DEWHA assessment of the ECBDMF
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <ul style="list-style-type: none"> (c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is: <ul style="list-style-type: none"> i. made by a State or self-governing Territory; and ii. in force under a law of the State or self-governing Territory; <p>if the Minister is satisfied that:</p> <ul style="list-style-type: none"> (f) the plan or regime 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 (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>The ECBDMF will be managed under the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>.</p> <p>The management regime for the ECBDMF was accredited in December 2004. DPI&F advised DEWHA of several amendments to the management arrangements for the ECBDMF since this accreditation was granted. DEWHA agreed that the amendments did not significantly affect the sustainability of the ECBDMF and that a new Part 13 declaration was not required at that time.</p> <p>There have been no protected species interactions reported in the ECBDMF since 2004. Given the highly selective, hand harvest method employed in the fishery, DEWHA considers the current operation of the ECBDMF is not likely to adversely affect the survival or recovery in nature of any threatened species.</p>

Section 222A Minister may accredit plans or regimes	DEWHA assessment of the ECBDMF
<p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <ul style="list-style-type: none"> (c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is: <ul style="list-style-type: none"> i. made by a State or self-governing Territory; and 	<p>The ECBDMF will be managed under the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>.</p>

<p>ii. in force under a law of the State or self-governing Territory;</p> <p>if the Minister is satisfied 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 survival or recovery in nature of a listed migratory species.</p>	<p>The management regime for the ECBDMF was accredited in December 2004. DPI&F advised DEWHA of several amendments to the management arrangements for the ECBDMF since this accreditation was granted. DEWHA agreed that the amendments did not significantly affect the sustainability of the ECBDMF and that a new Part 13 declaration was not required at that time.</p> <p>There have been no interactions with migratory species reported in the ECBDMF since 2004. Given the highly selective, hand harvest method employed in the fishery, DEWHA considers the current operation of the ECBDMF is not likely to adversely affect the survival or recovery in nature of any listed migratory species.</p>
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Section 245 Minister may accredit plans or regimes	DEWHA assessment of the ECBDMF
<p>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> <p>i. made by a State or self-governing Territory; and</p> <p>ii. in force under a law of the State or self-governing Territory;</p> <p>if the Minister is satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p>	<p>The ECBDMF will be managed under the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>.</p> <p>The management regime for the ECBDMF was accredited in December 2004. DPI&F advised DEWHA of several amendments to the management arrangements for the ECBDMF since this accreditation was granted. DEWHA agreed that the amendments did not significantly affect the sustainability of the ECBDMF and that a</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 species of cetacean or a population of that species.</p>	<p>new Part 13 declaration was not required at that time.</p> <p>There have been no interactions with cetaceans reported in the ECBDMF since 2004. Given the highly selective, hand harvest method employed in the fishery, DEWHA considers the current operation of the ECBDMF is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p>
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Section 265 Minister may accredit plans or regimes	DEWHA assessment of the ECBDMF
<p>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> <ol style="list-style-type: none"> i. made by a State or self-governing Territory; and ii. in force under a law of the State or self-governing Territory; <p>if the Minister is satisfied that:</p> <p>(f) the plan 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</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 marine species or a population of that species.</p>	<p>The ECBDMF will be managed under the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>.</p> <p>The management regime for the ECBDMF was accredited in December 2004. DPI&F advised DEWHA of several amendments to the management arrangements for the ECBDMF since this accreditation was granted. DEWHA agreed that the amendments did not significantly affect the sustainability of the ECBDMF and that a new Part 13 declaration was not required at that time.</p> <p>There have been no interactions with listed marine species reported in the ECBDMF since 2004. Given the highly selective, hand harvest method employed in the fishery, DEWHA considers the current operation of the ECBDMF is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p>

Section 303AA Conditions relating to accreditation of plans, regimes and policies	DEWHA assessment of the ECBDMF
This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	DEWHA recommends that the ECBDMF be accredited under sections 208A, 222A, 245 and 265.
<p>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:</p> <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with <p>In such a case, the instrument of accreditation is to specify the period, circumstances or condition.</p>	DEWHA considers that no conditions are required for the accreditation for the ECBDMF under Part 13.
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

Section 303DC Minister may amend list	DEWHA assessment of the ECBDMF
<p>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 ECBDMF approved WTO is already included on the LENS.</p>

Section 303FN Approved wildlife trade operation	DEWHA assessment of the ECBDMF
<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 ECBDMF is consistent with objects of Part 13A (listed after this table) as:</p> <ul style="list-style-type: none"> ▪ there is no harvest of species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); ▪ 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 ECBDMF is unlikely to be unsustainable and threaten biodiversity within the next 3 years; and ▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens. <p>DEWHA considers that the ECBDMF will not be detrimental to the survival or conservation status of a taxon to which it relates within the next 3 years, given the management measures currently in place, which include limited entry, a total allowable catch, area closures and minimum size limits. Under an Industry MOU, a rotational zoning scheme also applies.</p>

<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>DEWHA considers that the ECBDMF will not threaten any relevant ecosystem within the next 3 years, given the management measures currently in place, which include limited entry, a total allowable catch, area closures and minimum size limits. Under an MOU, a rotational zoning scheme also applies.</p> <p>The EPBC Regulations 2000 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 EPBC Regulations 2000.</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>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>DEWHA considers that the ECBDMF will not have a significant impact on any relevant ecosystem within the next 3 years, given the highly selective, hand harvest method employed and the range of management measures currently in place, which include limited entry, a total allowable catch, area closures and minimum size limits. Under an Industry MOU, a rotational zoning scheme also applies.</p> <p>The management arrangements that will be employed for the ECBDMF are likely to be effective. Management arrangements for the ECBDMF are included in the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>. Management arrangements include limited entry, a total allowable catch, area closures and minimum size limits. Under an Industry MOU, a rotational zoning scheme also applies. The performance of the ECBDMF will be reviewed annually, against a series of objectives, performance measures and reference points for target species, protected species and ecosystem impacts.</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</p>	<p>The ECBDMF will be managed under the <i>QLD Fisheries Act 1994</i> and the <i>QLD Fisheries Regulation 1995</i>.</p>

<p>relates 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 QLD <i>Fisheries Act 1994</i> and the QLD <i>Fisheries Regulation 1995</i> apply throughout QLD waters.</p> <p>The management arrangements that will be employed for the ECBDMF are likely to be effective. Management arrangements for the ECBDMF are included in the QLD <i>Fisheries Act 1994</i> and the QLD <i>Fisheries Regulation 1995</i>. Management arrangements include limited entry, a total allowable catch, area closures and minimum size limits. Under an Industry MOU, a rotational zoning scheme also applies. The performance of the ECBDMF will be reviewed annually, against a series of objectives, performance measures and reference points for target species, protected species and ecosystem impacts.</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 ECBDMF is a commercial fishery.</p>
<p>In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.</p>	<p>No assessment of the ECBDMF has been carried out under Part 10 of the EPBC Act.</p>
<p>The above does not limit the matters that may be taken into account in deciding whether to declare that a fishery is an approved wildlife trade operation for the purposes of this section.</p>	

Section 303FR Public consultation	DEWHA assessment of the ECBDMF
<p>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>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 ECBDMF a WTO and included the annual reports, was released for public comment which closed on 13 December 2007 with three submissions received.</p>

(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.	
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 declare the ECBDMF a WTO and included the annual reports, was released for public comment on 15 November 2007 and closed on 13 December 2007, a total of 20 business days.
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.	Three public comments about the proposal were received.

Section 303FT Additional provisions relating to declarations	DEWHA assessment of the ECBDMF
This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the ECBDMF will be made under section 303FN.
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: <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	The standard conditions applied to commercial fishery WTOs include: <ul style="list-style-type: none"> • operation in accordance with the management regime; and • notifying DEWHA of changes to the management regime; and • annual reporting. <p>It is recommended the standard conditions are applied to the ECBDMF WTO declaration.</p> <p>The WTO instrument for the ECBDMF specifies the 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, 303FO or 303FP or this section is to be made available for inspection on the Internet.	The instrument for the ECBDMF made under sections 303FN and 303FT will be gazetted and made available on the DEWHA website.

Section 391 Minister must consider precautionary principle in making decisions	DEWHA assessment of the ECBDMF
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.	You must consider the precautionary principle when making a decision to declare an approved WTO.
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 DPI&F for the ECBDMF

The material submitted by DPI&F demonstrates that the management arrangements for the ECBDMF meet most of the requirements of the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. Management arrangements include limited entry, a total allowable catch, area closures and minimum size limits. Under an Industry MOU, a rotational zoning scheme also applies. 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 effectiveness of the Industry initiated Rotational Zoning Scheme has not been analysed;
- a lack of performance measures for those key target species whose catch levels are significantly higher than the current Review Reference Points; and
- a lack of biological and recruitment information on burrowing blackfish, which is now the key target species of the fishery.

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 improving protection for EPBC Act and CITES listed species and obtaining sustainable yield estimates for a number of the key target species. DEWHA considers that, until it can be demonstrated that these issues have been adequately dealt with, a 3-year WTO declaration is appropriate.

Given the low level of protected species interactions under current fishing operations, 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. As there has been some minor amendments to the management arrangements DEWHA considers a new Part 13 accreditation should be granted at this time.

Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the declaration (3 years). Note that a standard condition of a WTO is an annual reporting requirement, the details of which are provided in Table 4.

Table 4: Queensland East Coast Bêche-de-mer Fishery (ECBDMF) Assessment - Issues, Conditions and Recommendations

	Issue	DEWHA WTO Condition
1	<p>General Management Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid, 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 (including legislated and non-legislated components) 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.</p>	<p>Condition 1: Operation of the ECBDMF will be carried out in accordance with the <i>Queensland Fisheries Act 1994</i> and the <i>Queensland Fisheries Regulation 1995</i>.</p> <p>Condition 2: The Department of Primary Industries and Fisheries (DPI&F) to inform DEWHA of any intended amendments to the management arrangements that may affect the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based.</p>
2	<p>Annual Reporting 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 recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration (3 years). Annual reports should follow Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> (the Guidelines) and 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 progress in implementing DEWHA recommendations. Electronic copies of the Guidelines are available from the DEWHA website at http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html</p>	<p>Condition 3: DPI&F to continue to produce and present reports to DEWHA annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

	Issue	DEWHA Recommendation
3	<p>Assessment of the effectiveness of the Rotational Zoning Scheme (RZS) The RZS was introduced into the ECBDMF in 2004 via an Industry MOU to address concerns with the potential for localised and serial depletion in the fishery. The fishery is separated into 154 zones (RZS zones), each of which can be fished for a maximum of 15 days annually, once every three years. DEWHA congratulates Industry and DPI&F on the measures that have been implemented as part of the RZS and the high level of compliance achieved.</p> <p>DEWHA notes that one of the operational objectives in the draft Performance Measurement System (PMS) is to minimise the risk of localised and serial depletion in the fishery and this is assessed using levels of effort applied to each of the RZS zones. DEWHA is concerned that there is no indication that DPI&F intends to conduct a review of the effectiveness of the RZS in achieving its aims, using spatial data now available from the RZS zones fished. DEWHA recommends that DPI&F conduct this review and provide a report to DEWHA on the species composition of each of the RZS zones prior to the expiration of the next export approval in December 2010.</p>	<p>Recommendation 1: DPI&F to review the effectiveness of the RZS and provide a report to DEWHA on the species composition of the RZS zones.</p>
4	<p>Development of additional performance measures for key species DEWHA notes that the draft PMS for the ECBDMF includes a Review Reference Point (RRP) of 15 t for burrowing blackfish. As this RRP was triggered in 2005, resource assessments have been undertaken in two key areas for burrowing blackfish. DEWHA would like to see additional performance measures, related to the outcomes of resource assessments for key species whose RRP's have been triggered, as a means of on-going review. Such measures may include definition of an available biomass limit reference point that if reached would trigger a management response.</p>	<p>Recommendation 2: DPI&F to incorporate additional performance measures, relating to the outcomes of resource assessments for key target species, into the PMS, with priority given to burrowing blackfish.</p>
5	<p>Research The two resource assessments undertaken on burrowing blackfish indicate that this species can be found in very high densities in specific habitats. DEWHA notes that the harvest levels of burrowing blackfish have continued to increase</p>	<p>Recommendation 3: DPI&F to identify as a priority and support research into the basic biology and recruitment of key target species, including</p>

<p>significantly since the 2004 assessment of the ECBDMF. Given this species is now the key species taken in the ECBDMF, DEWHA considers DPI&F should support research into the basic biology, including recruitment, of this species. Should additional species, such as curryfish, become major components of the total catch, DEWHA also considers that DPI&F should support biological research into these species.</p> <p>Preliminary evidence suggests that sea cucumber species in general play an important role in maintaining the health of the benthic marine ecosystem, including coral reefs, areas between reefs and seagrass beds. Given a large proportion of the fishery operates in the Great Barrier Reef World Heritage Area, DEWHA recommends that DPI&F should support research into the ecological impact of sea cucumber harvest to assist with determining what is a suitably precautionary and ecologically sustainable level of harvest for each species.</p>	<p>burrowing blackfish, and the ecological impact of sea cucumber harvest in the ECBDMF.</p>
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Acronyms

AFMA	Australian Fisheries Management Authority
CPUE	Catch per unit effort
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CRA	Compliance Risk Assessment
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEH	Department of the Environment and Heritage
DEWHA	Department of the Environment, Water, Heritage and the Arts
DPI&F	Department of Primary Industries and Fisheries
ECBDMF	East Coast Bêche-de-mer Fishery
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
GBRMP	Great Barrier Reef Marine Park
GBRMPA	Great Barrier Reef Marine Park Authority
GBR WHA	Great Barrier Reef World Heritage Area
LENS	List of Exempt Native Specimens
MOU	Memorandum of Understanding
MSY	maximum Sustainable Yield
PMS	Performance Measurement System
QFIRAC	Queensland Fishing Industry Research Advisory Committee
QLD	Queensland
RRPs	Review Reference Points
RZS	Rotational Zoning Scheme
SAG	Scientific Advisory Group
SCUBA	Self contained underwater breathing apparatus
TAC	Total Allowable Catch
VMS	Vessel Monitoring System
WTO	Wildlife Trade Operation