



Australian Government

Department of the Environment

Assessment of the
East Coast Otter Trawl Fishery

November 2013

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Disclaimer

This document is an assessment carried out by the Department of the Environment 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 on the fishery in relation to decisions under Part 13 and Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999*.

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Contents

Table 1: Summary of the East Coast Otter Trawl Fishery	1
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Table 1 contains a brief overview of the operation of the fishery including: the gear used, species targeted, byproduct species, bycatch species, annual catch, management regime and ecosystem impacts.

Table 2: Progress in implementation of conditions and recommendations made in the previous assessment of the East Coast Otter Trawl Fishery.....	9
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Table 2 contains an update on the progress that has been made by the fishery's management agency in implementing the conditions and recommendations that formed part of the fishery's previous approved wildlife trade operation declaration.

Table 3: The Department of the Environment's assessment of the Queensland East Coast Otter Trawl Fishery against the requirements of the EPBC Act related to decisions made under Part 13 and Part 13A.....	18
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Table 3 contains the Department's assessment of the Queensland East Coast Otter Trawl Fishery's management arrangements against all the relevant parts of the *Environment Protection and Biodiversity Conservation Act 1999* that the delegate must consider before making a decision.

The Department of the Environment's conditions and recommendations to Fisheries Queensland for the Queensland East Coast Otter Trawl Fishery	37
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This section contains the Department's assessment of the Queensland East Coast Otter Trawl Fishery's performance against the Australian Government's *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition* and outlines the reasons the Department recommends that the fishery be declared an approved wildlife trade operation.

Table 4: The Department of the Environment's final conditions and recommendations to Fisheries Queensland for the Queensland East Coast Otter Trawl Fishery	38
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Table 4 contains a description of the issues identified by the Department with the current management regime for the Queensland East Coast Otter Trawl Fishery and outlines the proposed conditions and recommendations that would form part of the delegate's decision to declare the fishery an approved wildlife trade operation.

References.....	50
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Acronyms	50
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Table 1: Summary of the East Coast Otter Trawl Fishery

<p>Key documents relevant to the fishery</p>	<ul style="list-style-type: none"> ▪ Queensland <i>Fisheries Act 1994</i> ▪ Queensland Fisheries Regulation 2008 ▪ Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 ▪ <i>Annual status report 2011 – East Coast Otter Trawl Fishery – 2012</i> ▪ <i>East Coast Otter Trawl Fishery 2011 – 2012 fishing years interim report – 2013</i> ▪ <i>East Coast Otter Trawl Fishery 2011 Progress against SEWPaC conditions and recommendations – 2012</i> ▪ <i>East Coast Otter Trawl Fishery 2011 & 2012 Progress against SEWPaC conditions and recommendations – 2013</i> ▪ <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park – 2012</i> ▪ <i>Stock status of Queensland's fisheries resources 2012</i> ▪ <i>Performance measurement system – East Coast Otter Trawl Fishery – 2009</i> ▪ Department of Sustainability, Environment, Water, Population and Communities – <i>Marine Bioregional Plan for the Temperate East Marine Region – 2012</i> ▪ Department of Sustainability, Environment, Water, Population and Communities – <i>Assessment of the East Coast Otter Trawl Fishery – November 2010</i>
<p>Area</p>	<p>The Queensland East Coast Otter Trawl Fishery includes all tidal waters (excluding estuaries) off the east coast of Queensland out to the East Coast Offshore Constitutional Settlement boundary between Cape York in the north and the Queensland/New South Wales border to the south (Figure 1). This covers the M1, M2, T1 and T2 licence areas. Part of the fishery operates within the Great Barrier Reef World Heritage Area and in the vicinity of the Moreton Bay, Sandy Strait, Shoalwater and Corio Bays and Bowling Green Bay Ramsar wetland sites.</p>
<p>Harvested Species</p>	<p>The Queensland East Coast Otter Trawl Fishery is a trawl fishery which harvests multiple species.</p> <p>Under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010, principal fish are defined as prawns, scallops, bugs and squid and permitted fish are defined as Balmain bug, blue swimmer crab, cuttlefish, mantis shrimp, octopus, pipefish, red champagne lobster, slipper lobster, threadfin bream and three-spot crab.</p> <p>The species harvested in the fishery include: Eastern king prawn, red spot king prawn, brown tiger prawn, grooved tiger prawn, blue endeavour prawn, red endeavour prawn, banana prawn, greasyback prawn, school prawn, coral prawn, Moreton Bay bug, Balmain bug, slipper lobster, red champagne lobster, blue swimmer crab, three-spotted crab, mantis shrimp, saucer scallop, mud scallop, pencil squid, octopus, cuttlefish, threadfin bream and pipefish (pipehorses).</p>

Fishery status	The <i>Stock status of Queensland's fisheries resources 2012</i> indicates that no principal or permitted species are overfished, however, a number of species harvested in the fishery are classified as 'undefined'. Saucer scallop, eastern king prawn, blue and red endeavour prawn, tiger prawn and white banana prawn stocks are all assessed as sustainable in the <i>Status of key Australian fish stocks reports 2012</i> . No principal species have been assessed as being at high risk from trawl operations in the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> .																												
Gear	Vessels operating in the East Coast Otter Trawl Fishery use demersal otter trawl gear in either triple or quad net arrangements. The Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 sets out boat and gear restrictions applicable to each licence category. Some variations to the prawn trawl gear are allowed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010, such as stronger ground gear for targeting scallops. Holders of 'T1' licences are also permitted to use a beam trawl. Turtle excluder devices and bycatch reduction devices are mandatory in all trawl nets (except try nets).																												
Season	<p>The East Coast Otter Trawl Fishery operates all year round however there are temporal closures in place on certain licences in certain areas as set out in the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010. Peak fishing seasons for some target species are as follows:</p> <ul style="list-style-type: none">▪ eastern king prawn – January to July▪ tiger prawn – March to November▪ banana prawn – March to June▪ red spot king prawn – March to September▪ saucer scallop – November to February.																												
Commercial harvest	<p>Total commercial harvest has decreased slightly since the last assessment of the fishery with 7054 tonnes, 6457 tonnes and 6336 tonnes harvested in 2010, 2011 and 2012 respectively. Annual harvest of selected primary species are given below in tonnes:</p> <table><thead><tr><th></th><th>2010</th><th>2011</th><th>2012</th></tr></thead><tbody><tr><td>eastern king prawn</td><td>2675</td><td>2002</td><td>2576</td></tr><tr><td>tiger prawn</td><td>1284</td><td>1231</td><td>809</td></tr><tr><td>endeavour prawn</td><td>581</td><td>519</td><td>446</td></tr><tr><td>red spot king prawn</td><td>344</td><td>114</td><td>257</td></tr><tr><td>saucer scallop</td><td>426</td><td>274</td><td>691</td></tr><tr><td>Moreton Bay bug</td><td>465</td><td>305</td><td>459</td></tr></tbody></table>		2010	2011	2012	eastern king prawn	2675	2002	2576	tiger prawn	1284	1231	809	endeavour prawn	581	519	446	red spot king prawn	344	114	257	saucer scallop	426	274	691	Moreton Bay bug	465	305	459
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Value of commercial harvest	<p>2010 - \$88 million</p> <p>2011 - \$76 million</p> <p>2012 - \$81 million</p>																												

Take by other sectors	<p>In 2010 it was estimated that 86 tonnes of banana prawns was taken in the recreational sector. Recreational take of other species has not been estimated recently but is assumed to be negligible. Combined take from the charter sector was less than one tonne in 2011 and 2012.</p> <p>Other Queensland and New South Wales managed fisheries also target some principal and permitted species of the East Coast Otter Trawl Fishery. Queensland and New South Wales collaborate on the management of shared stocks.</p>
Commercial licences issued	<p>In 2012, Fisheries Queensland advised that a total of 448 licences were issued to 307 operators with the following fishery symbols:</p> <p>T1 – 397</p> <p>T2 – 26</p> <p>M1 – 47</p> <p>M2 – 25</p>

Management arrangements	<p>The fishery is managed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 and Queensland Fisheries Regulation 1995 in force under the Queensland <i>Fisheries Act 1994</i>.</p> <p><u>Input controls</u></p> <ul style="list-style-type: none"> ▪ Limited entry ▪ Transferable effort quota ▪ Effort capped at 1996 level less 5% ▪ Permanent area closures ▪ Temporal closures ▪ Net restrictions <ul style="list-style-type: none"> – length (varies with licence and area) – mesh size (varies with licence and area) – sweep length (varies with licence and area) – covering net (varies with licence) – ground chains (varies with licence) ▪ Boat length restrictions ▪ Mandatory use of turtle excluder devices and bycatch reduction devices (all trawl nets except try nets) <p><u>Output controls</u></p> <ul style="list-style-type: none"> ▪ Possession and trip limits for some and permitted species ▪ Total ban on harvesting egg bearing female Balmain bugs, slipper lobsters, champagne lobster, blue swimmer crab and three-spotted crabs ▪ Minimum shell diameter for saucer scallops (90 millimeters) ▪ Minimum carapace lengths for bugs, red champagne lobster, blue swimmer crabs and three-spotted crabs <p>Parts of the fishery operate within the Great Barrier Reef World Heritage Area and the Moreton Bay, Great Sandy Strait, Shoalwater and Corio Bays Area and Bowling Green Bay Ramsar wetland areas. These areas are subject to additional spatial and temporal closures to fishing.</p> <p>A review of the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 is currently underway.</p>
Export	<p>The main export markets are in Asia, including Japan and Hong Kong. Product has also been exported to Europe in the past and more recently to the United States of America.</p>
Bycatch	<p>Bycatch in the Queensland East Coast Otter Trawl Fishery primarily consists of small finfish, crabs, non-target penaeid prawns, sponges, sea stars, gastropods and other bottom dwelling invertebrate species. Larger bycatch species are usually able to exit through the mandatory turtle excluder devices or bycatch reduction devices. Bycatch rates have decreased since the introduction of mandatory turtle excluder devices and bycatch reduction devices in trawl nets.</p>

<p>Interaction with Protected Species¹</p>	<p>The Queensland East Coast Otter Trawl Fishery interacts with a number of protected species including turtles, sea snakes, sawfish and syngnathids. The introduction of mandatory measures such as the use of turtle excluder devices and bycatch reduction devices in all trawl nets has significantly reduced the capture rate of most of these groups and the majority are released alive. Sea snake captures remain particularly high.</p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef</i> assessed two species of sea snake (elegant sea snake and ornate reef sea snake) as being at high risk to trawl operations and two more species (spectacled sea snake and small-headed sea snake) at intermediate risk. Fisheries Queensland has conducted research into sea snake mitigation in the fishery and extended these results to industry. Mandatory measures to further reduce the rate of sea snake capture have been recommended as part of the trawl plan review.</p> <p>The fishery interacts with two species of seahorse, three species of pipefish and one species of pipehorse. All of these species were assessed to be at intermediate risk from trawling operations as bycatch reduction devices are ineffective at excluding these species and they have low post capture survival. However, large areas of the Great Barrier Reef Marine Park are closed to fishing (33 per cent of the marine park) and there are trip limits placed on the harvest of these species.</p> <p>Since the introduction of mandatory turtle excluder devices in the fishery, turtle and sawfish captures have been low with four turtles and one sawfish captured in 2012, all released alive.</p> <p>A Memorandum of Understanding between the Queensland Department of Primary Industries and Fisheries and the Department of the Environment and Heritage for the Reporting of Fisheries Interactions with Protected Species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Reporting MoU) was signed in 2005 to streamline reporting requirements for interactions with protected species, assisting fishers in meeting their requirements under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>. As such, the Reporting MoU reduces the administrative reporting burden on individual fishers and provides for regular reporting of protected species interactions.</p> <p>Unless exceptional circumstances exist, the Department will not take any actions against the authority holders in respect of a failure to meet the seven-day reporting requirement of protected species interactions, if the interaction was recorded in the authority holder's logbook at the time of the interaction and in accordance with the requirements of the Reporting MoU.</p>
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¹ 'Protected species' means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and listed threatened, listed marine and listed migratory species.

Ecosystem Impacts	<p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> assessed 14 ecosystem processes, all of which were considered to be at low risk from trawling.</p> <p>The <i>Marine bioregional plan for the Temperate East Marine Region 2012</i> has identified that there are key ecological features present in the area of the fishery (shelf rocky reefs, canyons on the eastern continental slope and upwelling off Fraser Island) which are also of regional priority and that there are pressures in the area of the fishery from the harvesting of living resources and of bycatch.</p> <p>Bycatch reduction devices and turtle exclusion devices are mandatory in the fishery which has significantly reduced turtle and large species bycatch. Recent research has refined the use of particular bycatch reduction devices to reduce sea snake capture and extension of these results to industry has been reported as successful in reducing bycatch in the fishery.</p> <p>No target or byproduct species have been classified as overfished in the <i>Stock status of Queensland's fisheries resources 2012</i>.</p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> found that current risk levels from trawling are generally low. No principal species were assessed to be at higher than intermediate risk from trawling operations in the Great Barrier Reef Marine Park.</p>
Impacts on World Heritage property and Ramsar sites	<p>The assessment also considered the possible impacts on the world heritage values of the Great Barrier Reef World Heritage Area and the ecological character of the Moreton Bay, Great Sandy Strait, Shoalwater and Corio Bays Area and Bowling Green Bay Ramsar wetland areas.</p> <p><u>Great Barrier Reef World Heritage Area</u></p> <p>The Great Barrier Reef Marine Park is subject to spatial zoning arrangements that are designed to protect the biodiversity and health of the marine park. Approximately 33 per cent of the marine park is closed to fishing.</p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> determined that current risk levels from trawling are generally low under current management arrangements and effort levels, but acknowledges that some high risks remain for several byproduct and bycatch species. In particular, 11 species of skates and rays, two species of sea snake and a deepwater habitat in the southern Great Barrier Reef Marine Park were categorised as being at high risk from trawling.</p>

<p>Impacts on World Heritage property and Ramsar sites (cont'd)</p>	<p>An effort cap is in place in the Great Barrier Reef Marine Park which decreases annually to mitigate the effects of effort creep and to ensure that effort levels do not exceed historic levels. A review of the Queensland Fisheries (East Coast Trawl) Management Plan 2010 is currently underway. Proposals to mandate the use of effective square mesh codend and fisheye bycatch reduction devices in the scallop and red spot king prawn sectors, respectively, to reduce interactions with sea snakes which have a high interaction rate in these sectors in the Great Barrier Reef Marine Park, are being considered.</p> <p>Due to the implementation of area and seasonal closures, gear, size and harvest restrictions in the fishery, the Department considers that an action taken by an individual fisher, acting in accordance with the East Coast Otter Trawl Fishery management arrangements in force under the Queensland <i>Fisheries Act 1994</i> and the Queensland Fisheries (East Coast Trawl) Management Plan 2010, would not be expected to have a significant impact on the Great Barrier Reef Marine Park or the world heritage values of the Great Barrier Reef World Heritage Area.</p> <p><u>Ramsar wetland sites</u></p> <p>Area closures to net fishing apply in some areas of Moreton Bay, Great Sandy Strait, Shoalwater and Corio Bays and Bowling Green Bay. Due to the implementation of area and seasonal closures, gear, size and harvest restrictions used in the fishery, significant impacts on the ecological character of these sites are considered unlikely.</p> <p>On this basis the Department considers that an action taken by an individual fisher, acting in accordance with the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010, would not be expected to have a significant impact on any wetlands of international importance.</p>
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Figure 1. Area of the East Coast Otter Trawl Fishery

Table 2: Progress in implementation of conditions and recommendations made in the previous assessment of the East Coast Otter Trawl Fishery

Part 13 Condition	Progress	Recommended Action
<p>Taking into account:</p> <ul style="list-style-type: none"> the results of the Fisheries Research and Development Corporation project 2005/053 on reducing the impact of Queensland's trawl fisheries on sea snakes; Fisheries Queensland's evaluation of the use of appropriate bycatch reduction devices by fishers targeting red spot king prawns; and any other relevant expert information, <p>by 1 June 2013, Fisheries Queensland to implement mandatory measures to mitigate the impacts of fishing on sea snakes in the East Coast Otter Trawl Fishery.</p>	<p>Since the 2010 assessment of the Queensland East Coast Otter Trawl Fishery, Fisheries Queensland has completed a two year extension project, FRDC Project 2008/101, <i>Extension of Fisheries Research and Development Corporation funded research results on improved bycatch reduction devices (BRDs) to the Queensland East Coast Otter Trawl Fishery</i>, which has facilitated a significant reduction (over 60 per cent) in fishery bycatch through the use of effective bycatch reduction devices.</p> <p>As part of this extension work, square mesh codend and fisheye bycatch reduction devices were distributed to industry. Around 75 per cent of fishers participated in the bycatch reduction device and extension program and the majority of fishers are currently using these particular bycatch reduction devices.</p> <p>The extension program report recommended mandatory use of effective square mesh codend bycatch reduction devices in the scallop sector and fisheye bycatch reduction devices in the red spot king prawn sector. Proposals to implement this recommendation are currently under consideration as part of the trawl plan review.</p>	<p>Fisheries Queensland has made progress on this condition through progressing the trawl plan review and rigorous extension work. The Department recognises that significant efforts have been made to minimise the capture of sea snakes, and acknowledges that an efficient way of implementing mandatory measures to protect sea snakes would be through the trawl plan review. The Department considers that this condition should be continued as the trawl plan review has not yet been finalised and mandatory measures to mitigate the impacts of fishing on sea snakes have not yet been made.</p> <p>The Department considers that a new Part 13 accreditation for the East Coast Otter Trawl Fishery specify a similar condition (see Part 13 Condition, Table 4).</p>

Part 13A Conditions	Progress	Recommended Action
<p>Condition 1</p> <p>Operation of the East Coast Otter Trawl Fishery will be carried out in accordance with the Queensland <i>Fisheries Act 1994</i>, 'Fisheries Regulation 2008', and Queensland 'Fisheries (East Coast Trawl) Management Plan 2010'.</p>	<p>Fisheries Queensland has advised that the fishery has been operating in accordance with the Queensland <i>Fisheries Act 1994</i> and the Queensland Fisheries (East Coast Trawl) Management Plan 2010.</p>	<p>The Department of the Environment considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the East Coast Otter Trawl Fishery should specify a similar condition (see Condition 1, Table 4).</p>
<p>Condition 2</p> <p>Fisheries Queensland to inform the Department of Sustainability, Environment, Water, Population and Communities 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>	<p>Fisheries Queensland has informed the Department that there have been no changes to the management arrangements since the previous approval that would negatively impact on resource sustainability.</p>	<p>The Department considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the East Coast Otter Trawl Fishery should specify a similar condition (see Condition 2, Table 4).</p>
<p>Condition 3</p> <p>Fisheries Queensland to produce and present reports to the department annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>	<p>Fisheries Queensland has supplied the Department with annual status reports for the 2010/11 and 2011/12 fishing years.</p>	<p>The Department considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the East Coast Otter Trawl Fishery should specify a similar condition (see Condition 3, Table 4).</p>

Part 13A Conditions	Progress	Recommended Action
<p>Condition 4</p> <p>Fisheries Queensland to complete the review of east coast trawl fishery management arrangements and implement the outcomes in the East Coast Otter Trawl Fishery.</p>	<p>The review of the management arrangements for the East Coast Otter Trawl Fishery commenced in 2009. The preliminary outcomes of the review recommended the removal of latent effort in the fishery. Consultation with licence holders has shown broad industry support for this outcome.</p> <p>The framework for removing latent effort from the fishery has yet to be agreed, which has delayed the completion of the review. The change in government in Queensland in 2012 and subsequent changes in policy have caused significant delays in the trawl plan review process. Consequently, further consultation with industry was conducted to clarify their opinions around a range of issues and to help finalise options for inclusion into a new regulatory impact statement for the pending public comment phase of the review.</p> <p>Fisheries Queensland has informed the Department that the review of the management arrangements for the East Coast Otter Trawl Fishery is expected to be completed in mid-2014.</p>	<p>The Department recognises Fisheries Queensland's progress on the trawl review and considers that this condition is ongoing.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the East Coast Otter Trawl Fishery specify a related condition (see Condition 4, Table 4).</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 1</p> <p>Fisheries Queensland to:</p> <p>a) continue to take action to improve protected species reporting by fishers in the East Coast Otter Trawl Fishery; and</p> <p>b) take into account:</p> <ul style="list-style-type: none"> • best estimates of protected species underreporting; and • best estimates of incidental fishing mortality at capture and post release mortality of sea snakes <p>in all risk assessments and take appropriate action to address any unacceptable risks.</p>	<p>a) Fisheries Queensland has continued to raise industry awareness of fisher's responsibilities for reporting Species of Conservation Interest (SOCl) interactions. Fisheries Queensland has produced a series of educational videos on safe handling of aquatic animals to reduce injuries to SOCl and fishers.</p> <p>The Fisheries Observer Program has been discontinued since 2010. Historical validation of SOCl logbook data may be possible once analysis for the 2010 Fisheries Observer Program data has been completed.</p> <p>b) Fisheries Queensland has advised that the results from FRDC project 2005/053 <i>Reducing the impact of Queensland's trawl fisheries on protected sea snakes</i> were considered in the ecological risk assessments for the Great Barrier Reef Marine Park area and the fishery area south of the Great Barrier Reef Marine Park.</p>	<p>The Department of the Environment considers that there are ongoing aspects of this recommendation. Since the Fishery Observer Program has been discontinued and there appears to be discrepancies between logbook reports and independent research reports (see issues text for Recommendation 1 in Table 4) the Department considers that further improvements in protected species reporting are warranted.</p> <p>Furthermore, as an ecological risk assessment for the fishery area south of the Great Barrier Reef Marine Park is still being finalised, the Department considers that appropriate action will be required to address any unacceptable risks identified.</p> <p>The Department recommends that these actions be continued (see Part 13 Condition, Recommendation 1 and Recommendation 3, Table 4)</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 2</p> <p>Fisheries Queensland to:</p> <p>a) By 30 June 2012, complete appropriate stock assessments for the key species identified in the East Coast Otter Trawl Fishery, including: <i>Melicertus plebejus</i> (eastern king prawn), <i>Penaeus esculentus</i> (brown tiger prawn) and <i>Amusium balloti</i> (saucer scallop), which have not yet had stock assessments completed;</p> <p>b) continue to improve knowledge of stock for those fish resources whose stock status is deemed 'uncertain'; and</p> <p>c) develop appropriate management measures to mitigate risks to byproduct species which are identified as being at high risk in the ecological risk assessment of trawling by the Great Barrier Reef Marine Park Authority.</p>	<p>Stock assessments for eastern king prawns and saucer scallops have been completed and both stocks were reported as being sustainably fished in the <i>Stock status of Queensland's fisheries resources 2012</i>.</p> <p>Fisheries Queensland has informed the Department that a stock assessment for brown tiger prawns was not prioritised in 2012 as current information suggests that there are no sustainability concerns for the northern tiger prawn sector of the fishery. Scientists at the Queensland Department of Agriculture, Fisheries and Forestry and the University of Queensland are jointly working on the development of novel assessment methods for multi-species fisheries which may have application to sectors of the Queensland East Coast Otter Trawl Fishery including the northern tiger prawn sector.</p> <p>No byproduct species were assessed to be at high risk from trawl operations. However, the three species of Balmain bug included in the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> were found to be at 'intermediate-high' risk. Fisheries Queensland has advised that, based on fishery catch data, only a small part of the east coast Balmain bug stock exists within the Great Barrier Reef Marine Park. On average 70 per cent of the Balmain bug catch is taken south of the Great Barrier Reef Marine Park. Moreover as noted in the 2012 Stock Status Report, there is now sufficient evidence to classify the stock status of Balmain Bugs in Queensland as 'sustainably fished'. Catch and nominal catch rates in NSW are also stable.</p>	<p>Whilst no byproduct (permitted) species in the fishery were classified at high risk in the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i>, and no species were classified as overfished in the <i>Stock status of Queensland's fisheries resources 2012</i>, there remain a number of principal and permitted species classified as 'undefined' or 'uncertain'.</p> <p>The Department considers the issues covered by this recommendation to be partially met and ongoing.</p> <p>The Department recommends that this action be continued (see Recommendation 2, Table 4)</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 3</p> <p>As part of the new management arrangements for the East Coast Otter Trawl Fishery, Fisheries Queensland to ensure total and proportional effort allocation in the fishery is environmentally sustainable for all targeted and byproduct species, as well as for bycatch species, habitats and the broader ecosystem.</p>	<p>As the trawl plan review has not yet been completed, this recommendation has not been progressed. Fisheries Queensland has informed the Department that the current level of effort occurring in the fishery is environmentally sustainable.</p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> found that current risk levels from trawling activity were generally low, but noted that some risks remained. No species were assessed as overfished in the <i>Stock status of Queensland's fisheries resources 2012</i> although the stock status of several principal and permitted species are classified as uncertain or undefined.</p>	<p>The Department considers that, although current effort levels appear to be sustainable, the effort allocation is substantially higher than current effort levels. The effort allocation is based upon historic effort levels (1996) while the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> is based on 2009 levels of effort. Should effort in the fishery increase above 2009 levels, which would be allowable under the current management arrangements, it may increase the risk ratings determined in the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i>. The Department considers that any new management arrangements for the East Coast Otter Trawl Fishery should aim to reduce effort allocation in the fishery to a level based upon sustainability criteria.</p> <p>The Department considers the issues covered by this recommendation to be ongoing.</p> <p>The Department recommends that this action be continued (see Condition 4, Table 4).</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 4</p> <p>Fisheries Queensland to:</p> <p>a) develop and implement finer scale management in the East Coast Otter Trawl Fishery to ensure that individual areas and stocks within the fishery are sustainably harvested; and</p> <p>b) ensure that, total effort in the Great Barrier Reef World Heritage Area does not increase above the historic proportion of total fishing effort in the East Coast Otter Trawl Fishery as a result of the introduction of new management arrangements.</p>	<p>a) Fisheries Queensland has advised that finer scale management is being considered as part of the trawl plan review.</p> <p>b) The current management arrangements ensure that the total effort allocation in the Great Barrier Reef Marine Park will not exceed historic levels in the East Coast Otter Trawl Fishery. As the trawl plan review has not been completed, this recommendation has not been progressed.</p>	<p>The Department considers that finer scale management in the East Coast Otter Trawl Fishery is important to ensure that individual areas and stocks within the fishery are sustainably managed. It will also be important that the mechanisms to ensure that effort in the Great Barrier Reef World Heritage Area does not increase above the historic proportion of total fishing effort in the East Coast Otter Trawl Fishery be retained in any new management arrangements made as a result of the trawl plan review.</p> <p>The Department considers the issues covered by this recommendation to be ongoing.</p> <p>The Department recommends that this action be continued (see Condition 4, Table 4).</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 5</p> <p>Fisheries Queensland to:</p> <p>a) complete the review of the effectiveness of the catch limits currently set for blue swimmer crabs, octopus, and slipper lobster in the East Coast Otter Trawl Fishery by 31 January 2012; and</p> <p>b) as part of the trawl plan review, review the performance measures for byproduct species and implement responses as appropriate.</p>	<p>Fisheries Queensland has advised progressing this recommendation is contingent on the completion of the trawl plan review, expected to be completed by mid 2014. As such this recommendation has not progressed since the Department's 2010 reassessment of the fishery. The <i>Ecological risk assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i> categorises blue swimmer crab as 'low'; harvested octopus species as either 'low' or 'intermediate-low' and slipper lobsters as 'intermediate' risk from trawl operations.</p>	<p>The Department recognises that none of these species are classified as being at high risk from trawl operations, and that a risk assessment for the area south of the Great Barrier Reef Marine Park is currently being finalised. However, the stock status for these species is currently either 'uncertain' or 'undefined'.</p> <p>The Department considers that further work is required to determine the stock status for these species. Should unacceptable risks be determined in any ecological risk assessment for the fishery, the Department expects that Fisheries Queensland will take steps to address these risks.</p> <p>The Department recommends that this action be continued (see Recommendation 2 and Recommendation 3, Table 4).</p>
<p>Recommendation 6</p> <p>Fisheries Queensland to continue to improve knowledge of Moreton Bay bug stocks and factors contributing to their sustainable management, and continue to implement measures to ensure the take of Moreton Bay bugs is sustainable.</p>	<p>Fisheries Queensland has improved the reliability of estimates of catch per unit effort for Moreton Bay bugs harvested in the East Coast Otter Trawl Fishery. <i>The stock status of Queensland's fisheries resources 2012</i> indicates that at current effort levels, Moreton Bay bugs are sustainably fished, and the <i>Ecological risk assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i> has categorised Moreton Bay bugs at low risk from trawl fishing.</p>	<p>The Department notes that at current effort levels, risks to Moreton Bay bug stocks are low and that they are classified as sustainably fished. The Department considers that this recommendation has been met.</p>

Recommendation	Progress	Recommended Action
<p>Recommendation 7</p> <p>Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) continue to develop and implement measures to reduce bycatch in the East Coast Otter Trawl Fishery; and b) develop a performance measure aimed at reducing bycatch levels in the fishery. 	<p>The two year <i>FRDC Project No. 2008/101: Extension of Fisheries Research and Development Corporation funded research results on improved bycatch reduction devices to the Queensland East Coast Otter Trawl Fishery</i> was completed in 2011. This project has facilitated a reduction in fishery bycatch rates through the use of more effective turtle exclusion devices and bycatch reduction devices. Additionally, Fisheries Queensland has advised that development of a performance measure aimed at reducing bycatch levels in the fishery will be considered in the light of mandating the use of highly effective bycatch reduction devices as part of the trawl plan review.</p>	<p>Although progress has been made on the recommendation, bycatch rates in the fishery remain high. While the Department acknowledges that recent extension programs have resulted in lower bycatch rates, it still considers that continued efforts should be made to minimise bycatch rates. The Department considers that an effective way to continue these improvements would be to include a performance measure aimed at reducing bycatch rates levels into the fishery's management arrangements.</p> <p>The Department recommends that this action be continued (see Recommendation 4, Table 4).</p>

Table 3: The Department of the Environment’s assessment of the Queensland East Coast Otter Trawl Fishery against the requirements of the EPBC Act related to decisions made under Part 13 and 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 EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A. A complete version of the EPBC Act can be found at <http://www.comlaw.gov.au/>.

Part 13

Division 1 Listed threatened species Section 208A Minister may accredit plans or regimes	The Department’s assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> 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 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 threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing; and</p>	<p>The Queensland East Coast Otter Trawl Fishery will be managed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 in force under the Queensland <i>Fisheries Act 1994</i>.</p> <p>The Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 was accredited in December 2010. The management arrangements for the Queensland East Coast Otter Trawl Fishery have not significantly changed since this accreditation was granted and given the management arrangements listed in Table 1, still require individual fishers to take all reasonable steps to ensure that listed threatened species are not killed or injured as a result of the fishery.</p>

<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p>	<p>Given the management measures in place in the fishery, including:</p> <ul style="list-style-type: none"> • limited entry • tradable effort units • gear restrictions (net and boat) • mandatory bycatch reduction devices and turtle excluder devices • spatial and temporal closures, <p>the Department considers that the current operation of the fishery is not likely to adversely affect the survival or recovery in nature of any listed threatened species.</p>
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Division 2 Migratory species Section 222A Minister may accredit plans or regimes	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <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 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 conservation status of a listed migratory species or a population of that species.</p>	<p>The Queensland East Coast Otter Trawl Fishery will be managed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 in force under the Queensland <i>Fisheries Act 1994</i>.</p> <p>The Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 was accredited in December 2010. The management arrangements for the Queensland East Coast Otter Trawl Fishery have not significantly changed since this accreditation was granted and given the management arrangements listed in Table 1, still require individual fishers to take all reasonable steps to ensure that listed migratory species are not killed or injured as a result of the fishery.</p> <p>Given the management measures in place in the fishery, including:</p> <ul style="list-style-type: none"> • limited entry • tradable effort units • gear restrictions (net and boat) • mandatory bycatch reduction devices and turtle excluder devices • spatial and temporal closures, <p>the Department considers that the current operation of the fishery is not likely to adversely affect the conservation status of a listed migratory species or a population of that species.</p>

Part 13 (cont.)

Division 3 Whales and other cetaceans Section 245 Minister may accredit plans or regimes	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p class="list-item-l1">(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p class="list-item-l2">i. made by a State or self-governing Territory; and</p> <p class="list-item-l2">ii. in force under a law of the State or self-governing Territory;</p> <p>if satisfied that:</p> <p class="list-item-l1">(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p> <p class="list-item-l1">(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>The Queensland East Coast Otter Trawl Fishery will be managed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 in force under the Queensland <i>Fisheries Act 1994</i>.</p> <p>The Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 was accredited in December 2010. The management arrangements for the Queensland East Coast Otter Trawl Fishery have not significantly changed since this accreditation was granted and given the management arrangements listed in Table 1, still require individual fishers to take all reasonable steps to ensure that whales or cetaceans are not killed or injured as a result of the fishery.</p> <p>Given the management measures in place in the fishery, including:</p> <ul style="list-style-type: none">• limited entry• tradable effort units• gear restrictions (net and boat)• mandatory bycatch reduction devices and turtle excluder devices• spatial and temporal closures, <p>the Department considers that the current operation of the fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p>

Part 13 (cont.)

Division 4 Listed marine species Section 265 Minister may accredit plans or regimes	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p class="list-item-l1">(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p class="list-item-l2">i. made by a State or self-governing Territory; and</p> <p class="list-item-l2">ii. in force under a law of the State or self-governing Territory;</p> <p>if satisfied that:</p> <p class="list-item-l1">(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</p>	<p>The Queensland East Coast Otter Trawl Fishery will be managed under the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 in force under the Queensland <i>Fisheries Act 1994</i>.</p> <p>The Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 was accredited in December 2010. The management arrangements for the Queensland East Coast Otter Trawl Fishery have not significantly changed since this accreditation was granted. Two species of pipefish, <i>Solegnathus hardwickii</i> and <i>S. dunckeri</i> (which are listed marine species) incidentally captured in the East Coast Otter Trawl Fishery are permitted to be retained. Trip limits of 50 individuals in total are placed on each of these species to limit their harvest and ensure they are not targeted. Annual catches of these two pipefish species have remained relatively stable between 2007 and 2012, averaging approximately 260 kilograms annually.</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>Management measures in place in the fishery include:</p> <ul style="list-style-type: none"> • limited entry • tradable effort units • gear restrictions (net and boat) • mandatory bycatch reduction devices and turtle excluder devices • spatial and temporal closures. <p>Extensive research and extension work has been undertaken to minimise sea snake capture in the fishery including the distribution of best practice bycatch reduction devices to industry free of charge. Given these measures, the Department considers that the current operation of the fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p>
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Part 13 (cont.)

Section 303AA Conditions relating to accreditation of plans, regimes and policies	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	The Department recommends that the management regime for the Queensland East Coast Otter Trawl Fishery be accredited under sections 208A, 222A, 245 and 265.
(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	<p>To satisfy the requirements of sections 208A and 265 we recommend that the Queensland East Coast Otter Trawl Fishery be accredited under Part 13 subject to a condition that requires Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) reduce the bycatch of sea snakes, including by methods such as trawl nets to be fitted with bycatch reduction devices that are demonstrably capable of minimising the bycatch, with a progress report to be provided by 1 December 2014 b) continue to monitor and report on the uptake and correct use of bycatch reduction devices to assist achieving reductions in sea snake bycatch c) increase the accuracy of reporting of EPBC Act protected species interactions in fishers' log books, and d) following the progress report outlined in a) above, obtain independent verification of the effectiveness of the bycatch reduction devices in minimising EPBC Act protected species bycatch. <p>The Part 13 instrument for the East Coast Otter Trawl Fishery specifies this condition.</p>
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	

Part 13A

Section 303BA Objects of Part 13A

(1) The objects of this Part are as follows:

- (a) to ensure that Australia complies with its obligations under CITES² 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 principal is taken into account in making decisions relating to the utilisation of wildlife.

² Convention on International Trade in Endangered Species of Wild Fauna and Flora

Part 13A

Section 303DC Minister may amend list	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Minister may, by instrument published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <ul style="list-style-type: none">(a) including items in the list;(b) deleting items from the list; or(c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or(d) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or(e) correcting an inaccuracy or updating the name of a species.	<p>The Department recommends that specimens derived from species harvested in the Queensland East Coast Otter Trawl Fishery, other than</p> <ul style="list-style-type: none">• specimens that belong to species listed under Part 13 of the EPBC Act (other than a species listed in the conservation dependent category), and• specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list) <p>continue to be included in the list of exempt native specimens while the Queensland East Coast Otter Trawl Fishery is subject to a declaration as an approved wildlife trade operation.</p>
<p>(1A) In deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery, 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 Queensland East Coast Otter Trawl Fishery has been carried out under Part 10 of the EPBC Act.</p>

<p>(1C) The above does not limit the matters that may be taken into account in deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery.</p>	<p>It is not possible to list exhaustively the factors that you may take into account in amending the list of exempt native specimens. The objects of Part 13A, which are set out above this table, provide general guidance in determining factors that might be taken into account. A matter that is relevant to determining whether an amendment to the list is consistent with those objects is likely to be a relevant factor.</p> <p>The Department considers that the amendment of the list of exempt native specimens to include product taken in the East Coast Otter Trawl Fishery (excluding specimens that belong to species listed under Part 13 of the EPBC Act [other than a species listed in the conservation dependent category] and excluding specimens that belong to taxa listed under section 303CA of the EPBC Act) would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) ▪ the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species ▪ the operation of the fishery during the period of the recommended inclusion is unlikely to be unsustainable and threaten biodiversity, and ▪ the Environment Protection and Biodiversity Conservation Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.
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<p>(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. 	<p>The Department considers that the consultation requirements have been met.</p> <p>The application from Fisheries Queensland was released for public comment from 23 August 2013 to 23 September 2013. The public comment period sought comment on:</p> <ul style="list-style-type: none"> ▪ the proposal to continue to include product derived from the Queensland East Coast Otter Trawl Fishery, except those species listed under Part 13 of the EPBC Act, in the list of exempt native specimens, and ▪ Fisheries Queensland's application for the Queensland East Coast Otter Trawl Fishery. <p>One comment was received.</p>
<p>(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.</p>	<p>The existing instrument for the Queensland East Coast Otter Trawl Fishery made under section 303DC was gazetted and is available through the Department's website.</p>

Section 303FN Approved wildlife trade operation	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
(2) The Minister may, by instrument published in the <i>Gazette</i> , declare that a specified wildlife trade operation is an approved wildlife trade operation for the purposes of this section.	
<p>(3) 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>The Department considers that the operation of the Queensland East Coast Otter Trawl Fishery is consistent with objects of Part 13A (listed above) as:</p> <ul style="list-style-type: none"> ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) ▪ the fishery will not harvest any CITES listed species ▪ the operation of the Queensland East Coast Otter Trawl Fishery is unlikely to be unsustainable and threaten biodiversity within the next three years, and ▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.

<p>(b) the operation will not be detrimental to:</p> <ul 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 Department considers that the Queensland East Coast Otter Trawl 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</p> <ul style="list-style-type: none"> ▪ limited entry ▪ tradable effort units ▪ gear restrictions (net and boat) ▪ mandatory bycatch reduction devices and turtle excluder devices ▪ spatial and temporal closures.
<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>The Department considers that the Queensland East Coast Otter Trawl Fishery will not be likely to threaten any relevant ecosystem within the next three years, given the management measures currently in place, which include</p> <ul style="list-style-type: none"> ▪ limited entry ▪ tradable effort units ▪ gear restrictions (net and boat) ▪ mandatory bycatch reduction devices and turtle excluder devices ▪ spatial and temporal closures.
<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>The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify fish as a class of animal in relation to the welfare of live specimens.</p>
<p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.</p>

<p>(4) 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>The Department considers that the Queensland East Coast Otter Trawl Fishery will not be detrimental to the operation of any relevant ecosystem within the next three years, given the management measures currently in place, which include</p> <ul style="list-style-type: none"> ▪ limited entry ▪ tradable effort units ▪ gear restrictions (net and boat) ▪ mandatory bycatch reduction devices and turtle excluder devices ▪ spatial and temporal closures. <p>The management arrangements that will be employed for the Queensland East Coast Otter Trawl Fishery are likely to be effective. Entry to the fishery is limited and gear restrictions apply to operators. As the fishery operates in the Great Barrier Reef Marine Park and in the Moreton Bay, Great Sandy Strait, Shoalwater and Corrio Bays Area and Bowling Green Bay Ramsar wetland areas, it is subject to extensive area closures. Bycatch reduction devices and turtle excluder devices are mandatory in all trawl nets in the fishery.</p>
<p>(5) 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 is in force in the State or Territory concerned; and</p>	<p>The Queensland East Coast Otter Trawl Fishery will be managed under the Fisheries (East Coast Trawl) Management Plan 2010 in force under the Queensland <i>Fisheries Act 1994</i>.</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 Queensland <i>Fisheries Act 1994</i> applies throughout Queensland waters.</p> <p>The legislation is likely to be effective.</p>
<p>(10) 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 Queensland East Coast Otter Trawl Fishery is a commercial fishery.</p>

Section 303FR Public consultation	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. 	<p>The Department considers that the consultation requirements of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> for declaring a fishery an approved wildlife trade operation have been met. A public notice, which set out the proposal to declare the Queensland East Coast Otter Trawl Fishery an approved wildlife trade operation and included the <i>Annual status report 2011 – East Coast Otter Trawl Fishery, East Coast Otter Trawl Fishery 2011 – Progress against SEWPaC conditions and recommendations</i> and <i>East Coast Otter Trawl Fishery 2011 & 2012 – Progress against SEWPaC conditions and recommendations</i> was released for public comment which closed on 23 September 2013 with one submission received.</p>
<p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to declare the Queensland East Coast Otter Trawl Fishery an approved wildlife trade operation and included the <i>Annual status report 2011 – East Coast Otter Trawl Fishery, East Coast Otter Trawl Fishery 2011 – Progress against SEWPaC conditions and recommendations</i> and <i>East Coast Otter Trawl Fishery 2011 & 2012 – Progress against SEWPaC conditions and recommendations</i> was released for public comment on 23 August 2013 and closed on 23 September 2013, a total of 21 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>The public comment received on the <i>Annual status report 2011 – East Coast Otter Trawl Fishery, East Coast Otter Trawl Fishery 2011 – Progress against SEWPaC conditions and recommendations</i> and <i>East Coast Otter Trawl Fishery 2011 & 2012 – Progress against SEWPaC conditions and recommendations</i> is included at <u>Attachment C</u> of the brief. The Department's assessment has considered the public comment received on the submission.</p>

Section 303FT Additional provisions relating to declarations	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the Queensland East Coast Otter Trawl Fishery will be made under section 303FN.
<p>(4) 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> <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>	<p>The standard conditions applied to a commercial fishery wildlife trade operation include:</p> <ul style="list-style-type: none"> ▪ operation in accordance with the management regime ▪ notifying the Department 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>Additional conditions applied to the East Coast Otter Trawl Fishery wildlife trade operation include:</p> <ul style="list-style-type: none"> ▪ continuation of monitoring and reporting on effort levels within each sector of the East Coast Otter Trawl Fishery ▪ reviewing total effort expended in the fishery, particularly effort in the Great Barrier Reef World Heritage Area, to ensure that it is ecologically sustainable, and ▪ interim measures until the outcomes of the Trawl Plan Review are known, to: <ul style="list-style-type: none"> a) closely monitor effort in the fishery, and b) should total effort exceed total effort levels expended in 2009, <ul style="list-style-type: none"> ▪ review the relative changes in ecological risk attributable to the increased effort, and ▪ determine an appropriate management response to ensure identified increases in ecological risk do not result in unsustainable outcomes. <p>The wildlife trade operation instrument for the Queensland East Coast Otter Trawl Fishery specifies the standard and any additional conditions applied.</p>
(8) A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.

(9) 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.	
(11) 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 Queensland East Coast Otter Trawl Fishery made under sections 303FN and the conditions under section 303FT will be gazetted and made available through the Department's website.

Part 16

Section 391 Minister must consider precautionary principal in making decisions	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
(1) The Minister must take account of the precautionary principal 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.	Having regard to the precautionary management measures in place in this fishery, summarised in Table 1, the Department considers that the precautionary principal has been accounted for in the preparation of advice in relation to a decision under section 303DC and section 303FN.
(2) The precautionary principal 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.	

Part 12

Section 176 Bioregional Plans	The Department's assessment of the Queensland East Coast Otter Trawl Fishery
(5) Subject to this Act, the Minister must have regard to a bioregional plan in making any decision under this Act to which the plan is relevant.	The <i>Marine bioregional plan for the Temperate East Marine Region</i> has been considered in the preparation of advice in relation to decisions under section 303DC and section 303FN. Harvesting of living resources and of bycatch have been identified as pressures operating within the Temperate East Marine Region in which part of the Queensland East Coast Otter Trawl Fishery operates. Bycatch reduction devices and turtle exclusion devices are mandatory in this fishery, which has significantly reduced turtle and large species bycatch. Recent research has refined the use of particular bycatch reduction devices to reduce sea snake capture and extension of these results to industry has been successful in reducing bycatch in the fishery. No target or byproduct species have been assessed as overfished in the <i>Stock status of Queensland's fisheries resources 2012</i> and no principal species were assessed to be at more than intermediate risk from trawling operations in the <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> .

The Department of the Environment's conditions and recommendations to Fisheries Queensland for the Queensland East Coast Otter Trawl Fishery

The material submitted by Fisheries Queensland demonstrates that the management arrangements for the East Coast Otter Trawl Fishery continue to meet most of the requirements of the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.

The Department considers that overall the management regime for the East Coast Otter Trawl Fishery aims to ensure that fishing is conducted in a manner that does not lead to overfishing.

Management measures in place in the fishery include:

- limited entry
- tradable effort units
- gear restrictions (net and boat)
- mandatory bycatch reduction devices and turtle excluder devices, and
- spatial and temporal closures.

Ecosystem Impacts

Taking into account the management measures described above, the Department considers that the management regime for the Queensland East Coast Otter Trawl Fishery provides 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, the Department has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised, including:

- interactions with protected species (particularly sea snakes)
- the need to address excessive effort allocation in the fishery
- the need for finer scale management of effort in the fishery, and
- lack of an ongoing program to validate bycatch, discards and logbooks.

The key challenges for this fishery will be:

- the improvement of protected species reporting and independent data validation
- finalising stock assessments for principal and permitted species
- mitigating risks to species found to be at high risk in risk assessments, and
- continuing to reduce bycatch levels in the fishery.

The Department considers that, until it can be demonstrated that these issues have been adequately addressed, declaration of the harvest operations of the East Coast Otter Trawl Fishery as an approved wildlife trade operation for three years, until 25 November 2016, is appropriate. The Department considers that the declaration should be subject to the conditions listed in Table 4. To contain and minimise the risks in the longer term the recommendations outlined in Table 4 have been made.

Unless a specific time frame is provided, each condition and recommendation must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

Table 4: The Department of the Environment's final conditions and recommendations to Fisheries Queensland for the Queensland East Coast Otter Trawl Fishery

Issue	Condition/Recommendation
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes operational and legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.</p>	<p>Condition 1: Operation of the fishery will be carried out in accordance with the Queensland Fisheries (East Coast Otter Trawl Fishery) Management Plan 2010 under the Queensland <i>Fisheries Act 1994</i>.</p> <p>Condition 2: Fisheries Queensland to inform the Department of the Environment of any intended material changes to the Queensland East Coast Otter Trawl Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>
<p><u>Annual reporting</u></p> <p>It is important that reports be produced and presented to the Department of the Environment annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration.</p> <p>Annual reports should include: a description of the fishery, management arrangements in place, research and monitoring outcomes, recent catch data for all sectors of the fishery, status of target stock, interactions with protected species, impacts of the fishery on the ecosystem in which it operates and information outlining progress in implementing conditions and recommendations resulting from the previous accreditation of the fishery (for a complete description of annual reporting requirements, see Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> available from the Department's website at http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html).</p>	<p>Condition 3: Fisheries Queensland to produce and present reports to the Department of the Environment annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

Issue	Conditions and Recommendations
<p><u>Protected species interactions and sea snake bycatch</u></p> <p>Under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, all species of sea snake are listed marine species. The <i>Ecological risk assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i> lists 15 species of sea snake which have overlapping distributions with the fishery in the Great Barrier Reef Marine Park. Of these, two species, the elegant sea snake and ornate sea snake, were considered to be at high risk from trawl operations. The spectacled and small-headed sea snakes were also considered to be at intermediate risk from trawling operations. The majority of sea snake interactions occur in the red spot king prawn and scallop sectors of the fishery.</p> <p>Significant reductions in sea snake interactions have been made through the FRDC Project 2008/101, <i>Extension of Fisheries Research and Development Corporation funded research results on improved bycatch reduction devices (BRDs)</i>, which was completed in 2011. This project has successfully reduced bycatch in the fishery through the increased use of best practice bycatch reduction devices. As part of the extension project, Fisheries Queensland distributed 267 square mesh codend bycatch reduction devices and 6232 fisheye bycatch reduction devices free of charge to industry and a rebate scheme was offered to offset the cost of adopting best practice square mesh cod ends and turtle excluder devices. Recommendations from this project to mandate the use of square mesh codends in the scallop sector and fish eye bycatch reduction devices in the red spot king prawn sector have been made proposals under consideration in the trawl plan review.</p> <p>Fisheries Queensland has also instigated additional training of compliance officers in determining compliance of installed bycatch reduction devices with legislation as well as pre-season penalty free gear inspections where fishers can obtain advice about the legality and effectiveness of their installed devices.</p>	<p>Part 13 Condition: Fisheries Queensland to work closely with the fishing industry to:</p> <ul style="list-style-type: none"> a) reduce the bycatch of sea snakes, including by methods such as trawl nets to be fitted with bycatch reduction devices that are demonstrably capable of minimising the bycatch, with a progress report to be provided by 1 December 2014 b) continue to monitor and report on the uptake and correct use of bycatch reduction devices to assist achieving reductions in sea snake bycatch c) increase the accuracy of reporting of EPBC Act protected species interactions in fishers' log books, and d) following the progress report outlined in a) above, obtain independent verification of the effectiveness of the bycatch reduction devices in minimising EPBC Act protected species bycatch <p>Recommendation 1: Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) monitor changes to sea snake catch and catch-per-unit-effort, using the best information available, and b) continue to support research where possible with the aim of understanding and reducing the ecological risk posed by the fishery to sea snakes.

Issue	Conditions and Recommendations
<p><u>Protected species interactions and sea snake bycatch (cont'd)</u></p> <p>Results from the FRDC Project 2005/053 <i>Reducing the impact of trawl fisheries on protected sea snakes</i> showed that placement of bycatch reduction devices in trawl nets influenced their effectiveness and recommended that fisheye bycatch reduction devices be made mandatory in areas of high sea snake capture such as the red spot king prawn sector. The authors also recommended that a maximum distance of 50 meshes from the codend drawstrings be mandated for the installation of fisheye bycatch reduction devices. At this distance from the codend drawstrings, fisheye bycatch reduction devices were shown to reduce sea snake capture by 63 per cent with no loss of product from the net. Effectiveness of the device decreased with increasing distance from the drawstrings. Under the current Fisheries (East Coast Trawl) Management Plan 2010 fishers may place a bycatch reduction device up to a maximum distance of 70 meshes from the codend drawstrings.</p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> relied heavily upon results from the FRDC Project 2005/053 <i>Reducing the impact of trawl fisheries on protected sea snakes</i> in estimating fishery related ecological risk to sea snakes. Since completion of this work, fishing effort, which is the key driver of ecological risk in this fishery, has significantly reduced. Average annual effort between 2008 and 2012 shows reductions of 35 per cent in the tiger and endeavour prawn sectors, 40 per cent in Moreton Bay, 27 per cent in beam trawl and 18 per cent in red spot king prawn (the sector responsible for 60 per cent of sea snake interactions). Based solely on these reductions in effort updated estimates of trawl fishery and sea snake interaction rates have fallen by 26 per cent since 2007.</p>	

Issue	Conditions and Recommendations
<p><u>Protected species interactions and sea snake bycatch (cont'd)</u></p> <p>Whilst recognising the ongoing work, the Department is concerned about the discrepancy between log book reporting of sea snake interactions and the 2010 FRDC report, <i>Reducing the impact of Queensland's trawl fisheries on protected sea snakes</i>. This report estimated that the average annual catch of sea snakes between 2003 and 2007 was in the order of 100 000 individuals, and that based on recent estimates of post release survival that approximately 27 000 of these snakes may have died. Updated figures based on falling effort levels within all sectors of the fishery predict a 27 per cent reduction in the total number of sea snake interactions, including a reduction in the estimated average annual interaction rate between 2008 and 2012 to approximately 77 000 individuals with an estimated 20 000 of these interactions being fatal. In contrast industry reported interactions with sea snakes have portrayed a fall of approximately 94 per cent over this same period from 1574 in 2007 to 87 in 2012. Fisheries Queensland has advised that following publication of the above research results an increased awareness by industry on the significance of sea snake interactions may have contributed to the disproportionate reduction in industry reported interactions.</p> <p>In the Department's 2010 <i>Assessment of the Queensland East Coast Otter Trawl Fishery</i>, a recommendation was made for Fisheries Queensland to continue to improve protected species reporting.</p> <p>Fisheries Queensland continues to improve protected species reporting by conducting regional port visits to raise industry awareness of legal responsibilities for reporting species of conservation interest captures in logbooks. Fisheries Queensland has also produced a series of educational videos targeting the handling of protected species to improve post capture survival.</p> <p>However, the cessation of the Fisheries Observer Program in 2012 means there is no longer routine collection of fishery independent data on discards or bycatch. The Fisheries Observer Program enabled validation of logbook records and provided opportunities to train crew members in species identification.</p>	

Issue	Conditions and Recommendations
<p><u>Protected species interactions and sea snake bycatch (cont'd)</u></p> <p>The Department recognises the significant efforts and achievements made by Fisheries Queensland in working with the trawl fishery to increase the effective use of bycatch reduction devices throughout the fishery. The Department also acknowledges that, based on updated effort figures and increased usage of effective bycatch reduction devices, negative interactions with sea snakes will have reduced significantly since completion of the <i>Ecological risk assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i>.</p> <p>However, noting that sea snake species are listed marine species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, and that the most recent ecological risk assessment for the fishery identified that the fishery posed a high ecological risk to two species of sea snakes, the Department considers that Fisheries Queensland must continue to deliver further reductions in the level of fishery derived risk for all species of sea snakes and particularly, the elegant sea snake and ornate sea snake.</p> <p>The Department considers that mandating the use of optimum bycatch reduction device types in each sector of the fishery and reducing the legislated distance for the placement of bycatch reduction devices would contribute to reducing sea snake captures and hence risk to sea snakes from trawl operations.</p> <p>Additionally, in the absence of a fishery observer program, the Department considers that it is essential that measures are taken to ensure logbook data is accurate and represents best estimates of product and byproduct landings and protected species interactions. There is also a need for regular collection and reporting of discards and bycatch composition and levels for the fishery.</p> <p>Whilst recognising the considerable extension work undertaken by Fisheries Queensland, the Department considers that further research and ongoing monitoring of sea snake interactions is needed to demonstrate that mitigation measures are being effective and that the fishery is not having a detrimental impact on sea snakes populations in the fishery.</p>	

Issue	Conditions
<p><u>Effort Allocation</u></p> <p>In the Department's 2010 <i>Assessment of the Queensland East Coast Otter Trawl Fishery</i>, it was found that 'Fisheries Queensland has few mechanisms by which to reduce total effort or to partition effort across the different target species and/or areas of the fishery if required for ecological sustainability purposes'. This has been a concern of the Department since the first assessment of the fishery in 2004. A recommendation was made in 2010 for Fisheries Queensland to ensure that total and proportional effort allocation in the fishery was environmentally sustainable for all targeted, byproduct and bycatch species, habitats and the broader ecosystem.</p> <p>Fisheries Queensland, between 2009 and 2012, undertook a comprehensive review of the management arrangements for the East Coast Otter Trawl Fishery (trawl plan review). The review included consideration of all available information and expertise to evaluate the effectiveness of the current management arrangements for the fishery. In 2012 the stakeholder reference group advising the review reached consensus on a range of recommended changes to the current fishery management arrangements. However, recent progress with the review has been delayed due to a number of factors including the change of government in Queensland. The Queensland Government has reaffirmed its commitment to timely implementation of the outcomes.</p> <p>The trawl plan review technical advisory and scientific advisory groups have agreed that status quo management arrangements are undesirable, and that 'a significant reduction in total allocated effort [is] required as a key element of any future management strategies'. They also agreed that 'management tools [are] required that actively manage effort within each of the key sectors of the fishery towards profitability (B_{MEY}) targets or profitability (B_{MEY}) proxies'. Additionally, the view of the scientific and technical advisory groups were that the review should be completed and implemented.</p> <p>An ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef region was undertaken in 2010 and 2011. It assessed the risks posed by this fishery to achieving fishery-related and broader ecological objectives of both the Queensland and Australian governments, including risks to the values and integrity of the Great Barrier Reef World Heritage Area.</p>	<p>Condition 4: Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) continue to monitor and report on effort levels within each sector of the East Coast Otter Trawl Fishery, given fishing effort is a key driver of ecological risk, and b) review total effort expended in the fishery, particularly effort in the Great Barrier Reef World Heritage Area, to ensure that it is ecologically sustainable. <p>Condition 5: Until the outcomes of the trawl plan review are known, Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) closely monitor effort in the fishery, and b) should total effort exceed total effort levels expended in 2009, <ul style="list-style-type: none"> • review the relative changes in ecological risk attributable to the increased effort, and • determine an appropriate management response to ensure identified increases in ecological risk do not result in unsustainable outcomes.

Issue	Conditions
<p><u>Effort Allocation (cont'd)</u></p> <p>This was a comprehensive, robust and transparent assessment of the fishery that used accepted standards and the latest scientific findings. The risks assessed included direct and indirect effects on the species caught in the fishery as well as on the structure and functioning of the ecosystem. In total, over 900 species, 10 habitat types, 16 assemblages and 14 ecosystem processes were considered in the assessment using a hierarchical process. The assessment also considered known external pressures (i.e. non-trawl fishery-related pressures such as modification of coastal ecosystems, degraded water quality and predicted climate change vulnerabilities), which may increase the susceptibility of an ecological component to the effects of trawling.</p> <p>The assessment took into account current management arrangements and fishing practices at the time of the assessment. It also recognised that the ecosystem, which has been subject to multiple use for decades, is no longer pristine. The assessment captured a substantial range of published material as well as a diverse range of expert opinion. This broad body of knowledge provides a high degree of confidence that the findings about the remaining risk levels are robust.</p> <p>The main findings of the assessment included that:</p> <ul style="list-style-type: none"> • current risk levels from trawling activities are generally low • some risks from trawling remain, and • trawl fishing effort is a key driver of ecological risk. <p>The risk assessment also found that the management arrangements for the fishery at the time did not provide the means to control risks and impacts on harvested species or the environment.</p> <p>In 2010, in response to concerns from the Department and other fishery stakeholders about increasing effort within the eastern king prawn sector of the fishery, Fisheries Queensland established specific effort management controls for this sector. Effort levels are now continuously monitored in real time by a mandatory satellite based vessel monitoring system. If the relevant effort trigger is reached, a prescribed management control restricts further fishing effort to a maximum of 24 days of fishing per boat per month for the remainder of the fishing season. The effort trigger and subsequent management response was reached and enacted in 2011 and 2012 but the effort trigger was not reached for 2013.</p>	

Issue	Conditions
<p><u>Effort Allocation (cont'd)</u></p> <p>In addition, several other important research programs were conducted including quantitative stock assessments, management strategy evaluation and bioeconomic modelling for major sectors of the East Coast Otter Trawl Fishery. This included the saucer scallop, eastern king prawn and Moreton Bay fishing sectors. Results show that current effort and harvest levels for the major sectors of the fishery are at or below levels considered to represent maximum sustainable yield and that the fishery appears to be operating closer to the more conservative maximum economic yield reference point.</p> <p>The Department recognises the current level of effort utilisation in the fishery appears to be constrained by economic drivers, and is substantially lower than the total allowable effort allocation. The Department, taking into consideration the large body of supporting evidence, considers that the Queensland East Coast Otter Trawl Fishery is operating in a sustainable manner and that at current fishing levels, the fishery is unlikely to present significant risks to target or the majority of byproduct species.</p> <p>However, the Department is concerned that total effort allocation within the fishery is based on historical levels rather than sustainability criteria and is considered to be excessive. The Department is concerned that if the total allocated effort in the fishery was utilised this would likely increase the ecological risks identified in the <i>Ecological risk assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i> beyond sustainable levels. The Department also notes that some high and intermediate-high risks remain for several species of byproduct, bycatch and species of conservation interest in the fishery, and that the potential to increase effort levels would increase these risks. Additionally, the Department notes that, although the current trawl effort is still well below the effort allocation, trawl effort inside the Great Barrier Reef Marine Park has increased since 2009.</p> <p>The Department considers that to ensure the ecological sustainability of the fishery, the total effort allocated should be reduced to a lower level and should be based upon sustainability criteria, as opposed to historic levels. Measures to mitigate any high ecological risks should be implemented (see Recommendation 3) and measures to address the latent effort in the fishery should also continue.</p>	

Issue	Conditions
<p><u>Effort Allocation (cont'd)</u></p> <p>Given delays in completing the current review of management arrangements and to ensure the ongoing ecological sustainability of the fishery, the Department considers that timely completion of the trawl plan review is important and that environmental safeguards must be maintained and improved under any new management arrangements to ensure the ongoing sustainability of the fishery.</p> <p>The Department also considers that introducing finer scale management controls across all sectors of the fishery, similar to those introduced for the eastern king prawn sector of the fishery, would be beneficial in ensuring the long-term ecological sustainability of the fishery.</p> <p>Consequently, the Department considers that while the review of management arrangements is being finalised, Fisheries Queensland should closely monitor effort utilisation in the East Coast Otter Trawl Fishery, ensuring that if effort utilisation exceeds that utilised in 2009, ecological risk is reviewed and appropriate management responses are determined.</p>	

Issue	Recommendations
<p><u>Stock assessments for principal and permitted species</u></p> <p>In the Department's 2010 <i>Assessment of the Queensland East Coast Otter Trawl Fishery</i>, a recommendation was made for Fisheries Queensland to complete appropriate stock assessments for the key species identified in the East Coast Otter Trawl Fishery.</p> <p>Since the 2010 assessment of the fishery, Fisheries Queensland has completed stock assessments for eastern king prawns, tiger prawns in Moreton Bay and saucer scallops. The FRDC project 2008/019 <i>Bio-economic modelling of the eastern king prawn (EKP) fishery</i> has now been completed and the results are being considered as part of the trawl plan review.</p> <p>Joint research is currently underway by the Queensland Department of Agriculture, Fisheries and Forestry and University of Queensland scientists, on the development of novel assessment methods for multi-species fisheries. As part of this project, research staff are currently preparing north Queensland tiger and endeavour prawn and red spot king prawn vessel and gear data, and catch and effort data, to undertake fishing power analysis and stock assessment for these species. While a stock assessment has not been finalised for brown tiger prawns, Fisheries Queensland has advised that the East Coast Otter Trawl Fishery is considered to be operating closer to the more conservative reference point of maximum economic yield, than to maximum sustainable yield.</p> <p>The Department notes that there are still a number of principal and permitted species which are defined as 'uncertain' or 'undefined' in the <i>Stock status of Queensland's fisheries resources 2012</i> report. Additionally, several permitted species such as pipefish species (which are a Part 13 listed marine species) are not listed in the <i>Stock status of Queensland's fisheries resources 2012</i> report.</p> <p>Furthermore, principal species such as grooved tiger prawns and mud scallops were assessed to be at intermediate risk from trawl operations in the <i>Ecological Risk Assessment of the East Coast Otter Trawl in the Great Barrier Reef Marine Park</i>. The Department acknowledges the work that has been done to improve stock assessments for eastern king prawns and saucer scallops, and considers it important to continue to determine the status of principal and permitted species stocks to ensure their sustainability continues.</p>	<p>Recommendation 2: Taking into account relevant research, Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) continue to develop stock assessments for principal species, and b) continue to improve knowledge of stock status for principal and permitted species including pipefish.

Issue	Recommendations
<p><u>Other species and habitats at high risk from trawl operations</u></p> <p>The <i>Ecological risk assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> was finalised in 2012. This comprehensive ecological risk assessment considered the management arrangements and effort levels at the time (2010-2011) of the assessment and concluded that “current risk levels from trawling activities are generally low”, however, “some risks from trawling remain”. In particular, 11 species of skates and rays, two species of sea snake and a deepwater habitat in the southern Great Barrier Reef Marine Park were assessed as being at high risk from trawling activity, while three species of Balmain bug were assessed to be at intermediate-high risk from trawling activity. A number of intermediate risks were also identified for principal, permitted and bycatch species and species assemblages.</p> <p>Whilst recognising the improvements in risk profiles since the last ecological risk assessment was conducted in 2005, and the generally low overall risk to the area from trawling operations, the Department considers that management measures to reduce the risk to those species and habitats assessed to be at high risk in the ecological risk assessment should be developed and implemented. The Department also recommends that Fisheries Queensland should take steps to reduce risks to species assessed to be above intermediate risk from trawling operations.</p> <p>The Department is also aware that Fisheries Queensland is in the process of finalising an ecological risk assessment for the area of the fishery south of the Great Barrier Reef Marine Park. This area encompasses the Moreton Bay and Great Sandy Strait Ramsar wetland areas and as such, the Department considers that the completion and publication of this ecological risk assessment will be of major importance in informing management decisions in the continuing trawl plan review and in demonstrating the ecologically sustainable operation of the fishery. The Department also considers that management measures should be implemented to address any risks identified at probable high risk in this risk assessment.</p>	<p>Recommendation 3: Fisheries Queensland to:</p> <ul style="list-style-type: none"> a) complete and publish the ecological risk assessment for the area of the fishery south of the Great Barrier Reef Marine Park b) investigate measures to mitigate risks to species identified to be at probable high risk from the impacts of fishing in the risk assessments, and c) continue to monitor and improve compliance with rules concerning turtle excluder devices and bycatch reduction devices.

Issue	Recommendations
<p><u>Bycatch of other species</u></p> <p>Since the Department's 2010 <i>Assessment of the East Coast Otter Trawl Fishery</i>, Fisheries Queensland has refined the definition of a turtle excluder device in the Queensland Fisheries Regulation 2008 and has conducted an extensive extension program which has been successful in reducing bycatch in the fishery.</p> <p>The <i>Ecological Risk Assessment of the East Coast Otter Trawl Fishery in the Great Barrier Reef Marine Park</i> assessed 45 bycatch species or species groups (not including species of conservation interest which were assessed as a separate group and are addressed in other conditions and recommendations in this assessment) and determined that the majority of species assessed were at low or intermediate-low risk from trawling operations. Three species of finfish (tufted sole, whipfin ponyfish and longfin silverbiddy) were categorised as being at intermediate risk from trawling operations.</p> <p>Despite the overall reduction and generally low risk of bycatch from trawl operations in the fishery, bycatch of some species, for which bycatch mitigation devices and turtle excluder devices are less effective, remains high. In this light, the Department considers that Fisheries Queensland should continue in its efforts to reduce bycatch in the fishery.</p> <p>The Department recognises that risks to many species in the fishery are highly contingent on the fishing effort and correct usage of turtle excluder devices and bycatch reduction devices. The Department considers that continued improvement and high compliance with rules concerning turtle excluder devices and bycatch reduction devices to be an essential component to maintaining the generally low levels of risk in the fishery and improving the risks to those species currently assessed to be at elevated risk levels.</p>	<p>Recommendation 4: Fisheries Queensland to continue to:</p> <ul style="list-style-type: none"> a) develop and implement measures to reduce bycatch in the East Coast Otter Trawl Fishery, and b) develop a performance measure aimed at reducing bycatch levels in the fishery.

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Acronyms

B _{MEY}	Biomass at maximum economic yield
BRD	Bycatch Reduction Device
CITES	Convention on the International Trade of Endangered Species of Wild Fauna and Flora
EKP	Eastern king prawn
EPBC Regulations	Environment Protection and Biodiversity Conservation Regulations 2000
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FRDC	Fisheries Research and Development Corporation
MoU	Memorandum of Understanding
SEWPaC	[Department of] Sustainability, Environment, Water, Population and Communities
SOCI	Species of Conservation Interest